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CANADIAN VESSEL PLAN APPROVAL AND INSPECTION STANDARD

1st EDITION

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Canada

Responsible Authority	Approval
The Executive Director, Domestic Vessel Regulatory Oversight - Marine Safety and Security, is responsible for this document, including any change, correction, or update.	**Luc Tremblay** Executive Director, Domestic Vessel Regulatory Oversight Transport Canada Marine Safety and Security **Date signed: June 14, 2021**

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REVISIONS

Last Review

Next Review **2 years from the date of the last review. This follows the review schedule for the Harmonized System of Survey and Certification (HSSC).**

Revision No.	Date of Issue	Affected Pages	Author(s)	Brief Description of Change
1	**2021-07-28**	**104**	**AMSD**	**Section 3.1.4.1.3.1.8 – "four" replaced with "five"**

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1. INTRODUCTION

The objective of this standard is to provide instructions and guidance for inspections of vessels subject to the *Vessel Safety Certificates Regulations* under the authority of the *Canada Shipping Act, 2001* (CSA 2001).

The CSA 2001, Section 211 empowers Marine Safety Inspectors (MSI) and Recognized Organizations (RO) to inspect at any reasonable time. This document does not supersede the inspection powers designated to the Inspector.

Inspection intervals can be given effect by setting the period of validity of the Canadian Maritime Documents (CMDs), which require inspections for their renewal: Paragraph 16(2) (c) of CSA 2001.

If there is a need to inspect a vessel that is outside of Canada even though none of the vessels certificates are in need of renewal, the vessel may have to be made available for inspections at certain intervals.

2. TYPES OF INSPECTIONS

2.1 Initial Inspection

An initial inspection is a complete inspection of all the items relating to a particular certificate before a vessel is put into service to ensure that the relevant requirements are complied with and that these items are satisfactory for the service for which the vessel is intended.

2.2 Annual Inspection

An annual inspection is a general inspection of the items relating to the particular certificate to ensure that they have been maintained and remain satisfactory for the service for which the vessel is intended. An annual inspection leads to an endorsement. For non-safety convention vessels, an annual inspection leads to the issue of a new certificate where required.

2.3 Intermediate Inspection

An intermediate inspection is an inspection of specified items relevant to the particular certificate to ensure that they are in a satisfactory condition and fit for the service for which the vessel is intended.

2.4 Periodical Inspection

A periodical inspection is an inspection of the items relating to the particular certificate to ensure that they are in a satisfactory condition and fit for the service for which the vessel is intended

2.5 Renewal Inspection

A renewal inspection is the same as a periodical inspection but also leads to the issue of a new certificate.

2.6 Inspections of the Outside of the Vessel’s Bottom

An inspection of the outside of the vessel's bottom is an inspection of the underwater part of the vessel and related items to ensure that they are in a satisfactory condition and fit for the service for which the vessel is intended.

2.7 Additional Inspection

An additional inspection is an inspection, either general or partial according to the circumstances, to be made after a repair resulting from an accident, modification, or whenever any repairs or renewals are made.

The Inspector responsible for issuing the relevant certificate will follow up with any repairs or renewals and determine if an additional inspection is necessary.

With regards to an accident or modifications, Transport Canada - Marine Safety and Security will initiate an investigation to determine whether an inspection is necessary.

The additional inspection, which may be general or partial according to the circumstances, should be such as to ensure that the repairs and any renewals have been effectively made and that the vessel and its equipment continue to be fit for the service for which the vessel is intended.

3. APPLICATION AND ARRANGMENT OF THE CANADIAN VESSEL PLAN APPROVAL AND INSPECTION STANDARD

This standard provides instructions and guidance upon which an inspector will be able to base their arrangements for carrying out inspections.

Although this standard contains details for inspections on various types of vessels, the inspection details are not necessarily applicable to all types and sizes of vessels and should be applied, as appropriate, to drilling rigs, barges and other platforms.

A description of the various types of inspections is given in section 4 and,

Annex 2 contains the detailed requirements for the various inspections for each of the certificates.

In Annex 2, two letter abbreviations have been used, the first letter indicating the division to be inspected, the second letter indicates the type of inspection as follows;

First letter	Division to be Inspected	Second Letter	Inspection Type
(H)	Hull	(I)	Initial
(M)	Machinery	(A)	Annual
(F)	Fire Safety	(In)	Intermediate
(L)	Life Saving	(P)	Periodical
(N)	Navigation and Communications	(R)	Renewal

In the Harmonized System of Survey and Certification (HSSC) two letter abbreviations have been used, the first letter indicates the certificate to which the inspection relates, the second letter

indicates the type of inspection, as indicated under the (FI), (FA), (FP), and (FR) for the various types of vessels in Annex 2 of this standard.

The first letter indicates the certificate to which the inspection relates, as follows:

First letter	SOLAS vessels certificate to which the inspection relates	Domestic vessel certificate to which the inspection relates
(E)	Cargo Ship Safety Equipment Certificate	Safety inspection certificate
(C)	Cargo Ship Safety Construction Certificate	Safety inspection certificate
(P)	Passenger Ship Safety Certificate	Safety inspection certificate

The second letter indicates the type of inspection, as follows:

Second letter	Type of inspection as defined in HSSC	Type of inspection as defined in Canadian regulatory regime
(I)	Initial	Initial
(A)	Annual	Annual
(P)	Periodical	Periodical
(R)	Renewal	Renewal

The voyage classification system has been streamlined to determine the inspection frequency for vessels.

For the purpose of inspection periodicity, where voyage terms under the CSA were referenced in this document, they have been replaced with the voyage terms used in the *Vessel Safety Certificates Regulations* as follows:

CSA (old act) Voyage Classifications	Application	VSCR Voyage Classifications
Foreign Voyage	A vessel operating on a "**Foreign Voyage"** shall be inspected at the same frequency as a vessel operating on "**Unlimited Voyage"**	**Unlimited Voyage**
Home Trade Class I	A vessel operating on a "**Home Trade Class I Voyage"** shall be inspected at the same frequency as a vessel operating on "N**ear coastal voyage, Class 1"**	**NC1**
Home Trade Class II	A vessel operating on a "**Home Trade Class II Voyage"** shall be inspected at the same frequency as a vessel operating on "**near coastal voyage, Class 1"**	
Home Trade Class III	A vessel operating on a "**Home Trade Class III voyage"** shall be inspected at the same frequency as a vessel operating on "**near coastal voyage, Class 2"**	**NC2**
Home Trade Class IV	A vessel operating on a "**Home Trade Class IV voyage"** must be inspected at the same frequency as a vessel on operating on **"Sheltered Waters Voyage"**	**SW**
Minor Waters Class I	A vessel operating on **"Minor Waters Voyage Class I"** must be inspected at the same frequency as a vessel operating on **"Sheltered Waters Voyage"**	
Minor Waters Voyage Class II	A vessel operating on a **"Minor waters voyage class II"** voyage must be inspected at the same frequency as a vessel operating on **"Sheltered Waters Voyage"**	

CSA (old act) Voyage Classifications	Application	VSCR Voyage Classifications
Inland Voyage Class I	A vessel operating on a "**Inland Voyage Class I"** voyages must be inspected at the same frequency as a vessel operating on "**Inland Voyage"**	**Inland Voyage**
Inland Voyage Class II	A vessel operating on a "**Inland Voyage Class II"** voyages must be inspected at the same frequency as a vessel operating on "**Inland Voyage"**	

For the purpose of this inspection standard the following abbreviations are used for Regulatory References:

Regulation	Abbreviation
Marine Machinery Regulations	MMR
Vessel Fire Safety Regulations	VFSR
Hull Construction Regulations	HCR
Navigation Safety Regulations, 2020	NSR 2020
Life Saving Equipment Regulations	LSER
Large Fishing Vessel Inspection Regulations	LFVIR
Vessel Safety Certificates Regulations	VSCR
Fishing Vessel Safety Regulations	FVSR
Marine Personnel Regulations	MPR
Cargo, Fumigation and Tackle Regulations	CFTR
Load Line Regulations	LLR
Fire and Boat Drill Regulations	FBDR

Regulation	Abbreviation
Fire Detection and Extinguishing Equipment Regulations	FDEER
Vessel Pollution and Dangerous Chemical Regulations	VPDCR

For the purpose of this inspection standard the following abbreviations are used

Abbreviation	Term
UWILD	Underwater inspection in lieu of Dry Dock
GT	Gross Tonnage
RO	Recognized Organization
AR	Authorized Representative
TCC	Transport Canada Centre
TCMSS	Transport Canada Marine Safety and Security
MSI	(Transport Canada) Marine Safety Inspector
DSIPLO	Delegated Statutory Inspection Program Liaison Officer
FP	Fire Protection

3.1 Machinery Inspections

3.1.1 Any machinery referred to in Schedules I to XV that is constructed after the coming into force of this standard shall be constructed and installed in a vessel in accordance with the following standards or specifications in force at the time the construction is commenced:

3.1.1.1 the standards or specifications in the rules or codes under which the machinery is being constructed; and

3.1.1.2 the design specifications set out in the *Marine Machinery Regulations* in each item of Part I of the applicable schedule of Schedules I to XV and the general design specifications set out in Schedule XVI.

3.1.2 In the event of any inconsistency between the standards or specifications referred to in paragraph 3.1.1.1 and the specifications referred to in paragraph, 3.1.1.2 the specifications referred to in paragraph 3.1.1.2 shall prevail.

3.1.3 Any machinery referred to in subsection 3.1.1 that has been constructed in accordance with the standards or specifications in rules or codes of an approved classification society may be installed in a vessel in accordance with the rules or codes of another approved classification society.

3.1.4 Subject to subsection 3.1.5 major repairs to machinery referred to in Schedules I to XV that was constructed before or after the coming into force of this Standard, including the reinstallation of components associated with the machinery following the major repairs, shall be made in accordance with the standards or specifications referred to in subsection 3.1.1 in force at the time the major repairs are commenced.

3.1.5 Where making major repairs in accordance with subsection 3.1.4 would be impracticable or inappropriate, the major repairs may be made in accordance with the standards or specifications relating to construction referred to in subsection 3.1.1.1 and 3.1.1.2 set out in this Standard at the time construction of the machinery commenced.

4. DESCRIPTION OF THE VARIOUS TYPES OF INSPECTIONS

4.1 Initial Inspection

4.1.1 Frequency

4.1.1.1 The initial inspection should be held before the vessel is put in service, or when a new instrument applies to an existing vessel, and the appropriate certificate is issued for the first time.

4.1.2 General

4.1.2.1 The initial inspection should include a complete inspection, with tests when necessary, of the structure, machinery and equipment to ensure that the requirements relevant to the particular certificate are complied with and that the structure, machinery and equipment are fit for the service for which the vessel is intended.

4.1.2.2 The initial inspection should consist of:

4.1.2.2.1 an examination of the plans, technical documents, diagrams, specifications, calculations and other technical documentation to verify that the structure, machinery and equipment comply with the requirements relevant to the particular certificate;

4.1.2.2.2 an inspection of the structure, machinery and equipment to ensure that the materials, scantlings, construction and arrangements, as appropriate, are in accordance with the approved plans, technical documents, diagrams, specifications, calculations and other technical documentation and that the workmanship and installation are in all respects satisfactory; and

4.1.2.2.3 check that all the certificates, record books, operating manuals and other instructions and vessel documentation specified in the requirements relevant to the particular certificate have been placed on board the vessel.

4.1.2.3 Re-Flagging (Flag-in / Flag-out)

4.1.2.3.1 Vessel transferring from a Foreign Registry to Canadian Registry and is the vessel's first time being certificated in Canada, shall be subject to an initial inspection before a safety inspection certificate issued as follows;

4.1.2.3.1.1 the vessel shall be completely inspected in dry dock and checked against plans and technical documents.

4.1.2.3.1.2 full particulars of the vessel's stability, including a copy of the hydrostatic curves, shall be verified. If this information is not available, an inclining experiment shall be conducted in the presence of the Inspector. If there are any differences between the vessel and the plans and technical documents, the Inspector shall make a detailed report about the condition of the vessel and any defects discovered shall be noted.

4.1.2.3.1.3 in the case of a vessel more than 12 years old, the hull shall be tested using non-destructive testing in accordance with this standard. In the case of a classed vessel, this requirement may be waived if the previous thickness measurements[1] that were taken during last dry-dock, indicating the vessel was free from appreciable hull deterioration, that all readings are satisfactory and within the maximum permissible diminution according to Classification Rules, determine the suitability of the vessel for the proposed intended service and issue instructions regarding any alterations or renewals, considered necessary before the vessel is accepted;

4.1.2.3.1.4 after approval of the plans and technical documents, a complete inspection of the hull shall be made as prescribed in this standard and the hull shall be cleaned inside and outside, all compartments being opened for access, and the vessel shall not be floated until inspection of all underwater portions has been completed.

4.1.2.3.2 Vessel's built outside of Canada and brought under Canadian Registry and is the vessel's first time being certificated in Canada, shall be subject to an initial inspection as follows before a safety inspection certificate may be issued;

4.1.2.3.2.1 if the vessel is in class with an RO, or certified by or under the authority of the government of the country to which the vessel belongs; Subject to this standard, the Regional Manager may accept the standards of one of the rules published by a RO in relation to a vessel, and any deviation from such rules shall be submitted to the Regional Director for approval.

4.1.2.3.2.2 in addition to 4.1.2.3.2.1vessel is subject to sections 4.1.2.3.1.1., 4.1.2.3.1.3, and 4.1.2.3.1.4.

[1] Refer to IACS UR Z7 Rev26, 1.5 Thickness Measurements Acceptance Criteria

4.1.2.3.3 Vessel Transferring from a Foreign Registry to Canadian Registry or a Vessel built outside of Canada is brought under Canadian Registry and have been certificated in Canada before, shall be subject to an initial inspection as follows before a safety inspection certificate may be issued;

4.1.2.3.3.1 the vessel shall be completely inspected and checked against plans and technical documents showing the vessel's construction to confirm that no alterations have been made since the last time the vessel operated in Canada and based on the vessels last inspection and dry-dock will determine if the inspection is to take place in dry-dock or afloat before a safety inspection certificate may be issued.

4.1.2.4 **Material Testing and Marking**

4.1.2.4.1 Sample pieces of any material to be used in the construction of or repairs to machinery referred to in subsection 4(1) of the *Marine Machinery Regulations* and required by the rules or codes under which the machinery is to be constructed and to be tested prior to use shall be identified and shall, in the presence of an Inspector, undergo, prior to the commencement of construction or repairs, the tests set out in those rules or codes.

4.1.2.4.2 The provisions of the requirement made in section 4.1.2.4.1are set out in sections 7, 8, 9, 10 and 11 of *Marine Machinery regulations* and the information on the material test certificate form number 85-0029 set out in schedule XVII of *Marine Machinery Regulations* shall be met and the certificate to be issued.

4.1.2.5 **Machinery Inspection**

4.1.2.5.1 Subject to section 4.1.2.5.3, all machinery referred to in subsections 4(1) and 5(1) of the *Marine Machinery Regulations* shall be verified by an Inspector during installation and major repair.

4.1.2.5.1.1 An inspection referred to in subsection 4.1.2.5.1 shall consist of the completion of each item set out in Part III of the applicable Machinery Schedules found in Appendix 3 of this Standard.

4.1.2.5.2 No inspection of machinery shall be carried out unless;

4.1.2.5.2.1 the tests and marking referred to in section 4.1.2.4.1 of this Standard have been completed and;

4.1.2.5.2.2 the material test certificates referred to in sections 4.1.2.4.2 have been provided to the Inspector.

4.1.2.5.3 No inspection of standardized and mass-produced machinery is required where:

4.1.2.5.3.1 the manufacturer has established and continuously applied, throughout the construction and testing of the machinery, quality control procedures that meet the requirements of paragraphs 4.1.2.5.3.3.1 and 4.1.2.5.3.3.2 and

4.1.2.5.3.2 the manufacturer provides, in respect of the machinery the following documentary information:

4.1.2.5.3.2.1 the model and serial number of the machinery;

4.1.2.5.3.2.2 confirmation that materials testing was carried out and that the materials meet the requirements of the rules or codes under which the machinery was constructed;

4.1.2.5.3.2.3 confirmation that the machinery was constructed in accordance with the requirements under the *Marine Machinery Regulations*;

4.1.2.5.3.2.4 confirmation that the machinery was tested in accordance with this standard, on completion of the construction; and

4.1.2.5.3.2.5 the permanent identification marking of the manufacturer and the location of the marking on the machinery.

4.1.2.5.3.3 the quality control procedures of a manufacturer are to be accepted where;

4.1.2.5.3.3.1 the manufacturer has provided a full documentation covering the quality control procedures being applied, including periodic auditing arrangements;

4.1.2.5.3.3.2 the quality control procedures and the construction and testing facilities have been inspected by one of the accredited bodies and has submitted a report thereon to the approved classification society, the society has approved the report and issued an acceptance certificate in respect of the inspection and a copy of the certificate has been submitted.

4.1.2.6 **Component Inspection Certificate and Marking**

4.1.2.6.1 Where an Inspector has carried out a construction inspection of machinery as per subsection 4.1.2.5.1 the Inspector or the Class/Manufacturer shall issue a component inspection certificate form number 85-0032 set out in schedule XVIII of *Marine Machinery Regulations* under the provisions set out in sections 16, 17 and 18.

4.1.3 Submission of Plans and Technical Documents

4.1.3.1 An application for an initial inspection should be reviewed along with the examination of plans and technical documents.

4.1.3.2 Plans and technical documents referred to in Appendix 1 Submission of Plans and Technical Documents for Approval for Passenger Vessels, Non-passenger Vessels and fishing vessels, as appropriate, together with, the particulars of the vessel; any exemptions sought; and any special conditions.

4.1.3.3 Detailed plans and documents in electronic format, as listed in Appendix 1 shall be submitted by the Authorized Representative (AR) of a vessel for approval before construction is commenced and if the construction of the vessel is commenced before that approval is obtained, the AR may be required to make such alterations as necessary to comply with the conditions of approval.

4.1.3.4 Vessels shall be inspected at suitable intervals during construction to ensure that the construction is in accordance with the approved plans and technical documents that the material and workmanship meet the requirements and where defects in either material or workmanship are found, alterations or replacements shall be made to rectify the deficiency.

4.2 Annual Inspection

4.2.1 Frequency

The annual inspection is to be held before the expiry date of the certificate.

4.2.2 General

4.2.2.1 An annual inspection should enable the MSI to verify that the condition of the vessel, its machinery and equipment is being maintained in accordance with the relevant requirements.

4.2.2.2 The scope of the annual inspection should be as follows:

4.2.2.2.1 consist of a certificate examination, a visual examination of a sufficient extent of the vessel and its equipment, and certain tests to confirm that their condition is being properly maintained;

4.2.2.2.2 include a visual examination to confirm that no unapproved modifications have been made to the vessel and its equipment; and

4.2.2.2.3 the content of each annual inspection is given in the respective requirements; the thoroughness and stringency of the inspection should depend upon the condition of the vessel and its equipment; and should any doubt arise as to the maintenance of the condition of the vessel or its equipment, further examination and testing should be conducted as considered necessary.

4.2.2.3 Where an annual inspection has not been carried out within the due dates, reference should be made to section 5.2 of this standard.

4.2.2.4 Where it is inconvenient for an owner to fulfill all the requirements of a periodical inspection referred to in sections 1.2.2.1.1 and 3.1.2.1.1, 1.1.2.1.1 or in sections 1.1.3.1.1 to 1.1.3.1.4.1 at the due date, refer to Appendix 6 of this standard for further guidance.

4.2.2.5 Where postponement is allowed under subsection 4.2.2.4

4.2.2.5.1 the periodical inspection shall be completed within a time determined by and in accordance with the requirements of the appropriate section, as if the vessel had been inspected on the original due date; and

4.2.2.5.2 in the case of vessels subject to five year inspection, the succeeding periodical inspection shall become due within the prescribed period from the original due date.

4.2.2.6 An owner may submit a proposal for a system of continuous inspection and testing of the hull of the vessel, whereby all compartments of the hull are opened for inspection and testing in regular rotation within a five-year period.

4.2.2.7 Where a system of continuous inspection is approved, the owner of the vessel for which it is approved, shall keep a record of inspections and tests.

4.3 Intermediate Inspection

4.3.1 Frequency

4.3.1.1 The intermediate inspection is to be held before the expiry date of the certificate.

4.3.2 General

4.3.2.1 The intermediate inspection should be an inspection of items relevant to the particular certificate to ensure that they are in a satisfactory condition and are fit for the service for which the vessel is intended.

4.3.2.2 When specifying items of hull and machinery for detailed examination, due account should be taken of any continuous inspection schemes that may be applied by classification societies.

4.3.2.3 Where an intermediate inspection has not been carried out within the due dates, reference should be made to section 5.2 of this standard.

4.4 Periodical Inspection

4.4.1 Frequency

4.4.1.1 The periodical inspection, is to be held before the expiry date of the certificate

4.4.2 General

4.4.2.1 The periodical inspection should consist of an inspection, with tests when necessary of the equipment to ensure that requirements relevant to the particular certificate are complied with and that they are in a satisfactory condition and are fit for the service for which the vessel is intended.

4.4.2.2 The periodical inspection should also consist of a check that all the certificates, record books, operating manuals and other instructions and vessel documentation specified in the requirements relevant to the particular certificate are on board the vessel.

4.4.2.3 Where a periodical inspection has not been carried out within the due dates, reference should be made to section 5.2 of this standard.

4.4.2.4 Where it is inconvenient for an owner to fulfill all the requirements of a periodical inspection referred to in section 3.1.4.1.1 to 3.1.4.1.4 at the due date, refer to Appendix 6 of this Standard for further guidance.

4.4.2.5 Where postponement is allowed under subsection 4.4.2.4 the succeeding periodical inspection shall become due within the prescribed period from the original due date

4.5 Renewal Inspection

4.5.1 Frequency

4.5.1.1 The renewal inspection is to be held before the expiry date of the certificate.

4.5.2 General

4.5.2.1 The renewal inspection should consist of an inspection, with tests when necessary of the structure, machinery and equipment to ensure that the requirements relevant to the particular certificate are complied with and that they are in a satisfactory condition and are fit for the service for which the vessel is intended.

4.5.2.2 The renewal inspection should also consist of a check that all the certificates, record books, operating manuals and other instructions and vessel documentation specified in the requirements relevant to the particular certificate are on board the vessel

4.5.2.3 Where it is inconvenient for an owner to fulfill all the requirements of an inspection referred to in section 3.1.4.1.1 to 3.1.4.1.4 at the due date, refer to Appendix 6 of this standard for further guidance.

4.5.2.4 Where postponement is allowed under subsection 4.5.2.3 the succeeding inspection shall become due within the prescribed period from the original due date.

4.5.2.5 An owner may submit a proposal for a system of continuous inspection and testing of the hull of the ship whereby all compartments of the hull are opened for inspection and testing in regular rotation within a four or five-year period

4.5.2.6 Where a system of continuous inspection is approved, the owner of the ship for which it is approved shall keep a record of inspections and tests.

4.5.3 Periodic Special Inspections

4.5.3.1 Machinery referred to in Machinery Schedules I to XV are subject to a periodic special inspection by an Inspector in accordance with subsection 4.5.3.1.1 and shall consist of an external and an internal inspection of the machinery comprising an inspection of each item set out in Subdivision I of Division II of Part IV of the applicable schedule I to XV of Appendix 3 of this standard or with a machinery planned maintenance system (MPMS) that is approved by the vessel delegated marine classification society [2]

4.5.3.1.1 Periodic special inspections shall be carried out;

4.5.3.1.1.1 at the intervals set out in Subdivision II of Division II of Part IV of the applicable schedule I to XV of Appendix 3 of this standard or with a machinery planned maintenance system (MPMS) that is approved by the vessel delegated marine classification society[2] and

4.5.3.1.1.2 at the time of the periodic general inspection, where during the inspection the Inspector has reasonable grounds to believe that there are internal defects in the machinery.

4.5.3.1.2 Where a periodic special inspection is required in accordance with paragraph 4.5.3.1.1.1 a periodic general inspection shall be carried out, as soon as practicable, subsequent to the reassembly of the machinery that was inspected.

4.5.3.1.3 Where machinery is to be inspected in accordance with this standard, the vessel owner shall ensure that the machinery is opened up and cleaned and the removable components are removed, as required by the Inspector.

4.5.4 Continuous Periodic Special Inspections

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[2] In case of vessels operating in accordance with the provisions of a Machinery Planned Maintenance system (MPMS) that is approved by the vessel delegated marine classification society the following is to be considered;

*The Chief Engineers shall be provided with familiarization training regarding use of the systems on board;
*The vessel delegated marine classification society reports are to clearly identify when the MPMS annual survey has been credited; and
*Continued performance of the post enrollment responsibilities of the vessel's Authorized Representative and the delegated vessel marine classification society, as set out in TP 13585 E DSIP Enrollment Procedure

4.5.4.1 On a written request by a vessel owner, the Regional Inspection Services manager may accept a system of continuous periodic special inspections where the inspection requirements referred to in paragraph 4.5.3.1.1.1 are complied with according to a cycle in which approximately the same number of components is inspected in each 12-month period.

4.5.4.2 An up-to-date record indicating the status of the continuous periodic special inspection of the various components on board a vessel shall be maintained.

4.5.4.3 Where, in the course of a continuous periodic special inspection, a defect is found in a component and the nature of the defect and the operational conditions indicate that there may be a similar defect in a related or similar component on board the vessel, the Inspector may require that the related or similar component also be inspected during the inspection.

4.6 Inspections of the Outside of the Vessel's Bottom

4.6.1 Frequency

4.6.1.1 There should be a minimum inspection of the outside of the vessel's bottom during any four or five year period as detailed in Appendix 2 of this standard.

4.6.2 General

4.6.2.1 Vessels subject to certification as prescribed in the *Vessel Safety Certificates Regulations*, shall be inspected in dry dock or on a slipway as prescribed in Tables I,II and III of Appendix 2, except that where cannot comply with the requirements, an Underwater Inspection In Lieu of Dry Dock (UWILD) may be allowed if there is no risk to the vessels safety, and where postponement is allowed in the case of vessels subject to four or five year inspection, refer to Appendix 6 of this standard for postponement request guidance, the succeeding inspection of the outside of the vessel's bottom shall become due within the inspection interval prescribed in Appendix 2 from the original due date of the inspection.

4.6.2.1.1 Notwithstanding section 4.6.2.1, consideration may be given to alternate inspections being carried out with the ship afloat, where the criteria specified Appendix 2 of this standard is to be considered to allow the alternative inspections for one cycle, as well as the information and supporting documents that are required to be submitted by the AR at least 90 days before the Dry Dock due date, through its RO when the vessel is delegated.

4.6.2.2 At the Inspection of the outside of the vessels bottom, the vessel shall be placed on blocks of sufficient height, and suitable stages shall be erected around the vessel to facilitate proper inspection of the outside of the hull and its appendages.

4.7 Additional Inspection

4.7.1 An additional inspection is an inspection, either general or partial according to the circumstances, to be made after a repair resulting from an accident, modification, or whenever any repairs or renewals are made.

4.7.2 The Inspector responsible for issuing the relevant certificate will follow up with any repairs or renewals and determine if an additional inspection is necessary.

4.7.3 With regards to an accident or modifications, the Inspector will initiate an investigation to determine whether an inspection is necessary.

4.7.4 The additional inspection, which may be general or partial according to the circumstances, should be such as to ensure that the repairs and any renewals have been effectively made and that the vessel and its equipment continue to be fit for the service for which the vessel is intended.

5. AMPLIFICATION OF TERMS AND CONDITIONS

5.1 Definition of Related Terms

5.1.1 All definitions from the *Canada Shipping Act 2001* and its regulations apply to this Standard for the requirement under consideration.

5.1.2 In addition to 5.1.1 the following definitions apply to this standard;

Act means the *Canada Shipping Act 2001*

Heavy Ice Conditions: means, those that may cause structural damage to the hull of the vessel, taking into consideration the hull strength of the vessel.

Inspector means an inspector appointed under the CSA, 2001

Local Steering Gear Control System means a system by which required rudder movements are transmitted to the steering gear power unit, which controls from a position within the steering gear compartment.

MTRB means the Marine Technical Review Board established under section 26 of the Act;

Non-destructive testing means a type of ultrasonic testing, magnetic particle testing, liquid penetrant testing and radiographic testing.

Pressure Vessel means a boiler or an unfired pressure vessel.

Recognized Organization means an organization or a corporation with which the Minister has entered into an agreement or arrangement under paragraph 10(1) (c) of the Act.

Shipside Door-Operating Mechanism means machinery employed in the opening and closing of a hull door, visor or roll on/roll off ramp of a vessel, but does not include the door, visor or ramp or any locking device.

5.2 Request for Extension, Postponement, Deviation or Exemption

5.2.1 Maximum period of validity for a Safety Inspection Certificate is a follows;

Vessel Type	Type of inspection, which leads to the issuance of a Safety Inspection Certificate	Maximum period of validity for the Safety Inspection Certificate issued
Passenger	Annual	1 year

Vessel Type	Type of inspection, which leads to the issuance of a Safety Inspection Certificate	Maximum period of validity for the Safety Inspection Certificate issued
Non-Passenger 150 GT and Greater	Renewal	5 years (with annual endorsements)
Fishing 150 GT and Greater	Annual	1 year
Non – Passenger and Fishing (greater than 15 GT and less than 150 GT)	Periodic (Renewal)	4 years

5.2.2 Notwithstanding the vessels initial, annual, intermediate, periodical, renewal and outside the vessels bottom inspections as described in this document, there may be certain unforeseen situations due to external factors that could require a request for a postponement, deviation or exemption from the requirements of this standard or for equivalencies or exemptions to requirements of standards not incorporated into regulations. In the case of IMO Certificates, any extension or postponement will be made in consideration of IMO requirements.

5.2.3 To apply for an exemption or equivalency to this standard, other than regulations and document referred by regulations, the applicant should first review the table under Appendix 6 of this standard to see if their request may be listed there, if not, please contact the nearest Transport Canada Centre (TCC) or the RO in the case of delegated vessels for additional details about your specific request.

5.2.4 To apply for an exemption or equivalency through the MTRB, the applicant should first contact their nearest TCC or the RO in the case of delegated vessels. Details on the application process are available at https://tc.canada.ca/en/marine-transportation/marine-safety/marine-technical-review-board-mtrb

5.3 Application of Special Circumstances

5.3.1 Continuous Inspection (Fishing Vessels Greater than 24.4 Metres or Greater than 150 GT)

5.3.1.1 Four year inspections may be carried out on a continuous basis if all parts subject to inspection are inspected at least once every four years and, where this method of

inspection is adopted, the owner of a fishing vessel shall furnish a chart for recording the inspections carried out.

5.3.1.2 The method of inspection referred to in subsection 5.3.1.1 shall not exempt any fishing vessel from the annual inspection required by this standard.

5.4 Inspections of the Outside of the Vessel's Bottom

5.4.1 Vessels subject to certification as prescribed in the *Vessel Safety Certificates Regulations*, shall be inspected in Dry Dock or on a slipway as prescribed in Tables I, II, III of Appendix 2, except that where it cannot comply with the requirements, an Under-Water Inspection in Lieu of Dry Dock (UWILD) may be allowed if there is no risk to the vessel safety and, where postponement is allowed in the case of vessel's subject to four or five year inspection, refer to Appendix 6 of this standard for postponement request guidance, the succeeding inspection of the outside of the vessel's bottom shall become due within the inspection interval prescribed in Appendix 2 from the original due date of the inspection.

5.4.2 Notwithstanding section 5.4.1 consideration may be given to alternate inspections being carried out with the ship afloat, where the criteria specified in Appendix 2 of this standard is to be considered to allow the alternative inspections for one cycle, as well as the information and supporting documents that are required to be submitted by the AR at least 90 days before the Dry Dock due date, through its RO when the vessel is delegated.

5.4.3 At the Inspection of the outside of the vessel's bottom, the vessel shall be placed on blocks of sufficient height, and suitable stages shall be erected around the vessel to facilitate proper inspection of the outside of the hull and its appendages.

5.5 Revalidation of Certificates

5.5.1 A certificate ceases to be valid if the periodical, intermediate or annual inspection, as appropriate, or the inspection of the outside of the vessel's bottom is not completed within the periods specified in this standard. The validity of the certificate should be restored by carrying out the appropriate inspection, which in such circumstances, should consist of the requirements of the inspection that was not carried out, but its thoroughness and stringency should have regard to the time this inspection was allowed to lapse.

5.6 Inspection of Radio Installations

5.6.1 The inspection of the radio installations, including those used in life saving appliances, should always be carried out by a qualified Radio Inspector or who has necessary knowledge of the requirements of the *Navigation Safety Regulations, 2020* ,SOLAS 74 Chapter IV, the International Telecommunication Union's Radio Regulations, and the associated performance standards for radio equipment.

5.7 Inspection of the Automatic Identification System (AIS)

5.7.1 The inspection of the AIS should always be carried out by a qualified Radio Inspector or who has necessary knowledge of the requirements of the *Navigation Safety Regulations*, 2020, SOLAS 74 Chapter V, the International Telecommunication Union's Radio Regulations, and the associated performance standards for radio equipment.

5.8 Inspection for Vessels Intending to Operate in Polar Waters

5.8.1 In accordance with SOLAS 74/88 regulations XIV/2.1 and 3.1, MARPOL Annex I regulation 47, MARPOL Annex II regulation 22, MARPOL Annex IV regulation 18 and MARPOL Annex V regulation 14, the Polar Code is a standalone instrument, providing requirements additional to SOLAS 74/88 and MARPOL for ships intended to operate in polar waters. The requirements of the Polar Code should be surveyed in the context of the surveys under SOLAS 74/88 and MARPOL, but do not form separate survey types.

5.8.2 For MARPOL Annexes I and II, compliance with the Polar Code should be indicated on the International Oil Pollution Prevention Certificate and, where applicable, the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk. For SOLAS 74/88, the Polar Ship Certificate should be issued (Polar Code, paragraph 1.3) and endorsed for compliance with the Polar Code. The Polar Ship Certificate should be perceived as a certificate additional to SOLAS certificates for ships intended to operate in polar waters, and the validities of other certificates are not affected by it when a ship stays outside of polar areas.

5.8.3 Although there is no dedicated type of survey associated with the Polar Ship Certificate, the applicable types of inspection are in Annex 1 section 9.

Annex 1 - INSPECTION REQUIREMENTS UNDER THE 1974 SOLAS CONVENTION, AS MODIFIED BY THE 1988 PROTOCOL RELATIVE THERETO

Note: Canadian Modifications outlines mandatory Canadian-specific requirements related to SOLAS and associated Codes, Recommendations, Guidelines, and Interpretations published in IMO Circulars and Resolutions and applies to new passenger vessels of more than 24 metres and cargo vessels of more than 500 GT and to existing passenger vessels of more than 24 metres and cargo vessels of more than 500 GT transferring to the Canadian Registry.

1. SOLAS CHAPTER II-1 Construction – Structure, Subdivision and Stability, Machinery and Electrical Installations

1.1 Reference to Other IMO Instruments or SOLAS Chapters

1.1.1 Load Lines Convention SOLAS Chapter II-1 Canadian Modifications

1.1.1.1 For this Annex, references to the International Convention on Load Lines made in SOLAS Chapter II-1 shall be interpreted as a reference to the appropriate part of the *Load Line Regulations*, SOR/2007-99.

2. SOLAS CHAPTER II-2 Construction – Fire Protection, Fire Detection and Fire Extinction

2.1 Regulation 7 Detection and Alarm

2.1.1 In addition to the requirements of Regulation 7, (VFSR SOR/2017-14 section 118) verify the arrangement to connect to the shore fire-alarm system or the local fire-station telephone system

2.1.2 Regulation 10 Fire-fighter’s outfits

2.1.3 In addition to the requirements of Regulation 10, (VFSR SOR/2017-14 section 144) Verify the provisions and specification for arrangement of the fire axes.

3. SOLAS CHAPTER III Life Saving Appliances and Arrangements

3.1 LSA CODE RESOLUTION MSC.48 (66) AND RESOLUTION MSC.81 (70)

3.1.1 Approval of Life Saving Appliances

3.1.1.1 In addition to the requirements of Resolution MSC.48(66) and Resolution MSC.71(7) all appliances shall comply with the Canadian Modifications set out in (TP 14475: Canadian Life Saving Appliance Standard).

3.1.1.2 In addition to the requirements of Resolution MSC.48(66) and Resolution MSC.71(7) all appliances shall be approved in accordance with (TP 14612: Procedures for Approval of Life Saving Appliances and Fire Safety Systems, Equipment and Products).

4. REQUIREMENTS FOR INSPECTIONS FOR THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

4.1 Initial Inspection

4.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

4.1.1.1 (EI) 1.1

4.1.1.2 (EI) 1.1.1 – EI 1.1.9.1

4.1.2 Canadian Modifications

4.1.2.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must**:**

4.1.2.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

4.1.2.1.2 Comply with the *Fire Detection and Extinguishing Equipment Regulations* (FDEER) (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(EI) 1.1.1.1	(VFSR SOR/2017-14 sections 3, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135) (FDEER section 14)
(EI) 1.1.1.2	(VFSR SOR/2017-14 sections, 114, 136, 137, 138) (FDEER section 16) (MMR Part I Schedule IX)
(EI) 1.1.1.3	(VFSR SOR/2017-14 sections 3, 143, 147,148, 151, 152, 153) (FDEER section 17)
(EI) 1.1.1.4	(VFSR SOR/2017-14 sections 3, 115, 116, 117, 118, 139, 140) (FDEER sections 13, 15)
(EI) 1.1.1.5	(VFSR SOR/2017-14 sections 112, 122)(FDEER section 15) (HCR sections 168, 169)
(EI) 1.1.1.6	(VFSR SOR/2017-14 sections 3, 146, 147,148,149,150) (HCR sections 84, 94, 95, 224)
(EI) 1.1.1.7	(VFSR SOR/2017-14 sections 3, 115) (FDEER section 13)
(EI) 1.1.1.8	(VFSR SOR/2017-14 sections 3, 141, 155) (FDEER section 15)
(EI) 1.1.1.10	(VFSR SOR/2017-14 section 142)(FDEER section 15)
(EI) 1.1.1.12	(VFSR SOR/2017-14 sections 3, 158) (FDEER section 16) (HCR section 94)

HSSC Ref.	Canadian Modifications
(EI) 1.1.1.14	(VFSR SOR/2017-14 sections 155,156)
(EI) 1.1.1.15	(VFSR SOR/2017-14 section 3)
(EI) 1.1.1.17	(VFSR SOR/2017-14 section 154)
(EI) 1.1.1.18	(LSER SOR/2010-83 - (6) Part 1, (32) Part II)
(EI) 1.1.1.23	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(EI) 1.1.1.25	(TP 127: Ships Electrical Standards (2018))
(EI) 1.1.2.1	(VFSR SOR/2017-14 section 3)
(EI) 1.1.2.3	(VFSR SOR/2017-14 section 3)
(EI) 1.1.4.2	(VFSR SOR/2017-14 sections 3, 109,110, 111, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135) (FDEER section 14) (HCR sections 83, 190) (MMR Schedule XII)
(EI) 1.1.4.3	(VFSR SOR/2017-14 sections 3, 136, 137, 154) (FDEER section 16)
(EI) 1.1.4.4	(VFSR SOR/2017-14 sections 3, 143, 148, 154) (FDEER section 17)
(EI) 1.1.4.5	(VFSR SOR/2017-14 section 159)
(EI) 1.1.4.6	(VFSR SOR/2017-14 sections 3, 115,116,117,118, 139,140,142) (FDEER sections 13, 15)
(EI) 1.1.4.8	(VFSR SOR/2017-14 sections 112, 115,116,117, 122,140)(FDEER sections 13, 15) (HCR sections 168, 169)
(EI) 1.1.4.9	(VFSR SOR/2017-14 sections 3,115, 146,147,148,149,150) (FDEER section 13) (HCR sections 84, 94, 95, 224)
(EI) 1.1.4.10	(VFSR SOR/2017-14 sections 3, 141, 155) (FDEER sections 15)
(EI) 1.1.4.12	(VFSR SOR/2017-14 sections 142, 158) (FDEER sections 15, 16) (HCR section 94)
(EI) 1.1.4.14	(VFSR SOR/2017-14 section 154)
(EI) 1.1.4.15	(VFSR SOR/2017-14 section 3)

HSSC Ref.	Canadian Modifications
(EI) 1.1.4.28	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(EI) 1.1.4.24	(FBDR SOR/2010-83 sections 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37)
(EI) 1.1.4.29	(TP 127: Ships Electrical Standards (2018))
(EI) 1.1.5.1	(VFSR SOR/2017-14 section 3)
(EI) 1.1.5.2	(VFSR SOR/2017-14 section 3)
(EI) 1.1.5.3	(VFSR SOR/2017-14 section 3)
(EI) 1.1.5.5	(VFSR SOR/2017-14 section 3)
(EI) 1.1.5.8	(VFSR SOR/2017-14 section 3)
(EI) 1.1.7.1	(VFSR SOR/2017-14 sections 157,158) (FDEER sections 16) (HCR sections 42, 94)
(EI) 1.1.7.3	(VFSR SOR/2017-14 section151)
(EI) 1.1.7.4	(VFSR SOR/2017-14 section 154)
(EI) 1.1.7.6	(FBDR SOR/2010-83 section 3, 7, 9)
(EI) 1.1.8.1	(VFSR SOR/2017-14 section 3)
(EI) 1.1.8.2	(VFSR SOR/2017-14 section 3)

4.2 Annual Inspection

4.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

4.2.1.1 (EA) 1.2

4.2.1.2 (EA) 1.2.1- 1.2.5.2

4.2.2 Canadian Modification

4.2.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

4.2.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

4.2.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(EA) 1.2.1.18	(VFSR SOR/2017-14 section154)
(EA) 1.2.1.20	(VFSR SOR/2017-14 sections 152, 157,158) (FDEER section 16) (HCR sections 42, 94)
(EA) 1.2.1.22	(VFSR SOR/2017-14 section151)
(EA) 1.2.1.26	(VFSR SOR/2017-14 section 3)
(EA) 1.2.1.28	(FBDR SOR/2010-83 sections 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37)
(EA) 1.2.2.1	(VFSR SOR/2017-14 sections 3, 109,110,111, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135)(FDEER section 14) (HCR sections 83,190) (MMR Schedule XII)
(EA) 1.2.2.3	(VFSR SOR/2017-14 sections 3, 114, 136, 137, 138) (FDEER section 16) (MMR Part I Schedule IX)
(EA) 1.2.2.4	(VFSR SOR/2017-14 sections 3, 143, 148, 154) (FDEER section 17)
(EA) 1.2.2.5	(VFSR SOR/2017-14 section 159)
(EA) 1.2.2.6	(VFSR SOR/2017-14 sections 3, 115, 116, 117, 139, 140, 142, 158) (FDEER sections 13, 15, 16)
(EA) 1.2.2.7	(VFSR SOR/2017-14 sections112, 115, 116, 117, 122, 140) (FDEER sections 13, 15) (HCR sections 168, 169)
(EA) 1.2.2.8	(VFSR SOR/2017-14 section 139) (FDEER section 15)
(EA) 1.2.2.9	(VFSR SOR/2017-14 sections 3, 115, 146,147.148,149,150)(FDEER section 13) (HCR sections 84, 94, 95, 224)
(EA) 1.2.2.10	(VFSR SOR/2017-14 sections 3, 141, 155) (FDEER sections 15)
(EA) 1.2.2.11	(VFSR SOR/2017-14 sections155, 156)
(EA) 1.2.2.14	(VFSR SOR/2017-14 sections 142,157,158(FDEER sections 15, 16) (HCR sections 42, 94)
(EA) 1.2.2.16	(VFSR SOR/2017-14 section 154)
(EA) 1.2.2.18	(FBDR SOR/2010-83 section 3, 7, 9)

HSSC Ref.	Canadian Modifications
(EA) 1.2.2.31	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(EA) 1.2.2.33	(*TP 127: Ships Electrical Standards (2018))*
(EA) 1.2.3.1	(VFSR SOR/2017-14 section 3)
(EA) 1.2.3.2	(VFSR SOR/2017-14 section 3)
(EA) 1.2.3.3	(VFSR SOR/2017-14 section 3)
(EA) 1.2.3.7	(VFSR SOR/2017-14 section 3)

4.3 Periodical Inspection

4.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

4.3.1.1 (EP) 1.3

4.3.1.2 (EP) 1.3.1 – 1.3.5.2

4.3.2 Canadian Modifications

4.3.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

4.3.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

4.3.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(EP) 1.3.2.2	(VFSR SOR/2017-14 section 3, 115, 116, 117, 139,140,158) (FDEER section 13, 15, 16)
(EP) 1.3.2.3	(VFSR SOR/2017-14 sections 112, 122, 140) (FDEER sections 15) (HCR sections 168, 169)
(EP) 1.3.2.4	(VFSR SOR/2017-14 sections 3, 115, 146,147, 148, 149, 150)(FDEER section 13) (HCR sections 84, 94, 95, 224)
(EP) 1.3.2.5	(VFSR SOR/2017-14 sections. 3, 141, 155) (FDEER section 15)
(EP) 1.3.2.7	(VFSR SOR/2017-14 section 112) (FDEER section 15)
(EP) 1.3.2.8	(VFSR SOR/2017-14 sections155, 156)

HSSC Ref.	Canadian Modifications
(EP) 1.3.3.2	(VFSR SOR/2017-14 section 3)

4.4 Renewal Inspection

4.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

4.4.1.1 (ER) 1.4

4.4.1.2 (ER) 1.4.1 – 1.4.5.1

4.4.2 Canadian Modification

4.4.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

4.4.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

4.4.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered**.**

HSSC Ref.	Canadian Modifications
(ER) 1.4.3.2	(VFSR SOR/2017-14 section 3)

5. REQUIREMENTS FOR INSPECTIONS FOR THE CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE

5.1 Initial Inspection

5.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

5.1.1.1 (CI) 2.1

5.1.1.2 (CI) 2.1.1- 2.1.9.1

5.1.2 Canadian Modifications

5.1.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

5.1.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

5.1.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(CI) 2.1.1.1	(LLR SOR/2007-99 -Schedule 1)

HSSC Ref.	Canadian Modifications
(CI) 2.1.1.3	(MPR SOR/2007-115 section 339) (MMR SOR/90-264 Schedule VII Part I Division IV), MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(CI) 2.1.1.4	(MPR SOR/2007-115 section 339)
(CI) 2.1.1.5	((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CI) 2.1.1.6	(TP 127 Ships Electrical Standards (2018))
(CI)2.1.1.7	(VFSR SOR/2017-14 section 154)
(CI) 2.1.1.9	(VFSR SOR/2017-14 section 109,110,112, 113, 114, 115, 122) (FDEER sections 13, 15) (HCR sections 56, 83, 150, 210) (MMR Schedules IX, XII)
(CI) 2.1.1.10	(VFSR SOR/2017-14 section 112,122) (FDEER sections 15) (HCR sections 168, 169)
(CI) 2.1.1.11	(VFSR SOR/2017-14 sections 3, 147) (HCR sections 84, 94, 224)
(CI) 2.1.1.14	(VFSR SOR/2017-14 section 156)
(CI) 2.1.1.25	(Rules of Recognized Organization)
(CI) 2.1.1.26	(VFSR SOR/2017-14 section158) (FDEER section 16) (HCR section 94)
(CI) 2.1.2.1	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CI) 2.1.2.2	(TP 127: Ships Electrical Standards (2018))
(CI) 2.1.2.3	(VFSR SOR/2017-14 sections 120, 121, 122) (HCR sections 43, 168, 169)
(CI) 2.1.2.4	(VFSR SOR/2017-14 section 111) (HCR section 190)
(CI) 2.1.4.4	(LLR SOR/2007-99 - Schedule 1)
(CI) 2.1.4.6	(MPR SOR/2007-115 section 339)
(CI) 2.1.4.7	(MPR SOR/2007-115 section 339) ((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))

HSSC Ref.	Canadian Modifications
(CI) 2.1.4.8	(MPR SOR/2007-115 section 339) ((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CI) 2.1.4.8.1	(VFSR SOR/2017-14 section 158)
(CI) 2.1.4.9	(MPR SOR/2007-115 section 339)
(CI) 2.1.4.10	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions) (VFSR SOR/2017-14 sections. 109, 110, 151, 152, 153)
(CI) 2.1.4.11 - (CI) 2.1.4.45	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(CI) 2.1.4.46	(VFSR SOR/2017-14 section 109) (HCR section 83) (MMR Schedule XII)
(CI) 2.1.4.47	(VFSR SOR/2017-14 section 109) (HCR section 83) (MMR Schedule XII)
(CI) 2.1.4.48	(VFSR SOR/2017-14 section 110) (HCR section 83) (MMR Schedule XII)
(CI) 2.1.4.49	(VFSR SOR/2017-14 section 109) (HCR section 83) (MMR Schedule XII)
(CI) 2.1.4.50	(TP 127 Ships Electrical Standards (2018)
(CI) 2.1.4.51	(TP 127 Ships Electrical Standards (2018)
(CI) 2.1.4.55	(VFSR SOR/2017-14 section 154)
(CI) 2.1.4.56	(VFSR SOR/2017-14 sections 112, 113, 114, 115, 121, 122, 123) (FDEER sections 13, 15) (HCR sections 43, 50, 56, 150, 168, 169, 185, 210, 235, 236, 237) (MMR Part I Schedule IX)
(CI) 2.1.4.57	(VFSR SOR/2017-14 sections 112,123)(FDEER section 15)(HCR sections 50, 185, 235, 236, 237)
(CI) 2.1.4.58	(VFSR SOR/2017-14 sections 3,147)(HCR sections 84, 94, 224)
(CI) 2.1.4.59	(VFSR SOR/2017-14 section 3)
(CI) 2.1.4.61	(VFSR SOR/2017-14 sections 155,156)
(CI) 2.1.4.72	(Rules of Recognized Organization)

HSSC Ref.	Canadian Modifications
(CI) 2.1.5.1	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CI) 2.1.5.6	(VFSR SOR/2017-14 section 111) (HCR section 190)
(CI) 2.1.8.1	(MPR SOR/2007-115 section 339)
(CI) 2.1.8.3	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CI) 2.1.8.11	(VFSR SOR/2017-14 section 154)

5.2 Annual Inspection

5.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

5.2.1.1 (CA) 2.1

5.2.1.2 (CA) 2.2.1 -2.2.62

5.2.2 Canadian Modifications

5.2.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

5.2.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

5.2.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(CA) 2.2.1.18	(VFSR SOR/2017-14 section 154)
(CA) 2.2.1.21	(MPR SOR/2007-115 section 339)
(CA) 2.2.1.22	(MMR SOR/90-264 Schedule VII Part I)(MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(CA) 2.2.2.2	(Rules of Recognized Organization)
(CA) 2.2.2.5	(LLR SOR/2007-99 - Schedule 1)
(CA) 2.2.2.7	(MPR SOR/2007-115 section. 339) (MMR SOR/90-264 Schedule VII Part I)(MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)

HSSC Ref.	Canadian Modifications
(CA) 2.2.2.8	(MPR SOR/2007-115 section 339) (MMR SOR/90-264 Schedule VII Part I)(MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(CA) 2.2.2.8.1	(VFSR SOR/2017-14 section157, 158)
(CA) 2.2.2.9	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)) (VFSR SOR/2017-14 sections 109,110, 151, 152,153)
(CA) 2.2.2.10 - (CA) 2.2.2.21	(MMR SOR/90-264 Schedule VII Part I, MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(CA) 2.2.2.22	(TP 127 Ships Electrical Standards (2018))
(CA) 2.2.2.23	(TP 127 Ships Electrical Standards (2018))
(CA) 2.2.2.2*6*	(VFSR SOR/2017-14 section 154)
(CA) 2.2.2.27	(VFSR SOR/2017-14 sections112,113,114,115,119,121,122,123) (FDEER sections 13, 15) (HCR sections 43, 45, 46, 50, 56, 148, 150, 168, 169, 170, 185, 207, 210, 222, 235, 236, 237)
(CA) 2.2.2.28	(VFSR SOR/2017-14 section. 147) (HCR sections 84, 94, 224)
(CA) 2.2.2.38	(MPR SOR/2007-115 section 339)
(CA) 2.2.3.1	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(CA) 2.2.3.5	(VFSR SOR/2017-14 section 111) (HCR section 190)
(CA) 2.2.3.17	(TP 127 Ships Electrical Standards (2018)

5.3 Intermediate Inspection

5.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

5.3.1.1 (CIn) 2.3

5.3.1.2 (CIn) 2.3.1 -2.3.6.2

5.3.2 Canadian Modifications: None

5.4 Renewal Inspection

5.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

5.4.1.1 (CR) 2.4

5.4.1.2 (CR) 2.4.1 – 2.4.7

5.4.2 Canadian Modifications: None

6. REQUIREMENTS FOR THE INSPECTION OF THE OUTSIDE OF THE SHIP'S BOTTOM OF CARGO SHIPS

6.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

6.1.1.1 (B) 3

6.1.1.2 (B) 3.1 - 3.2.2

6.1.2 Canadian Modifications: None

7. REQUIREMENTS FOR INSPECTION FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE

7.1 Initial Inspections

7.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

7.1.1.1 (RI) 4.1

7.1.1.2 (RI) 4.1.1 – RI 4.1.4.1

7.1.2 Canadian Modifications

HSSC Ref.	Canadian Modifications
(RI) 4.1.1.1	(TP 127 Ships Electrical Standards (2018))
(RI) 4.1.1.4	(TP 127 Ships Electrical Standards (2018))

7.2 Periodical Inspections

7.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

7.2.1.1 (RP) 4.2

7.2.1.2 (RP) 4.2.1 – RP 4.2.3.2

7.2.2 Canadian Modifications: None

7.3 Renewal Inspections

7.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

7.3.1.1 (RR) 4.3

7.3.1.2 (RR) 4.3.1 – 4.3.3.1

7.3.2 Canadian Modifications: None

8. REQUIREMENTS FOR INSPECTIONS FOR THE PASSENGER SHIP SAFETY CERTIFICATE

8.1 Initial Inspection

8.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

8.1.1.1 (PI) 5.1

8.1.1.2 (PI) 5.1.1 – PI 5.1.6.1

8.1.2 Canadian Modifications

8.1.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

8.1.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

8.1.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(PI) 5.1.1.1	(LLR SOR/2007-99.- Schedule 1)
(PI) 5.1.1.2	(MPR SOR/2007-115 section 339)
(PI) 5.1.1.5	(LLR SOR/2007-99- Schedule 1)(MPR SOR/2007-115 section 339)
(PI) 5.1.1.6	(MMR SOR/90-264 Schedule VII Part I, MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)(VFSR SOR/2017-14 section 158)
(PI) 5.1.1.7	(MPR SOR/2007-115 section. 339)
(PI) 5.1.1.8	(MMR SOR/90-264 Schedule VII Part I, MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(PI) 5.1.1.9	(MMR SOR/90-264 Schedule VII Part I Division IV (TP 127 Ships Electrical Standards (2018))
(PI) 5.1.1.10	(TP 127 Ships Electrical Standards (2018))
(PI) 5.1.1.11	(VFSR SOR/2017-14 section 154)
(PI) 5.1.1.12	(MMR SOR/90-264 Schedule VII Part I Division IV) MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions) (VFSR SOR/2017-14 sections 3, 109, 110, 111, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135)

HSSC Ref.	Canadian Modifications
(PI) 5.1.1.13	(VFSR SOR/2017-14 sections 3, 115,116,117,139,140) (FDEER sections 13, 15)
(PI) 5.1.1.14	(VFSR SOR/2017-14 sections 114, 143) (FDEER section 17) (MMR Part I Schedule IX)
(PI) 5.1.1.15	(VFSR SOR/2017-14 section 143) (FDEER section 17)
(PI) 5.1.1.16	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))(VFSR SOR/2017-14 Sections 115,116,117)
(PI) 5.1.1.17	(VFSR SOR/2017-14 Sections 151,152, 153)
(PI) 5.1.1.18	(VFSR SOR/2017-14 Sections 3, 112, 113, 115, 119, 120, 121, 122, 123, 141, 146, 147, 154, 157, 158) (FDEER sections 13, 15, 16) (HCR sections 42, 43, 45, 46, 50, 56, 84, 94, 148, 150, 168, 169, 170, 185, 207, 210, 222, 224, 235, 236, 237)
(PI) 5.1.1.19	(VFSR SOR/2017-14 Sections 3, 116, 117, 119, 120, 121, 122, 123, 142, 157, 158) (FDEER sections 13, 15, 16) (HCR sections 42, 43, 45, 46, 50, 94, 148, 168, 169, 170, 185, 207, 222, 235, 236, 237)
(PI) 5.1.1.20	(VFSR SOR/2017-14 Section 142) (FDEER section 15)
(PI) 5.1.1.21	(VFSR SOR/2017-14 Sections 3, 117) (FDEER section 13)
(PI) 5.1.1.22	(VFSR SOR/2017-14 Section 3)
(PI) 5.1.1.23	(VFSR SOR/2017-14 Section 3)
(PI) 5.1.1.29	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(PI) 5.1.1.30	(TP 127: Ships Electrical Standards (2018))
(PI) 5.1.1.38	(TP 127: Ships Electrical Standards (2018))
(PI) 5.1.1.41	(TP 127: Ships Electrical Standards (2018))
(PI) 5.1.1.45	(VFSR SOR/2017-14 section 158) (FDEER section 16) (HCR section 94)
(PI) 5.1.1.46	(VFSR SOR/2017-14 Section 159)

HSSC Ref.	Canadian Modifications
(PI) 5.1.1.47	(VFSR SOR/2017-14 Section 159)
(PI) 5.1.3.2	(SOLAS 74/12 reg.II-1/8-1)[3]; (TP 10943: Passenger Vessel Operations and Damaged Stability Standards (Non-convention vessels) (2007))(HCR 80)
(PI) 5.1.3.3	(SOLAS 74/12 reg.II-1/8-1)[3]
(PI) 5.1.3.4	(MPR SOR/2007-115 section 339)
(PI) 5.1.3.6	(LLR SOR/2007-99 - Schedule 1)
(PI) 5.1.3.17	(MPR SOR/2007-115 section 339)
(PI) 5.1.3.19	(MPR SOR/2007-115 section 339) ((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(PI) 5.1.3.20	(MPR SOR/2007-115 section 339 ((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions)
(PI) 5.1.3.20.1	(VFSR SOR/2017-14 Section 158)(FDEER section 16) (HCR section 94)
(PI) 5.1.3.21	(MPR SOR/2007-115 section 339)
(PI) 5.1.3.22	(MPR SOR/2007-115 section 339)
(PI) 5.1.3.23	(MPR SOR/2007-115 section 339)
(PI) 5.1.3.24-(PI) 5.1.3.59	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PI) 5.1.3.61	(VFSR SOR/2017-14 section151, 152,153)
(PI) 5.1.3.62	(VFSR SOR/2017-14 section151, 152,153)
(PI) 5.1.3.64	(TP 127 Ships Electrical Standards 2018))
(PI) 5.1.3.65	(TP 127 Ships Electrical Standards 2018))

[3] Regulation 8-1 does not apply to vessels engaged on a domestic voyage that does not exceed near coastal voyage Class 2.

HSSC Ref.	Canadian Modifications
(PI) 5.1.3.67	(TP 127 Ships Electrical Standards 2018))
(PI) 5.1.3.67.2	(VFSR SOR/2017-14 section 115)
(PI) 5.1.3.70	(VFSR SOR/2017-14 section 154)
(PI) 5.1.3.71	(VFSR SOR/2017-14 sections 3, 109,110,111,135) (FDEER sections 14) (HCR sections 83, 90) (MMR Part I Schedule XII)
(PI) 5.1.3.72	(VFSR SOR/2017-14 section142)
(PI) 5.1.3.73	(VFSR SOR/2017-14 sections 3, 136, 137, 138, 154) (FDEER sections 16)
(PI) 5.1.3.74	(VFSR SOR/2017-14 sections 3, 143, 148, 153,154) (FDEER section 17)
(PI) 5.1.3.75	(VFSR SOR/2017-14 sections 114, 154,159) (MMR Part I Schedule IX)
(PI) 5.1.3.76	(VFSR SOR/2017-14 sections 3, 115, 116, 117, 139,140,142,158) (FDEER sections 13, 15, 16) (HCR section 94)
(PI) 5.1.3.77	(VFSR SOR/2017-14 sections 112, 115, 116, 117, 122,140) (FDEER sections 13, 15) (HCR sections 168, 169)
(PI) 5.1.3.78	(VFSR SOR/2017-14 sections 3, 139) (FDEER section 15)
(PI) 5.1.3.79	(VFSR SOR/2017-14 sections 109,110, 151, 152, 153)(HCR section 83) (MMR Part I Schedule XII)
(PI) 5.1.3.80	(VFSR SOR/2017-14 sections 145, 146,147,148,149,150)(FDEER section 13) (HCR sections 84, 94, 95, 224)
(PI) 5.1.3.81	(VFSR SOR/2017-14 sections 3, 112, 113, 115, 119, 120, 121, 122, 123, 141, 146, 147, 148, 149, 150, 154, 157, 158) (FDEER sections 13, 15, 16) (HCR sections 42, 43, 45, 46, 50, 56, 84, 94, 95, 148, 150, 168, 169, 170, 185, 207, 210, 222, 224, 235, 236, 237)
(PI) 5.1.3.84	(VFSR SOR/2017-14 sections 149,150) (HCR sections 94, 95)
(PI) 5.1.3.86	(VFSR SOR/2017-14 section 3)
(PI) 5.1.3.87	(VFSR SOR/2017-14 sections 3,116,142) (FDEER sections 13, 15)
(PI) 5.1.3.88	(VFSR SOR/2017-14 sections 3,158) (FDEER sections 16)
(PI) 5.1.3.89	(VFSR SOR/2017-14 sections 3, 117) (FDEER sections 13)

HSSC Ref.	Canadian Modifications
(PI) 5.1.3.90	(VFSR SOR/2017-14 section 145) (FDEER sections 13)
(PI) 5.1.3.104	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(PI) 5.1.3.104.2	(LSER C.R.C., c. 1436 sections (6) Part 1, (32) Part II) (TP 14475: Canadian Life Saving Appliance Standard), (TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products)
(PI) 5.1.3.105	(TP 127 Ships Electrical Standards (2018))
(PI) 5.1.3.108	(VFSR SOR/2017-14 section 159)
(PI) 5.1.3.142	(VFSR SOR/2017-14 section 143) (FDEER section 17)
(PI) 5.1.3.145	(VFSR SOR/2017-14 section 159)
(PI) 5.1.3.146	(VFSR SOR/2017-14 section 159)
(PI) 5.1.5.1	(MPR SOR/2007-115 section339)
(PI) 5.1.5.4	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PI) 5.1.5.5	(MPR SOR/2007-115 section 339)
(PI) 5.1.5.6	(VFSR SOR/2017-14 section 154)
(PI) 5.1.5.7	(VFSR SOR/2017-14 sections 152,157,158) (HCR sections 42, 94)
(PI) 5.1.5.9	(VFSR SOR/2017-14 section 151)
(PI) 5.1.5.11	(FBDR SOR/2010-83 section 3, 7, 9)

8.2 Renewal Inspection

8.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections;

8.2.1.1 (PR) 5.2

8.2.1.2 (PR) 5.2.1.1- 5.2.4.1

8.2.2 Canadian Modifications

8.2.3 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

8.2.3.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

8.2.3.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

HSSC Ref.	Canadian Modifications
(PR) 5.2.1.15	(VFSR SOR/2017-14 section 154)
(PR) 5.2.1.20	(MPR SOR/2007-115 section 339)
(PR) 5.2.1.21	(MPR SOR/2007-115 section 339)
(PR) 5.2.1.22	(MPR SOR/2007-115 section 339)
(PR) 5.2.1.23	(MPR SOR/2007-115 section 339)
(PR) 5.2.1.24	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PR) 5.2.1.25	(VFSR SOR/2017-14 sections. 157,158) (FDEER section 16) (HCR section 42, 94)
(PR) 5.2.1.27	(VFSR SOR/2017-14 section 151)
(PR) 5.2.1.32	(FBDR SOR/2010-83 section 3, 7, 9)
(PR) 5.2.1.34	(FBDR SOR/2010-83 sections 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37)
(PR) 5.2.2.2	(SOLAS 74/06/12 regs.II-1/8, 8-1)[4]; (TP 10943: Passenger Vessel Operations and Damaged Stability Standards (Non-convention vessels) (2007)), (HCR 80), (LLR SOR/2007-99 - Schedule 1)
(PR) 5.2.2.3	(SOLAS 74/12 reg.II-1/8-1)[4]
(PR) 5.2.2.4	(MPR SOR/2007-115 section 339)
(PR) 5.2.2.7	(LLR SOR/2007-99 - Schedule 1)

[4] Regulation 8-1 does not apply to vessels engaged on a domestic voyage that does not exceed near coastal voyage Class 2

HSSC Ref.	Canadian Modifications
(PR) 5.2.2.21	(MPR SOR/2007-115 section 339)((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PR) 5.2.2.22	(MPR SOR/2007-115 section 339)((MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PR) 5.2.2.23	(VFSR SOR/2017-14 section 158) (FDEER section 16) (HCR section 94)
(PR) 5.2.2.24	(MPR SOR/2007-115 section 339)
(PR) 5.2.2.25	(MPR SOR/2007-115 section 339)
(PR) 5.2.2.26	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PR) 5.2.2.27-(PR) 5.2.2.54	(MMR SOR/90-264 Schedule VII Part I Division IV), (MSC/Circ.504 Guidance on design and construction of sea inlets under slush ice conditions))
(PR) 5.2.2.56	(VFSR SOR/2017-14 sections 151, 152, 153)
(PR) 5.2.2.57	(VFSR SOR/2017-14 sections 151, 152, 153)
(PR) 5.2.2.58	(TP 127 Ships Electrical Standards (2018))
(PR) 5.2.2.59	(TP 127 Ships Electrical Standards (2018))
(PR) 5.2.2.61	(TP 127 Ships Electrical Standards (2018))
(PR) 5.2.2.65	(VFSR SOR/2017-14 section 154)
(PR) 5.2.2.66	(VFSR SOR/2017-14 sections 3,109, 110, 111, 125, 126, 127, 128 129, 130, 131, 132, 133, 134, 135) (FDEER sections 14) (HCR sections 83, 190) (MMR Part I Schedule XII)
(PR) 5.2.2.68	(VFSR SOR/2017-14 sections 3, 114, 136,137) (FDEER sections 16) (MMR Part I Schedule IX)
(PR) 5.2.2.69	(VFSR SOR/2017-14 sections 3, 112, 113, 115, 116, 117, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 158) (FDEER sections 13, 14, 15, 16, 17) (HCR sections 43, 45, 46, 50, 56, 94, 148, 150, 168, 169, 170, 185, 207, 210, 222, 235, 236)

HSSC Ref.	Canadian Modifications
(PR) 5.2.2.70	(VFSR SOR/2017-14 sections 112, 122) (FDEER sections 15) (HCR sections 168, 169)
(PR) 5.2.2.71	(VFSR SOR/2017-14 sections 3, 139) (FDEER section 15)
(PR) 5.2.2.72	(VFSR SOR/2017-14 section 3)
(PR) 5.2.2.74	(VFSR SOR/2017-14 sections 3, 141) (FDEER section 15)
(PR) 5.2.2.75	(VFSR SOR/2017-14 sections 109,110, 151, 152, 153)(HCR section 83) (MMR Part I Schedule XII)
(PR) 5.2.2.76	(VFSR SOR/2017-14 sections 3,117) (FDEER section 13)
(PR) 5.2.2.76.2	(VFSR SOR/2017-14 section 115) (FDEER section 13)
(PR) 5.2.2.77	(VFSR SOR/2017-14 sections 3,143,148, 154) (FDEER section 17)
(PR) 5.2.2.78	(VFSR SOR/2017-14 section 159)
(PR) 5.2.2.79	(VFSR SOR/2017-14 sections 112, 113, 114, 120, 122, 123, 155, 156, 159) (FDEER section 15) (HCR sections 43, 50, 56, 150, 168, 169, 185, 210, 235, 236, 237) (MMR Part I Schedule IX)
(PR) 5.2.2.80	(VFSR SOR/2017-14 sections 109,110,111) (HCR sections 83, 190) (MMR Part I Schedule XII)
(PR) 5.2.2.81	(VFSR SOR/2017-14 section 120) (HCR section 43)
(PR) 5.2.2.82	(VFSR SOR/2017-14 sections 112,123) (FDEER sections 15) (HCR sections 50, 185, 235, 236, 237)
(PR) 5.2.2.83	(VFSR SOR/2017-14 sections 3,147,149) (HCR sections 84, 94, 224)
(PR) 5.2.2.86	(VFSR SOR/2017-14 sections 3,116,142) (FDEER sections 13, 15)
(PR) 5.2.2.87	(VFSR SOR/2017-14 sections 3,158) (FDEER section 16) (HCR section 94)
(PR) 5.2.2.88	(VFSR SOR/2017-14 section 145) (FDEER section 13)
(PR) 5.2.2.89	(VFSR SOR/2017-14 section 3)
(PR) 5.2.2.90	(VFSR SOR/2017-14 sections 155,156)
(PR) 5.2.2.92	(VFSR SOR/2017-14 section 159)

HSSC Ref.	Canadian Modifications
(PR) 5.2.2.93	(VFSR SOR/2017-14 section 159)
(PR) 5.2.2.94	(FBDR SOR/2010-83 section 3, 7, 9)
(PR) 5.2.2.106	(VFSR SOR/2017-14 section 159)
(PR) 5.2.2.112	(TP 127: Ships Electrical Standards (2018)

9. REQUIREMENTS FOR INSPECTION FOR THE POLAR SHIP CERTIFICATE ADDITIONAL TO SOLAS

9.1 Initial Inspection

9.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

9.1.1.1 (WI) 3.1

9.1.1.2 (WI) 3.1.1 – (WI) 3.1.4.1

9.1.2 **Canadian Modifications**

HSSC Ref.	Canadian Modifications
(WI) 3.1.1.52	(ASSPPR S. 11)
(WI) 3.1.2.49	(ASSPPR S. 11)
(WI) 3.1.3.5	(ASSPPR S. 11)

9.2 Annual Inspection

9.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

9.2.1.1 (WA) 3.2

9.2.1.2 (WA) 3.2.1 – (WA) 3.2.3.2

9.2.2 Canadian Modifications

HSSC Ref.	Canadian Modifications
(WA) 3.2.1.9	(ASSPPR S. 11)
(WA) 3.2.2.36	(ASSPPR S. 11)

9.3 Intermediate Inspection

9.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

9.3.1.1 (WIn) 3.3

9.3.1.2 (WIn) 3.3.1 – (WIn) 3.3.3.2

9.3.2 **Canadian Modifications:** None

9.4 Periodical Inspection

9.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

9.4.1.1 (WP) 3.4

9.4.1.2 (WP) 3.4.1 – (WP) 3.4.3.2

9.4.2 **Canadian Modifications:** None

9.5 Renewal Inspection

9.5.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections:

9.5.1.1 (WR) 3.5

9.5.1.2 (WR) 3.5.1 – (WR) 3.5.3.1

9.5.2 **Canadian Modifications:** None

Annex 2 - INSPECTION REQUIREMENTS FOR ISSUING SAFETY CERTIFICATE AND LETTER OF COMPLIANCE

1. REQUIREMENTS FOR INSPECTIONS FOR A PASSENGER VESSEL TO WHICH THE SAFETY CONVENTION DOES NOT APPLY AND THAT EXCEEDS 15 GT OR CARRIES MORE THAN 12 PASSENGERS[5]

1.1 SMALL PASSENGER VESSELS LESS THAN 24 METRES

1.1.1 Initial Inspections

1.1.1.1 **(HI) Hull Initial Inspection**

1.1.1.1.1 Verify the new vessel is being constructed in accordance with the plans and technical documents that have been submitted as set forth in Appendix 1 of this Standard**. (CSA 2001 s. 119).**

1.1.1.1.2 Verify before a new vessel is launched, the compartments within the main hull were subjected to hose or pressure tests[6] as follows: **(HCR s. 7, 13)**

1.1.1.1.2.1 Double bottoms that are not to be used for the carriage of oil: a head of water which shall be equal to the maximum head that can be experienced in service; **(HCR s. 11)**

1.1.1.1.2.2 Deep tanks and peak tanks used for the carriage of water, and deep tanks and double bottom tanks arranged for the carriage of oil fuel: a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m**; (HCR s. 10, 11, 13,)**

1.1.1.1.2.3 Peak bulkheads and stepped bulkheads, which do not form the boundaries of tanks, shall be tested by filling the peaks with water to the level of the load waterline; **(HCR s. 9, 10)**

1.1.1.1.2.4 Watertight bulkheads, including recesses and watertight flats, watertight tunnels, weather decks and waterways, shall be hose tested; the pressure of water in the hose shall be not less than 207 kPa; **(HCR s. 13)**

1.1.1.1.2.5 Testing of tanks where tanks are to be cemented shall be carried out before the cementing is commented. **(HCR s. 7, 13)**

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[5] Form Number 85-0431

[6] These tests may be conducted before the vessel is launched, or afterward in dry dock. If special conditions exist, which will not permit of either of these arrangements, an alternative arrangement may be made to the satisfaction of the inspector.

1.1.1.1.3 Inspect the underwater portion of the vessel and draft marks before the Vessel is floated for the issue of a safety inspection certificate**. (HCR s. 22)**

1.1.1.1.4 Examine all sea connections and discharge openings in the hull before the vessel is floated. (**HCR s. 19, 20)**

1.1.1.1.5 Examine means for closing openings in the hull, decks and superstructures before the vessel goes into service, and; **(HCR s.15, 16, 19, 20)**

1.1.1.1.6 Test watertight openings by hose-test; the pressure of the water in the hose shall be not less than 207 kPa**. (HCR s. 13, 14, 15, 18)**

1.1.1.1.7 Inspect all watertight doors within the hull, tried under working conditions and hose tested; the pressure of the water in the hose shall be not less than 207 kPa**. (HCR s. 16, 17, 18)**

1.1.1.1.8 Test the means for pumping before the inspection is completed. **(MMR s. 4, 5)**

1.1.1.1.9 Examine the hydraulic steering arrangements during construction and test under working conditions **(HCR s. 89, 90, and MMR Schedule VII Part I)**

1.1.1.1.10 Examine rod and chain steering and spare gear provided as follows; One spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on a Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on a Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90, and MMR Schedule VII Part I)**

1.1.1.1.11 Inspect masts and rigging during construction, verify tests of the cargo gear were made in the presence of a competent person. (**CFTR s. 303, 304, 305*)***

1.1.1.2 **(MI) Machinery Initial**

1.1.1.2.1 See Appendix 3 Machinery Schedules Part II, Part III Division I and Division II of the applicable schedule of Schedules III to IV and VI to XV **(MMR s. 4, 5)**

1.1.1.3 **(FI) Fire Safety Initial**

1.1.1.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.1.1.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.1.1.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

1.1.1.3.2 Verify Structural Fire Protection during construction to ensure that it reflects the approved plans and technical documents as per Appendix 1 of this standard.

1.1.1.3.3 Inspect the installation of all fire protection systems and equipment: **(VFSR s. 307) (FDEER s.9, 11-19, 37- 51, 54, 55, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97-109, Schedule I - VII)**

1.1.1.3.4 Verify equipment from manufacturer's documents, as applicable; **(VFSR s. 307) (FDEER s.9, 11, Schedule IV s.2, Schedule V s.2)**

1.1.1.3.5 Verify that all systems and equipment are in operational condition; **(VFSR s. 307) (FDEER s.9, s.11-19, Schedule I-VII)**

1.1.1.3.6 Verify correct installation of securing and release devices**; (VFSR s. 307) (FDEER s.9, 11, Schedule III s.2, Schedule III s.3, Schedule III s.5, Schedule III s.8, Schedule III s.11)**

1.1.1.3.7 Verify validity of equipment testing and servicing dates; and **(VFSR s. 307) (FDEER s.9, s.11, s.12)**

1.1.1.3.8 Verify that safety and operating instructions are posted. **(VFSR s. 307, 343)(FDEER s.9, 11, Schedule I s.3, Schedule III s.4, s.11, Schedule IV s.2, 3, 4, 5, 6, 13, Schedule V s.2, Schedule VI s.28)**

1.1.1.3.9 **For Passenger Vessels More than 15 GT but of less than 24Metres in length that are carrying more than 36 berthed passengers the following apply:**

1.1.1.3.9.1 Inspect Fire-resisting bulkheads and fire-resisting doors **(VFSR s. 120, 121, 205, 206 207, HCR s. 157, 160, 161,162, 163, 164, 165, 166, 167,168, 169, 219)**

1.1.1.3.9.2 Test self-closing arrangements for fire-resisting doors **(VFSR s. 212, HCR 43, 45, 71, 120, 158, 165, 170, 171, 181, 220, 222, 232),** and

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(PI)	5.1.1.6, 5.1.1.11 – 5.1.1.22, 5.1.1.44 – 5.1.1.46	For equipment of passenger vessels the examination of plans and designs
(PI)	5.1.2.19.1, 5.1.2.60, 5.1.2.61, 5.1.2.66.2, 5.1.2.69 – 5.1.2.90, 5.1.2.106, 5.1.2.140, 5.1.2.143, 5.1.2.144	Inspections of equipment during construction and after installation

(PI)	5.1.3.6 – 5.1.3.10	Documentation required to be placed on board the vessel.

1.1.1.4 **(LI) Life Saving Initial**

1.1.1.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as follows;

1.1.1.4.2 **Survival Craft**

1.1.1.4.2.1 Witness Survival Craft being swung out and lowered into the water at every inspection except that in exceptional circumstances lowering of the survival craft may be waived at the discretion of the Inspector who shall, however, satisfy himself regarding the length and condition of all lifeboats, falls and lifelines; **(LSER s. 140,141,142,143,144, 148)**

1.1.1.4.2.2 Verify that all moveable equipment has been removed before inspecting Survival Craft; (**LSER Schedules II, and XV (16)(b)**

1.1.1.4.2.3 Inspect all survival craft equipment and properly re-store; **(LSER s. 130)**

1.1.1.4.2.4 Verify all Survival Craft markings **(LSER Schedules V and V.1)**

1.1.1.4.2.5 Test new Survival Craft as per the revised recommendation on testing of Life Saving appliance (resolution MSC 81(70)) or installations with the full equipment and distributed weights representing the complement required to be on at the time of launching, plus 10 per cent of the complement weight (the weight of an adult shall be taken as 82.5 kg **(LSER Schedules V and IX)**

1.1.1.4.2.6 Verify all flotation material, or approved portable substitutes therefor, has been removed from Survival Craft for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the Survival Craft, the Inspector shall use non-destructive testing as the Inspector considers necessary to determine the condition of the substitute material (**LSER s. 114)**

1.1.1.4.3 **Life Rafts**

1.1.1.4.3.1 Verify the life rafts, equipment and stowage arrangements and test the means provided for placing them in the water; **(LSER s. 145, Schedule I, Schedule VIII)**

1.1.1.4.3.2 Verify all life raft markings; and **(LSER Schedule VIII)**

1.1.1.4.3.3 Verify all flotation material, or approved portable substitutes therefor, have been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the life raft the Inspector shall take use nondestructive testing as the Inspector considers necessary to determine the condition of the substitute material. **(LSER s. 114, 145, Schedule VIII)**

1.1.1.4.4 **Buoyant Apparatus**

1.1.1.4.4.1 Inspect all buoyant apparatus **(LSERs. 122)**

1.1.1.4.4.2 Verify buoyant apparatus markings; and **(LSER s. 122)**

1.1.1.4.4.3 Verify all flotation material, or approved substitutes therefor, has been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the buoyancy unit, the Inspector shall use non-destructive testing as the Inspector considers necessary to determine the condition of the substitute material. **(LSER s. 114, 122)**

1.1.1.4.5 Verify repairs to a lifeboat, life raft or buoyant apparatus that are necessary, are made before a certificate is issued. **(LSER 114)**

1.1.1.4.6 Examine the provision, disposition, stowage and condition of the Lifejackets, lifebuoys with their lights and lines, line-throwing appliances; including those fitted with self-igniting lights, self-activating smoke signals, buoyant lines, immersion suits, anti-exposure suits and thermal protective aids, and their associated batteries are not out of date and the means provided for stowage. **(LSER 121, 127.1, 131)**

1.1.1.5 **(NI) Navigation and Communication Equipment Initial**

1.1.1.5.1 Navigation and Communication Equipment on board shall be as per the specifications of the *Navigation Safety Regulations, 2020* (NSR 2020).

1.1.2 Annual Inspections

1.1.2.1 **(HA) Hull Annual Inspection**

1.1.2.1.1 The annual inspection shall be carried out as follows:

1.1.2.1.2 Examination and inspection of the vessel externally and internally such as structure, sea chest, scuppers, valves, etc. as far as may be possible without extensive opening up, and tests, if found necessary, and shall be conducted in the presence of an Inspector. Where a definite standard of subdivision has been approved, inspection shall be made to ensure that the watertight compartments and all arrangements and details connected with the subdivision are in order and that no changes affecting them have been made; **(HCR s. 9, 13, 14, 15, 16, 18)**

1.1.2.1.3 Verify alterations in approved subdivision arrangements and details, including watertight and non-watertight longitudinal bulkheads if fitted, appropriation of space below the bulkhead deck, and other alterations that have been made since the previous inspection shall be reported in detail; special attention shall be given to parts in the structure that are particularly subject to excessive deterioration from such causes as chafing, lying on the ground, or the handling of cargo; **(HCR s. 9, 13, 14, 15, 16)**

1.1.2.1.4 Examine all side scuttles, and where they are required to have special locking arrangements, the locking arrangements shall be tested and the Inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted; **(HCR s. 19)**

1.1.2.1.5 Inspect all scupper and sanitary discharge valves and other appliances intended to prevent the accidental admission of water into the hull, except valves and cocks connected with the machinery **(HCR s. 19)**

1.1.2.1.6 Inspect all scupper and sanitary discharge valves and cocks. Where the vessel has a large number of scupper and sanitary discharge valves and cocks and examination of at least 25 per cent of those valves and cocks annually shows that they are generally in good condition, the opening up of the remainder is not necessary, but every valve and cock shall be opened for inspection verify at least once every five years, and verify a record of the opening up and examination of such valves and cocks shall be kept on board the vessel; **(HCR s. 19)**

1.1.2.1.7 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; One spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR 89, 90, MMR Schedule VII Part I)**

1.1.2.1.8 Inspect all watertight doors and other means for closing openings in the watertight subdivision and their condition and efficiency ascertained; the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 14, 15, 16)**

1.1.2.1.9 Test warning signals, hand gear indicators showing when watertight doors are closed, and indicators at central closing stations **(HCR s. 17)**

1.1.2.1.10 Inspect hinged watertight doors and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18)**

1.1.2.1.11 Inspect a watertight door when it is removed for repairs and replaced, and, if practicable, shall be subjected to a hydraulic test; **(HCR s. 16, 18)**

1.1.2.1.12 Inspect fire-resisting bulkheads, fire-resisting doors, and test self-closing arrangements for fire-resisting doors; **(VFSR s. 120, 121, 205, 206 207, 212)**

1.1.2.1.13 Inspect hatchways with their closing and securing appliances, ventilators and other deck openings, casings and superstructure bulkheads with their closing appliances, windlass and anchor equipment, cargo and other openings in the shell plating, rudder, main and auxiliary steering gear; **(HCR s. 121, 122, 123, 124, 125, 126)**

1.1.2.1.13.1 All parts of rod and chain steering gear shall be inspected; the chain in the vicinity of the blocks shall be cleaned to allow proper inspection, and where any chain is so worn that the diameter at any part is reduced to the size shown schedule C of Appendix 5 of this standard, that part shall be renewed and a detailed

examination or all steering gear leads as follows; **(HCR s. 89, 90, and MMR Schedule VII Part 1)**

1.1.2.1.13.2 Examine all steering gear leads, to permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix 5 of this standard, these tests shall be carried out by an authority[7] accepted by the Regional Technical Services Manager and certificates of tests shall be issued; (**HCR s. 89, 90, and MMR Schedule VII Part 1)**

1.1.2.1.14 Test, assemble and connect the means for auxiliary steering; (**HCR s. 89, 90, and MMR Schedule VII Part 1)**

1.1.2.1.15 Verify the condition of the bottom plating where cement is removed from the bottom plating before new cement is laid; (**HCR s. 7)**

1.1.2.1.16 Inspect masts, spars, and rigging. (**CFTR s. 303, 304, 305)**

1.1.2.1.17 Verify by removing parts of the ceiling in the case of wooden vessels, in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained. (**HCR s. 7)**

1.1.2.2 **(MA) Machinery Annual**

1.1.2.2.1 **Periodic General Inspections**

1.1.2.2.1.1 where machinery referred to in Schedules I to XV is subject to an inspection at one year intervals, an Inspector shall carry out a periodic general inspection that consists of an external inspection of the machinery comprising an inspection or the completion of each item set out in Appendix 3 Machinery Schedules Division I of Part IV of the applicable schedule of Schedules II to IV and VI to XV **(MMR s. 4, 5)**

1.1.2.3 **(FA) Fire Safety Annual**

1.1.2.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.1.2.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.1.2.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

1.1.2.3.2 Non-convention Passenger Vessels more than 15 GT but of less than 24 Metres in length that are carrying more than 36 berthed passengers as defined under the

[7] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

application of part 1 of the VFSR, and Passenger-carrying vessels of not more than 15 GT that are carrying more than 12 passengers as defined under the application of part 3 of the VFSR are to be inspected as follows:

1.1.2.3.2.1 check the fire control plan or booklet against the vessel; **(VFSR s. 308, HCR s.40)**

1.1.2.3.2.2 Verify that the primary and emergency exits of all spaces are: unobstructed; able to be opened from both sides; and able to be kept in an open position while being used as part of an escape route. **(VFSR s. 313, HCR s.84)**

1.1.2.3.2.3 on passenger vessels, verify that the primary and emergency exits of public spaces are clearly identified by proper signage; **(VFSR s.313, HCR s.94)**

1.1.2.3.2.4 Inspect all fire protection systems and equipment by verifying that: **(VFSR s. 307,)**

1.1.2.3.2.5 Verify all systems and equipment are in operational condition; **(VFSR s. 307, FDEERs.21-36, s.37-49, s.50-52, s.54-55, s.85-95, s.96, s.97-103, s.104-109)**

1.1.2.3.2.6 Verify safety and operating instructions are posted; and **(VFSR s. 343, FDEER Schedule I s.3(2), Schedule III s.2(4), s.3.(11), Schedule V s.2.(2), Schedule VI s.28)**

1.1.2.3.2.7 Verify all equipment servicing and testing dates are valid. **(VFSR s. 307, FDEER s. 10, s.11)**

1.1.2.3.2.8 Verify that each portable fire extinguisher is:

1.1.2.3.2.9 is mounted securely and the quick release is easily operable; **(VFSR s. 307)**

1.1.2.3.2.10 stored in a readily accessible location where its operation will not be affected by icing or cold temperature, and if no other fire extinguisher is located in the same space, it is near the entrance to the space; and **(VFSR s. 307)**

1.1.2.3.2.11 identified, marked and tagged, as applicable. **(VFSR s. 307)**

1.1.2.3.2.12 Inspect and test means of closing main inlets and outlets of ventilation systems and for stopping ventilation fans from outside the spaces being served; and **(VFSR s. 329,HCR s.50)**

1.1.2.3.2.13 Examine the bilges and tank tops in machinery spaces containing internal combustion engines, boilers or oil fuel units to see that there is no accumulation of oil which might create a fire hazard. **(FDEER s.10, s.11(u)**

1.1.2.3.2.14 **Servicing of Equipment**

1.1.2.3.2.14.1 Verify that all fixed and portable fire extinguishing equipment requiring servicing were serviced as following; **(VFSR s. 307)**

1.1.2.3.2.14.2 fixed fire-extinguishing systems must be serviced as required by the standard to which they have been certified by a product certification body, or used for type approval by RO, and according to the equipment manufacturer's instructions or recommendations. **(VFSR s. 307, FDEER s.30(1), s.31.1(2), s.46.1(2), s.51.1(2), s.81(1)(e), s.82.1(2), s.94.1(2))**

1.1.2.3.2.14.3 fire extinguishers must be serviced as required by the standard to which they have been certified by a product certification body, or used for type approval by the U.S. Coast Guard or a RO, and according to the equipment manufacturer's instructions or recommendations**. (VFSR s. 307)**

1.1.2.3.3 In addition to the above inspection items the below table applies to;

1.1.2.3.3.1 passenger vessels more than 15 GT but of less than 24 metres in length that are carrying more than 36 berthed passenger

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(PR)	5.2.1.13, 5.2.1.23 – 5.2.1.27	Examination of current certificates and other records
(PR)	5.2.2.22, 5.2.2.54 – 5.2.2.56, 5.2.2.64 – 5.2.2.91, 5.2.2.104	Inspection of equipment

1.1.2.4 **(LA) Life Saving Annual**

1.1.2.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 1.1.1.4 (LI) Life Saving Initial.

1.1.2.5 **(NA) Navigation and Communication Equipment Annual**

1.1.2.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020* (NSR 2020).

1.1.3 Periodical Inspections;

1.1.3.1 **(HP) Hull Periodical Inspection**

1.1.3.1.1 **Inspection of a vessel not over five years old**

1.1.3.1.1.1 At a five-year inspection of a vessel not over five years old, the following requirements shall apply:

1.1.3.1.1.1.1 in accordance to the provisions of (HA) 1.1.2.1

1.1.3.1.1.1.2 Verify all holds and peaks are cleared **(HCR s. 9, 10)**

1.1.3.1.1.1.3 confirm in vessels with a single bottom, limber board and ceiling equal to not less than two strakes fore and aft on each side shall be removed, and one such strake shall be taken from the bilges; where the ceiling is fitted in hatches, the whole of the hatches and one strake of ceiling at the bilges has been removed; **(HCR s. 7, 9, 10)**

1.1.3.1.1.1.4 Verify in vessels with a double bottom, a sufficient amount of ceiling shall be removed to enable the condition of the tank top to be ascertained and, if it is found that the plating is free from dirt and rust, the removal of the remainder of the ceiling may be dispensed with; all bilges and limbers fore and aft has been cleaned; **(HCR s. 7, 11)**

1.1.3.1.1.1.5 Verify ceiling removed as in the holds; in the case of Great Lakes vessels, however, cleaning and ceiling removal shall be at the discretion of the Inspector; **(HCR s. 7, 9, 10)**

1.1.3.1.1.1.6 Inspect all steel work. Steel work shall be exposed and cleaned to the extent required by the Inspector for a proper examination; special attention shall be given to shell plating in way of openings; **(HCR s. 7, 19)**

1.1.3.1.1.1.7 Inspect a wooden ship. Inspection will require parts of the ceiling to be removed at the discretion of the Inspector in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained; **(HCR s. 7)**

1.1.3.1.1.1.8 Inspect and examine all scupper and sanitary discharge valves, excluding those connected to the machinery, not recorded as having been inspected since the first inspection, shall be opened up. All side scuttles shall be examined and, where required to have special locking arrangements, those locking arrangements shall be tested and the Inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted. **(HCR s. 19, 20)**

1.1.3.1.1.1.9 Verify signs of wastage a in any part of a vessel's structure, non-destructive testing may be required, and if any part is found to be defective, or if material is reduced in thickness[8], the defect shall be replaced by material equal in scantling and quality to that of the original construction; **(HCR s. 7)**

1.1.3.1.1.1.10 Inspect the inner surface of the bottom plating covered with cement or asphalt. This will require the removal of the covering and be dispensed with when it is found, by heating or chipping, to be sound and adhering satisfactorily to the steel; **(HCR s. 7)**

1.1.3.1.1.1.11 Test double bottom tanks that are not used for the carriage of oil fuel by a head of water to the light water line, but in no case less than 2.4 m above the inner bottom; in the case of Great Lakes vessels, the testing of tank tops may be waived at the discretion of the Inspector, having regard to the voyages the vessel makes; **(HCR s. 7, 11)**

1.1.3.1.1.1.12 Test double bottom compartments used for the carriage of oil fuel by a head of water or oil extending to the load water line, or by a head sufficient to give the maximum pressure that they may be required to bear at any time, whichever is the greater; (**HCR s. 11)**

[8] Refer to IACS UR Z7 Rev26, 1.5 Thickness Measurements Acceptance Criteria

1.1.3.1.1.1.13 Test the water tightness of peak tanks or deep tanks for carrying water ballast by a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.05 m; **(HCR s. 10, 11, 13, 83)**

1.1.3.1.1.1.14 Test of peak tanks or deep tanks in the case of Great Lakes vessels, may be waived if considered unnecessary by the Inspector after inspection of the structure; **(HCR s. 7, 10, 11, 13, 83)**

1.1.3.1.1.1.15 Inspect all water ballast tanks. All tanks shall be cleaned in order that their interior may be adequately inspected; special attention shall be given to tanks under boiler spaces; (**HCR s. 7)**

1.1.3.1.1.1.16 Test and inspect deep tanks constructed for carrying oil or oil and fresh water, but not used solely for that purpose, and peak tanks used for carrying oil fuel, by a head of water or oil sufficient to give the maximum pressure that can be experienced in service, or 2.4 m, whichever is the greater; (**HCR s. 10, 13)**

1.1.3.1.1.1.17 Test and inspect double bottom and deep tanks used exclusively for oil fuel or for oil fuel and fresh water, and oil fuel bunkers, need not be examined internally if after a general inspection and testing as required by paragraphs 1.1.3.1.1.1.12 and 1.1.3.1.1.1.16 their condition is found to be satisfactory; **(HCR s. 10, 11, 13)**

1.1.3.1.1.1.18 Inspect all watertight bulkheads, decks, tunnels and other subdivision arrangements to ascertain their condition, and if their watertightness has been impaired, any part found deficient shall be restored to its original condition; **(HCR s. 9, 10, 13)**

1.1.3.1.1.1.19 Verify where a definite standard of subdivision has been approved, the watertight compartments and all arrangements and details connected with the subdivision has been checked; **(HCR s. 9, 10)**

1.1.3.1.1.1.20 Inspect all masts, spars and rigging; (**CFTR s. 303, 304, 305)**

1.1.3.1.1.1.21 Inspect anchors, other equipment and chain cable. Where any length of chain cable is found to be reduced in diameter at any part to the extent indicated in schedule C of Appendix 5 of this standard, it shall be renewed; where renewal of anchors or cables is required, a certificate shall be produced to show that the replacement has been tested as prescribed by schedule A, schedule B: or schedule D of Appendix 5 of this standard:; the interior of the chain locker shall be cleared and cleaned and the compartment inspected; **(HCR s. 142, 143)**

1.1.3.1.1.1.22 Inspect hatch covers and supports, tarpaulins, cleats, battens, and other means of securing all hatches; **(HCR s. 116, 117, 118, 119, 121, 122, 123, 124, 125)**

1.1.3.1.1.1.23 Inspect ventilator coamings and covers; **(HCR s. 126)**

1.1.3.1.1.1.24 Inspect the rudder, its means of support, and the pintles and gudgeons, and, if considered necessary by the Inspector for proper examination, the rudder shall be lifted; **(HCR s. 89, 90, and MMR Schedule XII Part I)**

1.1.3.1.1.1.25 Examine all steering gear leads. to permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix of this standard, these tests shall be carried out by an authority[9] accepted by the Regional Technical Services Manager and certificates of tests shall be issued; **(HCR s. 89, 90, and MMR Schedule XII Part I)**

1.1.3.1.1.1.26 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, class 2 Voyage, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90, and MMR Schedule XII Part I)**

1.1.3.1.1.1.27 Test the main steering gear; **(HCR s. 89, 90, and MMR Schedule XII Part I)**

1.1.3.1.1.1.28 Test the means for auxiliary steering by assembling and connecting for testing. **(HCR s. 90, and MMR Schedule XII Part I)**

1.1.3.1.1.1.29 Inspect and open sluice valves and protective casings around air and sounding pipes; **(HCR s. 7)**

1.1.3.1.1.1.30 Inspect all watertight doors and other means for closing openings in watertight subdivisions and their condition and efficiency ascertained, the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 15, 16, 17, 18)**

1.1.3.1.1.1.31 Inspect and test warning signals, hand gear indicators showing when doors are closed, and indicators at central closing stations, **(HCR s. 17)**

1.1.3.1.1.1.32 Inspect hinged watertight door and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18, 19, 34, 119, 120)**

1.1.3.1.1.1.33 Inspect and hose test when a watertight door is removed for repair and replaced, if practicable, shall be subjected to a hydraulic test; **(HCR s. 15, 18)**

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[9] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

1.1.3.1.1.1.34 Inspect fire-resisting bulkheads and fire-resisting doors and test self-closing arrangements for fire-resisting doors; **(VFSR s. 120, 121, 205, 206 207, 212)**

1.1.3.1.1.1.35 Examine striking plates under sounding pipes and renewed when necessary; **(HCR s. 7)**

1.1.3.1.1.1.36 Inspect holds that are insulated for the purpose of carrying refrigerated cargoes and if the hull in way of the insulation was inspected when the insulation was fitted, it shall be sufficient to remove the limbers and hatches to expose the plating in way of these parts. **(HCR s. 7, 9, 10)**

1.1.3.1.2 **Inspection of vessel over five years old but not over 10 years old**

1.1.3.1.2.1 At a five-year inspection of a vessel over five years old but not over 10 years old, in addition to the requirements of section 1.1.3.1.1, the following requirements shall apply:

1.1.3.1.2.1.1 in accordance to the provisions of (HA) 1.1.2.1

1.1.3.1.2.1.2 Examine by removing the additional ceiling holds to enable the condition of the inner bottom plating, pillar feet and the bottom plating of bulkheads and tunnel sides; if considered necessary by the Inspector, all of the ceiling shall be removed; removal of additional ceiling and of fastenings, at the discretion of the Inspector, shall apply also in the case of wooden vessels; **(HCR s. 7, 9, 10)**

1.1.3.1.2.1.3 Examine vessels with a single bottom by removing one additional strake of the limber board and ceiling all the way fore and aft on each side; **(HCR s. 7, 9, 10)**

1.1.3.1.2.1.4 Examine all tanks that are used exclusively for oil fuel or oil fuel and fresh water, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCR s. 13, 83)**

1.1.3.1.2.1.5 in the case of double bottom tanks used exclusively for oil fuel or oil fuel and fresh water, where the foremost such tank has been thoroughly cleaned, gas-freed, inspected internally and found satisfactory to the Inspector, the cleaning, gas-freeing and internal examination of the other double bottom tanks used for such purpose shall not be necessary where, upon a general external examination, the Inspector finds their condition to be satisfactory, and; **(HCR s. 11, 13, 83)**

1.1.3.1.2.1.6 in the case of tanks used exclusively for oil fuel or oil fuel and fresh water, other than double bottom and peak tanks, the cleaning, gas-freeing and internal examination of those tanks shall not be necessary where, upon external examination, the Inspector finds their condition to be satisfactory; **(HCR s. 7, 13, 83)**

1.1.3.1.2.1.7 Lubricating oil tanks need not be examined internally where, upon external examination, the Inspector finds their condition to be satisfactory; **(HCR s. 13, 83)**

1.1.3.1.2.1.8 Examine plating in way of the side scuttles by having it exposed for examination. **(HCR s. 7, 19, 20)**

1.1.3.1.3 **Inspection of vessels over 10 years old but not over 25 years old**

1.1.3.1.3.1 At a five-year inspection of a vessel over 10 years old but not over 25 years old, in addition to the requirements of sections 1.1.3.1.1 and 1.1.3.1.2 the following requirements shall apply;

1.1.3.1.3.1.1 in accordance to the provisions of (HA) 1.1.2.1

1.1.3.1.3.1.2 Examine all steel work by having it cleaned and all rust removed, to the extent required by the Inspector for a proper examination; **(HCR s. 7)**

1.1.3.1.3.1.3 examination may require casings of pipes, spar ceiling and lining in way of the side scuttles to be removed; **(HCR s. 7, 19, 20)**

1.1.3.1.3.1.4 Examination of steel work will require that all the ceiling in the bunkers be removed; portions of the ceiling in the holds shall be removed to establish the condition of the steel work, and unless found free from rust and in good condition all of the ceiling shall be removed; **(HCR s. 7, 9, 10)**

1.1.3.1.3.1.5 examine, beneath vessel's side discharges, in way of boilers, steam pumps, watertight doors in machinery spaces, and in any locality where there is leakage from pipes and machinery or where continuous condensation occurs; **(HCR s. 7, 15, 18, 19)**

1.1.3.1.3.1.6 subject to paragraph 1.1.3.1.3.1.7, all tanks that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCR s. 7, 13, 83)**

1.1.3.1.3.1.6.1 in the case of a vessel not more than 15 years old, its tanks, other than peak tanks, that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil need not all be examined internally if, after a general inspection and testing and after an internal examination of one double bottom tank forward, one double bottom tank aft and one deep tank, the Inspector finds their condition to be satisfactory, and **(HCR s. 9, 10, 13, 83)**

1.1.3.1.3.1.6.2 in the case of a vessel more than 15 but not more than 20 years old, only one oil fuel double bottom tank amidships, one forward and one aft, and one deep tank need be examined internally, and such tanks should be selected so that as many different tanks as possible are examined internally before the vessel is 20 years old; **(HCR 7, 9, 10, 11 13)**

1.1.3.1.3.1.7 for a vessel where the interval between periodical inspections is five years, oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally when the vessel is 15 years old, except that where, upon external examination, an Inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary **(HCR 7, 13, 83)**

1.1.3.1.3.1.8 for a vessel 20 years old and over making unlimited voyages, Near Coastal voyage, Class 1, Near Coastal voyage, Class 2 , other than an inland non-passenger vessel making extended Near Coastal voyages within the Gulf of St. Lawrence, all tanks shall be examined internally at each five-year inspection; **(HCR s. 7, 13, 83)**

1.1.3.1.3.1.9 for wooden vessels, the requirements for boring, fastening and removal of ceiling, shall be augmented to the extent considered necessary by the Inspector; hull sheathing shall be removed as considered necessary to facilitate complete examination of the hull; **(HCR s. 7)**

1.1.3.1.3.1.10 Examination of adjacent steel work may require portions of the cement chocks at the vessel's sides shall be removed; **(HCR s. 7)**

1.1.3.1.3.1.11 where the holds are insulated for the purpose of carrying refrigerated cargo and the hull in way of the insulation was inspected when the insulation was fitted, enough insulation shall be removed from each of the chambers, and the framing and plating exposed so that their condition may be ascertained; and **(HCR s. 7, 9, 10)**

1.1.3.1.3.1.12 all mast and bowsprit wedging shall be removed; where the plating is doubled in way of the wedging, the wedging only need be removed. **(HCR s. 7)**

1.1.3.1.4 **Inspection of vessel over 25 years old**

1.1.3.1.4.1 where the interval between periodical inspections of a vessel is five years, it shall be inspected;

1.1.3.1.4.1.1 in accordance to the provisions of (HA) 1.1.2.1

1.1.3.1.4.1.2 in accordance with the requirements of sections 1.1.3.1.1, 1.1.3.1.2, and 1.1.3.1.3 at each five year inspection; and

1.1.3.1.4.1.3 in accordance with the requirements of subsection 1.1.3.1.4.2,

1.1.3.1.4.1.3.1 at the first five year inspection after the vessel is 25 years old,

1.1.3.1.4.1.3.2 at the first five year inspection 15 years after the inspection referred to in clause 1.1.3.1.4.1.3.1, and

1.1.3.1.4.1.3.3 every 12 years after the inspection referred to in clause 1.1.3.1.4.1.3.2, and

1.1.3.1.4.1.4 the oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally at the first five year inspection after the vessel is 25 years old, after the next 10 years, after the next nine years, and every eight years thereafter, except that where, upon external examination, the Inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary. **(HCR s. 7, 13, 83)**

1.1.3.1.4.2 at the inspection referred to in subparagraph 1.1.3.1.4.1.3, the following requirements apply:

1.1.3.1.4.2.1 subject to paragraph 1.1.3.1.4.2.2, the shell plating of a vessel shall be tested using non-destructive testing at such parts as may be considered necessary to ascertain its thickness and for this purpose the following requirements apply: **(HCR s. 7)**

1.1.3.1.4.2.1.1 the number of non-destructive testing, test spots on each side of the vessel shall in no case be less than three in each strake of plating not covered with cement, **(HCR s. 7)**

1.1.3.1.4.2.1.2 the testing shall be about amidships and in the vicinity of the peak bulkheads, **(HCR s.7)**

1.1.3.1.4.2.1.3 all paint and rust shall be removed from the area of the plating surrounding the holes before the thickness of the plating is gauged, **(HCR s.7)**

1.1.3.1.4.2.1.4 the thickness of the plating at all non-destructive testing, test spots shall be recorded by the Inspector, and **(HCR s.7)**

1.1.3.1.4.2.1.5 the plating covered with cement in the bottom of a vessel need not be tested using non-destructive testing, if in the opinion of the Inspector, the cement is adhering to the plating and it is unnecessary to test at that place; **(HCR s.7)**

1.1.3.1.4.2.2 in the case of a Great Lakes vessel, the Inspector shall satisfy himself that the condition of the shell plating is satisfactory and in so doing he shall **(HCR s. 7)**

1.1.3.1.4.2.2.1 give special attention to those parts of the vessel that are subject to damage in canals and locks and to all parts of the vessel that are particularly subject to excessive corrosion or wear and tear, and **(HCR s. 7)**

1.1.3.1.4.2.2.2 ascertain the thickness of the shell plating by non-destructive testing in such places as he deems necessary; **(HCR s. 7)**

1.1.3.1.4.2.3 where the holds of a vessel are insulated for the purpose of carrying refrigerated cargo, if the hull covered by insulation was inspected when the insulation was fitted, insulation additional to that removed pursuant to paragraph 1.1.3.1.3.1.11 shall be removed in each of the chambers in order to allow the condition of the framing and plating to be ascertained and the shell plating shall be tested by non-destructive testing as prescribed in paragraph 1.1.3.1.4.2.1; and **(HCR s. 7, 9, 10)**

1.1.3.1.4.2.4 all mast and bowsprit wedging of a vessel shall be removed whether the plating in way is doubled or not. **(HCR s. 7)**

1.1.3.2 **(MP) Machinery Periodical**

1.1.3.2.1 Refer to Appendix 3 Machinery Schedules Part IV Division II Subdivision I and Subdivision II of the applicable schedule of Schedules II to IV and VI to XV **(MMR s. 4, 5)**

1.1.3.3 **(FP) Fire Safety Periodical**

1.1.3.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.1.3.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.1.3.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

1.1.3.3.2 The provisions of (FA) 1.1.2.3

1.1.3.3.3 Inspect all structural fire protection arrangements; **(VFSR s. 307, FDEER s.8, HCR s.40-57, s.71-74)**

1.1.3.4 **(LP) Life Saving Periodical**

1.1.3.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 1.1.1.4 (LI) Life Saving Initial.

1.1.3.5 **(NP) Navigation and Communication Equipment Periodical**

1.1.3.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations*, 2020, (NSR 2020).

1.2 LARGE PASSENGER VESSELS 24 METRES AND GREATER

1.2.1 Initial Inspections

1.2.1.1 **(HI) Hull Initial Inspection**

1.2.1.1.1 Verify the new vessel is being constructed in accordance with the plans and technical documents that have been submitted as set forth in Appendix 1 of this Standard. **(CSA 2001 s.119)**

1.2.1.1.2 Verify before a new vessel is launched, the compartments within the main hull were subjected to hose or pressure tests[10] as follows: **(HCR s.7, 13)**

1.2.1.1.2.1 double bottoms that are not to be used for the carriage of oil: a head of water which shall be equal to the maximum head that can be experienced in service; **(HCR s. 11)**

1.2.1.1.2.2 deep tanks and peak tanks used for the carriage of water, and deep tanks and double bottom tanks arranged for the carriage of oil fuel: a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m; **(HCR s. 10, 11, 13, 83)**

1.2.1.1.2.3 peak bulkheads and stepped bulkheads, which do not form the boundaries of tanks, shall be tested by filling the peaks with water to the level of the load waterline; **(HCR s. 9, 10)**

1.2.1.1.2.4 watertight bulkheads, including recesses and watertight flats, watertight tunnels, weather decks and waterways, shall be hose tested; the pressure of water in the hose shall be not less than 207 kPa; **(HCR s. 13)**

1.2.1.1.2.5 testing of tanks where tanks are to be cemented shall be carried out before the cementing is commented. **HCR s. 7, 13)**

1.2.1.1.3 Verify inspection of the underwater portion of the vessel and Draft Marks before the Vessel is floated for the issue of a Safety inspection certificate. (**HCR s. 22 and LLR s. 4, 16)**

[10] These tests may be conducted before the vessel is launched, or afterward in dry dock. If special conditions exist, which will not permit of either of these arrangements, an alternative arrangement may be made to the satisfaction of the inspector.

1.2.1.1.4 Examine all sea connections and discharge openings in the hull before the vessel is floated. **(HCR s. 19)**

1.2.1.1.5 Examine means for closing openings in the hull, decks and superstructures before the vessel goes into service, and; **(HCR s. 15, 16,)**

1.2.1.1.6 Test watertight openings by hose-test; the pressure of the water in the hose shall be not less than 207 kPa. (**HCR s. 13, 14, 15, 18)**

1.2.1.1.7 Inspect Fire-resisting bulkheads and fire-resisting doors (**VFSR s. 120, 121, 205, 206 207)**

1.2.1.1.8 Test self-closing arrangements for fire-resisting doors **(VFSR s. 212)**

1.2.1.1.9 Inspect all watertight doors within the hull, tried under working conditions and hose tested; the pressure of the water in the hose shall be not less than 207 kPa. **(HCR s. 16, 17, 18)**

1.2.1.1.10 Test the means for pumping before the inspection is completed. **(MMR s. 4, 5)**

1.2.1.1.11 Examine the hydraulic steering arrangements during construction and test under working conditions **(HCR s. 89, 90 and MMR Schedule VII Part I)**

1.2.1.1.12 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; One spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2 having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule VII Part I)**

1.2.1.1.13 Inspect masts and rigging during construction, verify tests of the cargo gear were made in the presence of a competent person. **(CFTR s. *303, 304, 305)***

1.2.1.2 **(MI) Machinery Initial**

1.2.1.2.1 See Appendix 3 Machinery Schedules Part II, Part III Division I and Division II of the applicable schedule of Schedules I to XV **(MMR s. 4, 5)**

1.2.1.3 **(FI) Fire Safety Initial**

1.2.1.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.2.1.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.2.1.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(PI)	5.1.1.6, 5.1.1.11 – 5.1.1.22, 5.1.1.44 – 5.1.1.46	For equipment of passenger vessels the examination of plans and designs
(PI)	5.1.2.19.1, 5.1.2.60, 5.1.2.61, 5.1.2.66.2, 5.1.2.69 – 5.1.2.90, 5.1.2.106, 5.1.2.140, 5.1.2.143, 5.1.2.144	Inspections of equipment during construction and after installation
(PI)	5.1.3.6 – 5.1.3.10	Documentation required to be placed on board the vessel.

1.2.1.4 **(LI) Life Saving Initial**

1.2.1.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 1.1.1.4 (LI) Life Saving Initial.

1.2.1.5 **(NI) Navigation and Communication Equipment Initial**

1.2.1.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020* (NSR 2020).

1.2.2 Annual Inspections

1.2.2.1 **(HA) Hull Annual Inspection**

1.2.2.1.1 The annual inspection is to be carried out as follows:

1.2.2.1.2 Examination and inspection of the vessel externally and internally as far as may be possible without extensive opening up, and tests, if found necessary, and shall be conducted in the presence of a inspector to ensure that conditions are satisfactory. Where a definite standard of subdivision has been approved, inspection shall be made to ensure that the watertight compartments and all arrangements and details connected with the subdivision are in order and that no changes affecting them have been made; **(HCR s. 9, 13, 14, 15, 16)**

1.2.2.1.3 Verify alterations in approved subdivision arrangements and details, including watertight and non-watertight longitudinal bulkheads if fitted, appropriation of space below the bulkhead deck, and other alterations that have been made since the previous inspection shall be reported in detail; special attention shall be given to parts in the structure that are particularly subject to excessive deterioration from such causes as chafing, lying on the ground, or the handling of cargo; **(HCR s. 9, 13, 14, 15,16)**

1.2.2.1.4 Examine all side scuttles, and where they are required to have special locking arrangements, the locking arrangements shall be tested and the inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted; **(HCR s. 19)**

1.2.2.1.5 Inspect all scupper and sanitary discharge valves and other appliances intended to prevent the accidental admission of water into the hull, except valves and cocks connected with the machinery **(HCR s. 19)**

1.2.2.1.6 Inspect all scupper and sanitary discharge valves and cocks. Where the vessel has a large number of scupper and sanitary discharge valves and cocks and examination of at least 25 per cent of those valves and cocks annually shows that they are generally in good condition, the opening up of the remainder is not necessary, but every valve and cock shall be opened for inspection at least once every five year; and verify a record of the opening up and examination of such valves and cocks shall be kept on board the vessel; **(HCR s.19)**

1.2.2.1.7 Examine the rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule VII Part I)**

1.2.2.1.8 Inspect all watertight doors and other means for closing openings in the watertight subdivision and their condition and efficiency ascertained; the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 14, 15, 16)**

1.2.2.1.9 Test warning signals, hand gear indicators showing when watertight doors are closed, and indicators at central closing stations **(HCR s. 17)**

1.2.2.1.10 Inspect hinged watertight doors and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18)**

1.2.2.1.11 Inspect a watertight door when it is removed for repairs and replaced, and, if practicable, shall be subjected to a hydraulic test; **(HCR s. 16, 18)**

1.2.2.1.12 Inspect fire-resisting bulkheads, fire-resisting doors, and test self-closing arrangements for fire-resisting doors; **(VFSR s. 120, 121, 205, 206 207, 212)**

1.2.2.1.13 Inspect hatchways with their closing and securing appliances, ventilators and other deck openings, casings and superstructure bulkheads with their closing appliances, windlass and anchor equipment, cargo and other openings in the shell plating, rudder, main and auxiliary steering gear; **(HCR s. 121, 122, 123, 124, 125, 126)**

1.2.2.1.13.1 all parts of rod and chain steering gear shall be inspected; the chain in the vicinity of the blocks shall be cleaned to allow proper inspection, and where any chain is so worn that the diameter at any part is reduced to the size shown schedule C of Appendix 5 of this standard, that part shall be renewed and a detailed examination or all steering gear leads as follows; **(HCR s. 89, 90 and MMR Schedule VII Part 1)**

1.2.2.1.14 Examine all steering gear leads. To permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix 5 of this standard, these tests shall be carried out by an authority[11] accepted by the Regional Technical Services Manager and certificates of tests shall be issued; **(HCR s. 89, 90 and MMR Schedule VII Part 1)**

1.2.2.1.15 Test, assemble and connect the means for auxiliary steering ;**(HCR s. 89, 90 and MMR Schedule VII Part 1)**

1.2.2.1.16 Verify the condition of the bottom plating where cement is removed from the bottom plating before new cement is laid; **(HCR s. 7, 13)**

1.2.2.1.17 Inspect masts, spars and rigging. **(CFTR s. 303, 304, 305)**

1.2.2.1.18 Annual inspections for free board shall, whenever possible, be made at the time of the annual inspection; and **(LLR s. 12, 17)**

1.2.2.1.19 Verify by removing parts of the ceiling in the case of wooden vessels, in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained. **(HCR s. 7)**

1.2.2.2 **(MA) Machinery Annual**

1.2.2.2.1 No inspection shall be carried out pursuant to the Act unless a component inspection certificate has been issued for each component. **(MMR s. 16)**

[11] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

1.2.2.2.1.1 where machinery referred to in Schedules I to XV is subject to an inspection referred to in subsection 1.2.2.2.1 at specified intervals, an inspector shall carry out a periodic general inspection that consists of an external inspection of the machinery comprising an inspection or the completion of each item set out in Appendix 3 Machinery Schedules Division I of Part IV of the applicable schedule of Schedules I to XV **(MMR s. 16)**

1.2.2.3 **(FA) Fire Safety Annual**

1.2.2.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.2.2.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.2.2.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(PR)	5.2.1.13, 5.2.1.23 – 5.2.1.27	Examination of current certificates and other records
(PR)	5.2.2.22, 5.2.2.54 – 5.2.2.56, 5.2.2.64 – 5.2.2.91, 5.2.2.104	Inspection of equipment

1.2.2.4 **(LA) Life Saving Annual**

1.2.2.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section1.1.1.4 (LI) Life Saving Initial**.**

1.2.2.5 **(NA) Navigation and Communication Equipment Annual**

1.2.2.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020,* (NSR 2020).

1.2.3 Periodical Inspections

1.2.3.1 **(HP) Hull Periodical Inspection**

1.2.3.1.1 **Inspection of a Vessel not over five years old**

1.2.3.1.1.1 At five-year inspection of a vessel not over five years old, the following requirements shall apply:

1.2.3.1.1.1.1 in accordance with the provisions of (HA) 1.2.2.1

1.2.3.1.1.1.2 Verify all holds and peaks are cleared **(HCR s. 9, 10)**

1.2.3.1.1.1.3 confirm in vessels with a single bottom, limber board and ceiling equal to not less than two strakes fore and aft on each side shall be removed, and one such strake

shall be taken from the bilges; where the ceiling is fitted in hatches, the whole of the hatches and one strake of ceiling at the bilges has been removed; **(HCR s. 7, 9, 10)**

1.2.3.1.1.1.4 Verify in vessels with a double bottom, a sufficient amount of ceiling shall be removed to enable the condition of the tank top to be ascertained and, if it is found that the plating is free from dirt and rust, the removal of the remainder of the ceiling may be dispensed with; all bilges and limbers fore and aft has been cleaned; **(HCR s. 7, 11)**

1.2.3.1.1.1.5 Verify ceiling removed as in the holds; in the case of Great Lakes vessels, however, cleaning and ceiling removal shall be at the discretion of the inspector; **(HCR s. 7, 9, 10)**

1.2.3.1.1.1.6 Inspect all steel work. Steel work shall be exposed and cleaned to the extent required by the inspector for a proper examination; special attention shall be given to shell plating in way of openings; **(HCR s. 7, 19)**

1.2.3.1.1.1.7 Inspect a wooden ship. Inspection will require parts of the ceiling to be removed at the discretion of the inspector in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained; **(HCR s. 7)**

1.2.3.1.1.1.8 Inspect and examine all scupper and sanitary discharge valves, excluding those connected to the machinery, not recorded as having been inspected since the first inspection, shall be opened up. All side scuttles shall be examined and, where required to have special locking arrangements, those locking arrangements shall be tested and the inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted. **(HCR s. 19, 20)**

1.2.3.1.1.1.9 Verify signs of wastage a in any part of a vessel's structure, non-destructive testing may be required, and if any part is found to be defective, or if material is reduced in thickness[8], the defect shall be replaced by material equal in scantling and quality to that of the original construction; **(HCR s. 7)**

1.2.3.1.1.1.10 Inspect the inner surface of the bottom plating covered with cement or asphalt. This will require the removal of the covering and be dispensed with when it is found, by heating or chipping, to be sound and adhering satisfactorily to the steel; **(HCR s. 7)**

1.2.3.1.1.1.11 Test double bottom tanks that are not used for the carriage of oil fuel by a head of water to the light water line, but in no case less than 2.4 m above the inner bottom; in the case of Great Lakes vessels, the testing of tank tops may be waived at the discretion of the inspector, having regard to the voyages the vessel makes; **(HCR s. 7, 11)**

1.2.3.1.1.1.12 Test double bottom compartments used for the carriage of oil fuel by a head of water or oil extending to the load water line, or by a head sufficient to give the maximum pressure that they may be required to bear at any time, whichever is the greater **(HCR s. 11)**

1.2.3.1.1.1.13 Test the water tightness of peak tanks or deep tanks for carrying water ballast by a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m; **(HCR s. 10, 11, 13, 83)**

1.2.3.1.1.1.14 Test of peak tanks or deep tanks in the case of Great Lakes vessels, may be waived if considered unnecessary by the inspector after inspection of the structure; **(HCR s. 7, 10, 11, 13, 83)**

1.2.3.1.1.1.15 Inspect all water ballast tanks. All tanks shall be cleaned in order that their interior may be adequately inspected; special attention shall be given to tanks under boiler spaces; **(HCR s. 7)**

1.2.3.1.1.1.16 Test and inspect deep tanks constructed for carrying oil or oil and fresh water, but not used solely for that purpose, and peak tanks used for carrying oil fuel, by a head of water or oil sufficient to give the maximum pressure that can be experienced in service, or 2.4 m, whichever is the greater; **(HCR s. 10, 13)**

1.2.3.1.1.1.17 Test and inspect double bottom and deep tanks used exclusively for oil fuel or for oil fuel and fresh water, and oil fuel bunkers, need not be examined internally if after a general inspection and testing as required by paragraphs 1.2.3.1.1.1.12 and 1.2.3.1.1.1.16 their condition is found to be satisfactory; **(HCR s. 10, 11, 13)**

1.2.3.1.1.1.18 Inspect all watertight bulkheads, decks, tunnels and other subdivision arrangements to ascertain their condition, and if their watertightness has been impaired, any part found deficient shall be restored to its original condition; **(HCR s. 9, 10, 13)**

1.2.3.1.1.1.19 Verify where a definite standard of subdivision has been approved, the watertight compartments and all arrangements and details connected with the subdivision has been checked; **(HCR s. 9, 10)**

1.2.3.1.1.1.20 Inspect all masts, spars and rigging; **(CFTR s. 303, 304, 305)**

1.2.3.1.1.1.21 Inspect anchors, other equipment and chain cable. Where any length of chain cable is found to be reduced in diameter at any part to the extent indicated in schedule C of Appendix 5 of this standard, it shall be renewed; where renewal of anchors or cables is required, a certificate shall be produced to show that the replacement has been tested as prescribed by schedule A, schedule B: or schedule D of Appendix 5 of this standard:; the interior of the chain locker shall be cleared and cleaned and the compartment inspected; **(HCR s. 142, 143)**

1.2.3.1.1.1.22 Inspect hatch covers and supports, tarpaulins, cleats, battens, and other means of securing all hatches; **(HCR s. 116, 117, 118, 119, 121, 122, 123, 124, 125)**

1.2.3.1.1.1.23 Inspect ventilator coamings and covers; **(HCR s. 126)**

1.2.3.1.1.1.24 Inspect the rudder, its means of support, and the pintles and gudgeons, and, if considered necessary by the inspector for proper examination, the rudder shall be lifted; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

1.2.3.1.1.1.25 Examine all steering gear leads. To permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix of this standard, these tests shall be carried out by an authority[12] accepted by the Regional Technical Services manager and certificates of tests shall be issued;

1.2.3.1.1.1.26 Examine the rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule XII Part I)**

1.2.3.1.1.1.27 Test the main steering gear; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

1.2.3.1.1.1.28 Test the means for auxiliary steering by assembling and connecting for testing. **(HCR s. 89, 90 and MMR Schedule XII Part I)**

1.2.3.1.1.1.29 Inspect and open sluice valves and protective casings around air and sounding pipes; **(HCR s. 7)**

1.2.3.1.1.1.30 Inspect all watertight doors and other means for closing openings in watertight subdivisions and their condition and efficiency ascertained, the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 15, 16, 17, 18)**

1.2.3.1.1.1.31 Inspect and test warning signals, hand gear indicators showing when doors are closed, and indicators at central closing stations, **(HCR s. 17)**

1.2.3.1.1.1.32 Inspect hinged watertight door and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18, 19, 34, 119, 120)**

1.2.3.1.1.1.33 Inspect and hose test when a watertight door is removed for repair and replaced, if practicable, shall be subjected to a hydraulic test; **(HCR s. 15, 18)**

1.2.3.1.1.1.34 Inspect fire-resisting bulkheads and fire-resisting doors and test self-closing arrangements for fire-resisting doors; **(VFSR s. 120, 121, 205, 206 207, 212)**

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[12] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

1.2.3.1.1.1.35 Examine striking plates under sounding pipes and renewed when necessary; **(HCR s. 7)**

1.2.3.1.1.1.36 Inspect holds that are insulated for the purpose of carrying refrigerated cargoes and if the hull in way of the insulation was inspected when the insulation was fitted, it shall be sufficient to remove the limbers and hatches to expose the plating in way of these parts. **(HCR s. 7, 9, 10)**

1.2.3.1.2 **Inspection of vessel over five years old but not over 10 years old**

1.2.3.1.2.1 At a five year inspection of a vessel over five years old but not over 10 years old, in addition to the requirements of section 1.2.3.1.1, the following requirements shall apply:

1.2.3.1.2.1.1 in accordance with the provisions of (HA) 1.2.2.1

1.2.3.1.2.1.2 Examine by removing the additional ceiling holds to enable the condition of the inner bottom plating, pillar feet and the bottom plating of bulkheads and tunnel sides; if considered necessary by the inspector, all of the ceiling shall be removed; removal of additional ceiling and of fastenings, at the discretion of the inspector, shall apply also in the case of wooden vessels; **(HCR s. 7, 9, 10)**

1.2.3.1.2.1.3 Examine vessels with a single bottom by removing one additional strake of the limber board and ceiling all the way fore and aft on each side; **(HCR s. 7, 9, 10)**

1.2.3.1.2.1.4 Examine all tanks that are used exclusively for oil fuel or oil fuel and fresh water, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCR s. 13, 83)**

1.2.3.1.2.1.4.1 in the case of double bottom tanks used exclusively for oil fuel or oil fuel and fresh water, where the foremost such tank has been thoroughly cleaned, gas-freed, inspected internally and found satisfactory to the inspector, the cleaning, gas-freeing and internal examination of the other double bottom tanks used for such purpose shall not be necessary where, upon a general external examination, the inspector finds their condition to be satisfactory, and; **(HCR s. 11, 13, 83)**

1.2.3.1.2.1.4.2 in the case of tanks used exclusively for oil fuel or oil fuel and fresh water, other than double bottom and peak tanks, the cleaning, gas-freeing and internal examination of those tanks shall not be necessary where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s. 7, 13, 83)**

1.2.3.1.2.1.5 lubricating oil tanks need not be examined internally where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s. 13, 83)**

1.2.3.1.2.1.6 Examine plating in way of the side scuttles by having it exposed for examination. **(HCR s. 7, 19, 20)**

1.2.3.1.3 **Inspection of vessels over 10 years old but not over 25 years old**

1.2.3.1.3.1 At a five year inspection of a vessel over 10 years old but not over 25 years old, in addition to the requirements of sections 1.2.3.1.1and 1.2.3.1.2 the following requirements shall apply;

1.2.3.1.3.1.1 in accordance with the provisions of (HA) 1.2.2.1

1.2.3.1.3.1.2 Examine all steel work by having it cleaned and all rust removed, to the extent required by the inspector for a proper examination; **(HCR s. 7)**

1.2.3.1.3.1.3 Examination may require casings of pipes, spar ceiling and lining in way of the side scuttles to be removed; **(HCR s. 7, 19, 20)**

1.2.3.1.3.1.4 Examination of steel work will require that all the ceiling in the bunkers be removed; portions of the ceiling in the holds shall be removed to establish the condition of the steel work, and unless found free from rust and in good condition all of the ceiling shall be removed; **(HCR s. 7, 9, 10)**

1.2.3.1.3.1.5 Examine, beneath vessel's side discharges, in way of boilers, steam pumps, watertight doors in machinery spaces, and in any locality where there is leakage from pipes and machinery or where continuous condensation occurs; **(HCR s. 7, 15, 18, 19)**

1.2.3.1.3.1.6 Subject to paragraph 1.2.3.1.3.1.7, all tanks that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCR s. 7, 13, 83)**

1.2.3.1.3.1.6.1 in the case of a vessel not more than 15 years old, its tanks, other than peak tanks, that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil need not all be examined internally if, after a general inspection and testing and after an internal examination of one double bottom tank forward, one double bottom tank aft and one deep tank, the inspector finds their condition to be satisfactory, and **(HCR s. 9, 10, 13, 83)**

1.2.3.1.3.1.6.2 in the case of a vessel more than 15 but not more than 20 years old, only one oil fuel double bottom tank amidships, one forward and one aft, and one deep tank need be examined internally, and such tanks should be selected so that as many different tanks as possible are examined internally before the vessel is 20 years old; **(HCR s. 7, 9, 10, 11, 13)**

1.2.3.1.3.1.7 For a vessel where the interval between periodical inspections is five years, oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally when the vessel is 15 years old, except that where, upon external examination, an inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary **(HCR s. 7, 13, 83)**

1.2.3.1.3.1.8 For a vessel 20 years old and over, making unlimited voyages, Near coastal voyage Class 1, Near coastal voyage Class 2 , other than an inland non-passenger vessel making extended Near Coastal voyages within the Gulf of St. Lawrence, all tanks shall be examined internally at each five year inspection; **(HCR s. 7, 13, 83)**

1.2.3.1.3.1.9 For wooden vessels, the requirements for boring, fastening and removal of ceiling, as specified for previous five year inspection, shall be augmented to the extent considered necessary by the inspector; hull sheathing shall be removed as considered necessary to facilitate complete examination of the hull; **(HCR s. 7)**

1.2.3.1.3.1.10 Examination of adjacent steel work may require portions of the cement chocks at the vessel's sides shall be removed; **(HCR s. 7)**

1.2.3.1.3.1.11 Where the holds are insulated for the purpose of carrying refrigerated cargo and the hull in way of the insulation was inspected when the insulation was fitted, enough insulation shall be removed from each of the chambers, and the framing and plating exposed so that their condition may be ascertained; and **(HCR s. 7, 9, 10)**

1.2.3.1.3.1.12 All mast and bowsprit wedging shall be removed; where the plating is doubled in way of the wedging, the wedging only need be removed. **(HCR s. 7)**

1.2.3.1.4 **Inspection of vessel over 25 years old**

1.2.3.1.4.1 Where the interval between periodical inspections of a vessel is five years, it shall be inspected;

1.2.3.1.4.1.1 In accordance with the provisions of (HA) 1.2.2.1

1.2.3.1.4.1.2 In accordance with the requirements of sections 1.2.3.1.1, 1.2.3.1.2 and 1.2.3.1.3, at each five year inspection; and

1.2.3.1.4.1.3 In accordance with the requirements of subsection 1.2.3.1.4.2,

1.2.3.1.4.1.3.1 At the first five year inspection after the vessel is 25 years old,

1.2.3.1.4.1.3.2 At the first five year inspection 15 years after the inspection referred to in clause 1.2.3.1.4.1.3.1, and **(HCR s. 7, 13, 83)**

1.2.3.1.4.1.3.3 Every 12 years after the inspection referred to in clause 1.2.3.1.4.1.3.2; and

1.2.3.1.4.1.4 The oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally at the first five year inspection after the vessel is 25 years old, after the next 10 years, after the next nine years, and every eight years thereafter, except that where, upon external examination, the inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary. **(HCR s. 7)**

1.2.3.1.4.2 At the inspection referred to in subparagraph 1.2.3.1.4.1.3, the following requirements apply:

1.2.3.1.4.2.1 Subject to paragraph 1.2.3.1.4.2.2, the shell plating of a vessel shall be tested using non-destructive testing at such parts as may be considered necessary to ascertain its thickness and for this purpose the following requirements apply: **(HCR s. 7)**

1.2.3.1.4.2.1.1 The number of non-destructive testing test spots on each side of the vessel shall in no case be less than three in each strake of plating not covered with cement, **(HCR s. 7)**

1.2.3.1.4.2.1.2 The testing shall be about amidships and in the vicinity of the peak bulkheads, **(HCR s. 7)**

1.2.3.1.4.2.1.3 All paint and rust shall be removed from the area of the plating surrounding the holes before the thickness of the plating is gauged, **(HCR s. 7)**

1.2.3.1.4.2.1.4 The thickness of the plating at all non-destructive testing, test spots shall be recorded by the inspector, and **(HCR s. 7)**

1.2.3.1.4.2.1.5 The plating covered with cement in the bottom of a vessel need not be tested using non-destructive testing, if in the opinion of the inspector, the cement is adhering to the plating and it is unnecessary to tested at that place; **(HCR s.7)**

1.2.3.1.4.2.2 In the case of a Great Lakes vessel, the inspector shall satisfy himself that the condition of the shell plating is satisfactory and in so doing he shall **(HCR s.7)**

1.2.3.1.4.2.2.1 Give special attention to those parts of the vessel that are subject to damage in canals and locks and to all parts of the vessel that are particularly subject to excessive corrosion or wear and tear, and **(HCR s. 7)**

1.2.3.1.4.2.2.2 Ascertain the thickness of the shell plating by non-destructive testing in such places as he deems necessary; **(HCR s. 7)**

1.2.3.1.4.2.2.3 Where the holds of a vessel are insulated for the purpose of carrying refrigerated cargo, if the hull covered by insulation was inspected when the insulation was fitted, insulation additional to that removed pursuant to paragraph 1.2.3.1.3.1.11 shall be removed in each of the chambers in order to allow the condition of the framing and plating to be ascertained and the shell plating shall be tested using non-destructive testing as prescribed in paragraph 1.2.3.1.4.2.1 and **(HCR s. 7, 9, 10)**

1.2.3.1.4.2.3 All mast and bowsprit wedging of a vessel shall be removed whether the plating in way is doubled or not. **(HCR s. 7)**

1.2.3.2 **(MP) Machinery Periodical**

1.2.3.2.1 Refer to Appendix 3 Machinery Schedules Part IV Division II Subdivision I and Subdivision II of the applicable schedule of Schedules I to XV **(MMR s. 4, 5)**

1.2.3.3 **(FP) Fire Safety Periodical**

1.2.3.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

1.2.3.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

1.2.3.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

1.2.3.3.2 The provisions of (FA) 1.2.2.3, and

The following provisions of the HSSC apply as per Part 1 and 2 of the *VFSR*		
(PR)	5.2.1.13, 5.2.1.23 – 5.2.1.27	Examination of current certificates and other records
(PR)	5.2.2.22, 5.2.2.54 – 5.2.2.56, 5.2.2.64 – 5.2.2.91, 5.2.2.104	Inspection of equipment

1.2.3.4 **(LP) Life Saving Periodical**

1.2.3.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 1.1.1.4 (LI) Life Saving Initial.

1.2.3.5 **(NP) Navigation and Communication Equipment Periodical**

1.2.3.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020* (NSR 2020).

2. REQUIREMENTS FOR INSPECTIONS FOR A VESSEL EXCEEDING 15 GT BUT NOT EXCEEDING 150 GT (< 24M) PLYING AS A NON-PASSENGER VESSEL OR A FISHING VESSEL (<24.4M)[13]

2.1 NON-PASSENGER VESSELS LESS THAN 24 METRES (LESS THAN 150 GT) (Excluding Fishing Vessels)

2.1.1 Initial Inspection

2.1.1.1 **(HI) Hull Initial Inspection**

2.1.1.1.1 Before a new vessel is launched, the compartments within the main hull shall be subjected to hose or pressure tests[14] as follows: **(HCR s.7, 13)**

2.1.1.1.1.1 Double bottoms that are not to be used for the carriage of oil: a head of water which shall be equal to the maximum head that can be experienced in service; **(HCR s. 11)**

[13] Form number 85-0433

[14] These tests may be conducted before the vessel is launched, or afterward in dry dock. If special conditions exist, which will not permit of either of these arrangements, an alternative arrangement may be made to the satisfaction of the inspector.

2.1.1.1.1.2 Deep tanks and peak tanks used for the carriage of water, and deep tanks and double bottom tanks arranged for the carriage of oil fuel: a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m; **(HCR s. 10, 11, 13, 83)**

2.1.1.1.1.3 Peak bulkheads and stepped bulkheads, which do not form the boundaries of tanks, by filling the peaks with water to the level of the load waterline; **(HCR s. 9, 10)**

2.1.1.1.1.4 Watertight bulkheads, including recesses and watertight flats, watertight tunnels, weather decks and waterways, with a pressure of water in the hose shall be not less than 207 kPa; **(HCR s. 13)**

2.1.1.1.1.5 Cargo tanks in tankers with water to a head of 2.4 m above the highest point of the tanks, excluding the hatchways; **(HCR s. 7, 13, 83)**

2.1.1.1.1.6 Cofferdams in tankers shall be filled with water to the top of the hatchways; **(HCR s. 7, 13)**

2.1.1.1.2 Testing of tanks where tanks are to be cemented shall be carried out before the cementing is commented. **(HCR s. 7, 13)**

2.1.1.1.3 Verify inspection of the underwater portion of the vessel and Draft Marks before the Vessel is floated for the issue of a Safety inspection certificate. **(HCR s. 22 and LLR s. 4, 16)**

2.1.1.1.4 Examine all sea connections and discharge openings in the hull before the vessel is floated. **(HCR s. 19)**

2.1.1.1.5 Examine means for closing openings in the hull, decks and superstructures before the vessel goes into service, and; **(HCR s. 15, 16)**

2.1.1.1.6 Test watertight openings by hose-test; the pressure of the water in the hose shall be not less than 207 kPa. **(HCR s. 13, 14, 15, 18)**

2.1.1.1.7 Inspect all watertight doors within the hull, tried under working conditions and hose tested; the pressure of the water in the hose shall be not less than 207 kPa. **(HCR s. 16, 17, 18)**

2.1.1.1.8 Test the means for pumping before the inspection is completed. **(MMR s. 4, 5)**

2.1.1.1.9 Examine the hydraulic steering arrangements during construction and test under working conditions; **(HCR s. 89, 90 and MMR Schedule VII Part I)**

2.1.1.1.10 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2 , having

either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2 the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule VII Part I)**

2.1.1.1.10.1 Inspect masts and rigging during construction, verify tests of the cargo gear were made in the presence of a competent person, as prescribed in the *Cargo, Fumigation and Tackle Regulations*. **(CFTR s. 303, 304, 305*)***

2.1.1.2 **(MI) Machinery Initial**

2.1.1.2.1 Refer to Appendix 3 Machinery Schedules Part II, Part III Division I and Division II of the applicable schedule of Schedules II to IV and VI to XV (**MMR s. 4, 5)**

2.1.1.3 **(FI) Fire Safety Initial**

2.1.1.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

2.1.1.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

2.1.1.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

2.1.1.3.2 Inspect Structural Fire Protection during construction to ensure that it reflects the approved plans and technical documents and complies with VFSR requirements **(VFSR s. 302)**

2.1.1.3.3 Inspect the installation of all fire protection systems and equipment **(VFSR s. 307) (FDEER s.9, 11-19, 37- 51, 54, 55, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97-109, Schedule I - VII)**

2.1.1.3.4 Inspect Fire-resisting bulkheads and fire-resisting doors **(VFSR s.307)**

2.1.1.3.5 Test self-closing arrangements for fire-resisting doors **(VFSR s. 307)**

2.1.1.3.6 Verify equipment from manufacturer's documents, as applicable **(VFSR s. 307) (FDEER s.9, 11, Schedule IV s.2, Schedule V s.2)**

2.1.1.3.7 Verify that all systems and equipment are in operational condition; **(VFSR s. 307) (FDEER s.9, s.11-19, Schedule I-VII)**

2.1.1.3.8 Verify correct installation of securing and release devices; **(VFSR s. 307) (FDEER s.9, 11, Schedule III s.2, Schedule III s.3, 5, 8 and s.11)**

2.1.1.3.9 Verify the validity of equipment testing and servicing dates; and **(VFSR s. 307) (FDEER s.9, s.11, s.12)**

2.1.1.3.10 Verify that safety and operating instructions are posted, **(VFSR s.307, 343) (FDEER s.9, 11, Schedule I s.3, Schedule III s.4, s.11, Schedule IV s.2, 3, 4, 5, 6, 13, Schedule V s.2, Schedule VI s.28)**

2.1.1.3.11 **In addition to the above inspection items the below table applies to;**

2.1.1.3.11.1 Cargo (Non-passenger) vessels of more than 15 GT that carry dangerous goods, other than in limited quantities, and that are referred to in regulation 19.2.2 of Chapter II-2 of SOLAS or have cargo spaces referred to in that regulation as per Part 1 Vessels of the VFSR (**VFSR s. 120, 121, 205, 206 207, 212**)

The following provisions of the HSSC apply as per Part 1 of the *VFSR*		
(EI)	1.1.1 - 1.1.1.11, 1.1.1.13 - 1.1.1.14, 1.1.1.16, 1.1.1.21	Examination of plans and designs of cargo vessels
(EI)	1.1.2	Additional examination of plans and designs for Oil Tankers
(EI)	1.1.3.1 - 1.1.3.13, 1.1.3.24	Inspections during construction and after installation
(EI)	1.1.4	Additional inspection requirements for Oil Tankers during construction and after installation
(EI)	1.1.5.1 – 1.1.5.5	Documentation required to be placed on board
(EI)	1.1.6	Additional documentation required to be placed on board for Oil Tankers
(CI)	2.1.1.7 – 2.1.1.12, 2.1.1.14, 2.1.1.26	Examination of plans and designs of cargo vessels
(CI)	2.1.2.3, 2.1.2.4	Additional requirements for Oil Tankers examination of plans and designs
(CI)	2.1.3.8.1, 2.1.3.10, 2.1.3.46 – 2.1.3.49, 2.1.3.55 – 2.1.3.61	Inspections during construction and after installation
(CI)	2.1.4.4 – 2.1.4.6	Additional inspection requirements for Oil Tankers, Chemical Tankers and Gas carriers during construction and after installation
(CI)	2.1.6.11	Documentation required to be placed on Board

2.1.1.4 **(LI) Life Saving Initial**

2.1.1.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as follows;

2.1.1.4.2 **Survival Craft:**

2.1.1.4.2.1 Witness Survival Craft being swung out and lowered into the water at every inspection except that in exceptional circumstances lowering of the survival craft may be waived at the discretion of the inspector who shall, however, satisfy himself regarding the length and condition of all lifeboats, falls and lifelines; **(LSER s. 140,141,142,143,144)**

2.1.1.4.2.2 Verify that all moveable equipment has been removed before inspecting Survival Craft; **(LSER Schedules II and XV (16)(b))**

2.1.1.4.2.3 Inspect all survival craft equipment and properly re-store; **(LSER s. 130)**

2.1.1.4.2.4 Check and verify all Survival Craft markings **(LSER Schedules V and V.1)**

2.1.1.4.2.5 Test new Survival Craft as per the revised recommendation on testing of Life Saving appliance (resolution MSC 81(70)) or installations with the full equipment and distributed weights representing the complement required to be on at the time of launching, plus 10 per cent of the complement weight (the weight of an adult shall be taken as 82.5 kg); **(LSER Schedules V and IX)**

2.1.1.4.2.6 Verify all flotation material, or approved portable substitutes therefor, has been removed from Survival Craft for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the Survival Craft, the inspector shall use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material **(LSER s. 114)**

2.1.1.4.3 **Life rafts**

2.1.1.4.3.1 Verify the life rafts, equipment and stowage arrangements and test the means provided for placing them in the water; (**LSER s. 145, Schedules I and VIII)**

2.1.1.4.3.2 Verify all life raft markings; and **(LSER Schedule VIII)**

2.1.1.4.3.3 Verify all flotation material, or approved portable substitutes therefor, have been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the life raft the inspector shall take use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material. **(LSER s. 145, Schedule VIII)**

2.1.1.4.4 **Buoyant apparatus:**

2.1.1.4.4.1 Inspect all buoyant apparatus **(LSER s. 122)**

2.1.1.4.4.2 Verify buoyant apparatus markings; and **(LSER s. 122)**

2.1.1.4.4.3 Verify all flotation material, or approved substitutes therefor, has been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the buoyancy unit, the inspector shall use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material. **(LSER s.122)**

2.1.1.4.5 Verify repairs to a lifeboat, life raft or buoyant apparatus that are necessary, are made before a certificate is issued **(LSER s.114)**

2.1.1.4.6 Inspect Lifejackets, lifebuoys with their lights and lines, and line-throwing appliances; and the means provided for stowage shall be satisfactory to the inspector **(LSER s. 127.1, 131 Schedule XII)**

2.1.1.5 **(NI) Navigation and Communication Equipment Initial**

2.1.1.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020*, (NSR 2020.

2.1.2 Renewal Inspections

2.1.2.1 **(HR) Hull Renewal**

2.1.2.1.1 **Inspection of a vessel not over five years old**

2.1.2.1.1.1 At a four-year inspection of a vessel not over five years old, the following requirements shall apply:

2.1.2.1.1.1.1 Verify all holds and peaks shall be cleared **(HCR s. 9, 10)**

2.1.2.1.1.1.2 confirm in vessels with a single bottom, limber board and ceiling equal to not less than two strakes fore and aft on each side shall be removed, and one such strake shall be taken from the bilges; where the ceiling is fitted in hatches, the whole of the hatches and one strake of ceiling at the bilges has been removed; **(HCR s. 7, 9, 10)**

2.1.2.1.1.1.3 Verify in vessels with a double bottom, a sufficient amount of ceiling shall be removed to enable the condition of the tank top to be ascertained and, if it is found that the plating is free from dirt and rust, the removal of the remainder of the ceiling may be dispensed with; all bilges and limbers fore and aft has been cleaned; **(HCR s. 7, 11)**

2.1.2.1.1.1.4 Verify ceiling removed as in the holds; in the case of Great Lakes vessels, however, cleaning and ceiling removal shall be at the discretion of the inspector; **(HCR s. 7, 9, 10)**

2.1.2.1.1.1.5 Inspect all steel work. Steel work shall be exposed and cleaned to the extent required by the inspector for a proper examination; special attention shall be given to shell plating in way of openings; **(HCR s. 7, 19)**

2.1.2.1.1.1.6 Examination and inspection in the case of a wooden vessel, require parts of the ceiling shall be removed at the discretion of the inspector in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained; **(HCR s. 7)**

2.1.2.1.1.1.7 Inspect and examine all scupper and sanitary discharge valves, excluding those connected to the machinery, not recorded as having been inspected since the first inspection, shall be opened up. All side scuttles shall be examined and, where required to have special locking arrangements, those locking arrangements shall be tested and the inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted. **(HCR s. 19, 20)**

2.1.2.1.1.1.8 Verify signs of wastage a in any part of a vessel's structure, non-destructive testing may be required, and if any part is found to be defective, or if material is reduced in thickness[8,] the defect shall be replaced by material equal in scantling and quality to that of the original construction; **(HCR s. 7)**

2.1.2.1.1.1.9 Inspect the inner surface of the bottom plating covered with cement or asphalt. This will require the removal of the covering and be dispensed with when it is found, by heating or chipping, to be sound and adhering satisfactorily to the steel; **(HCR s. 7)**

2.1.2.1.1.1.10 Test double bottom tanks that are not used for the carriage of oil fuel by a head of water to the light water line, but in no case less than 2.44 m above the inner bottom; in the case of Great Lakes vessels, the testing of tank tops may be waived at the discretion of the inspector, having regard to the voyages the vessel makes;; **(HCR s. 7,11)**

2.1.2.1.1.1.11 Test double bottom compartments used for the carriage of oil fuel by a head of water or oil extending to the load water line, or by a head sufficient to give the maximum pressure that they may be required to bear at any time, whichever is the greater; **(HCR s. 11)**

2.1.2.1.1.1.12 Test the water tightness of peak tanks or deep tanks for carrying water ballast by a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 49 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m; **(HCR s. 10, 11, 13, 83)**

2.1.2.1.1.1.13 Test of peak tanks or deep tanks in the case of Great Lakes vessels, may be waived if considered unnecessary by the inspector after inspection of the structure; (**HCR s. 7, 10, 11, 13, 83)**

2.1.2.1.1.1.14 Inspect all water ballast tanks. All tanks shall be cleaned in order that their interior may be adequately inspected; special attention shall be given to tanks under boiler spaces; **(HCR s. 7)**

2.1.2.1.1.1.15 Inspect and test deep tanks constructed for carrying oil or oil and fresh water, but not used solely for that purpose, and peak tanks used for carrying oil fuel, by a head of water or oil sufficient to give the maximum pressure that can be experienced in service, or 2.4 m, whichever is the greater; **(HCR s. 10,13)**

2.1.2.1.1.1.16 Test and inspect double bottom and deep tanks used exclusively for oil fuel or for oil fuel and fresh water, and oil fuel bunkers, need not be examined internally if after a general inspection and testing as required by paragraphs 2.1.2.1.1.1.11or 2.1.2.1.1.1.15their condition is found to be satisfactory; **(HCR s. 11, 13)**

2.1.2.1.1.1.17 Inspect all watertight bulkheads, decks, tunnels and other subdivision arrangements to ascertain their condition, and if their watertightness has been impaired, any part found deficient shall be restored to its original condition; **(HCR s. 9, 10, 13)**

2.1.2.1.1.1.18 Verify where a definite standard of subdivision has been approved, the watertight compartments and all arrangements and details connected with the subdivision has been checked; **(HCR s.9, 10)**

2.1.2.1.1.1.19 Inspect all masts, spars and rigging; **(CFTR s. 303, 304, 305)**

2.1.2.1.1.1.20 Inspect anchors, other equipment and chain cable. Where any length of chain cable is found to be reduced in diameter at any part to the extent indicated in schedule C of Appendix 5 of this standard, it shall be renewed; where renewal of anchors or cables is required, a certificate shall be produced to show that the replacement has been tested as prescribed by schedule A, schedule B,: or schedule D of Appendix 5 of this standard:; the interior of the chain locker shall be cleared and cleaned and the compartment inspected; **(HCR s. 142, 143)**

2.1.2.1.1.1.21 Inspect hatch covers and supports, tarpaulins, cleats, battens, and other means of securing all hatches; **(HCR s. 116, 117, 118, 119, 121, 122, 123, 124, 125)**

2.1.2.1.1.1.22 Inspect ventilator coamings and covers (**HCR s. 126)**

2.1.2.1.1.1.23 Inspect the rudder, its means of support, and the pintles and gudgeons, and, if considered necessary by the inspector for proper examination, the rudder shall be lifted; (**HCR s. 89, 90 and MMR Schedule XII Part I)**

2.1.2.1.1.1.24 Examine all steering gear leads. To permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix 5 of this standard, these tests shall be carried out by an authority[15] accepted by the Regional Technical Services manager and certificates of tests shall be issued; (**HCR s. 89, 90 and MMR Schedule XII Part I)**

2.1.2.1.1.1.25 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall

[15] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule XII Part I)**

2.1.2.1.1.1.26 Test the main steering gear; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

2.1.2.1.1.1.27 Test the means for auxiliary steering by assembling and connecting for testing. **(HCR s. 89, 90 and MMR Schedule XII Part I)**

2.1.2.1.1.1.28 Inspect and open sluice valves and protective casings around air and sounding pipes; **(HCR s. 7)**

2.1.2.1.1.1.29 Inspect all watertight doors and other means for closing openings in watertight subdivisions and their condition and efficiency ascertained, the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 15,16, 17, 18)**

2.1.2.1.1.1.30 Inspect and test warning signals, hand gear indicators showing when doors are closed, and indicators at central closing stations, **(HCR s. 17)**

2.1.2.1.1.1.31 Inspect hinged watertight door and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18, 19, 34, 119, 120)**

2.1.2.1.1.1.32 Inspect and hose test when a watertight door is removed for repair and replaced, if practicable, shall be subjected to a hydraulic test; **(HCR s. 15,18)**

2.1.2.1.1.1.33 Inspect fire-resisting bulkheads and fire-resisting doors and test self-closing arrangements for fire-resisting doors; **(VFSR 120, 121, 205, 206 207, 212)**

2.1.2.1.1.1.34 Examine striking plates under sounding pipes and renewed when necessary; **(HCR 7)**

2.1.2.1.1.1.35 Inspect holds that are insulated for the purpose of carrying refrigerated cargoes and if the hull in way of the insulation was inspected when the insulation was fitted, it shall be sufficient to remove the limbers and hatches to expose the plating in way of these parts. **(HCR 7, 9, 10).**

2.1.2.1.1.2 **Oil tankers are subject to the following additional requirements;**

2.1.2.1.1.2.1 Verify the cargo tanks are cleaned, gas-free and the strums of the cargo suction pipes are removed to facilitate inspection of the shell plating and bulkheads in their vicinity; **(HCR s. 7, 19)**

2.1.2.1.1.2.2 Test each oil compartment and cofferdam, except in a case where the cofferdam between the engine room and the cargo tanks is used as a pump room, by filling with water to the top of the hatchway in the expansion trunk or cofferdam; provided that the tanks may be filled to the light water line when the vessel is in dry dock and the remainder of the test carried out afloat; the centre line bulkhead need not be tested independently. Where a pump room forms the cofferdam between cargo tanks and the machinery space, the inspector shall be satisfied that the integrity of the engine room bulkhead is being maintained; and **(HCR s. 7, 10 13)**

2.1.2.1.1.2.3 Test where extensive repairs have been made to the shell plating, the tanks shall be tested by being filled when the vessel is in dry dock; where this is not

practicable, particulars of any method proposed to be used in testing the tanks shall be submitted for the approval. (**HCR s. 7, 13, 19)**

2.1.2.1.2 **Inspection of vessel over five years old but not over 10 years old**

2.1.2.1.2.1 At a four year inspection of a vessel over five years old but not over 10 years old, in addition to the requirements of section 2.1.2.1.1 the following requirements shall apply:

2.1.2.1.2.1.1 Examine by removing the additional ceiling holds to enable the condition of the inner bottom plating, pillar feet and the bottom plating of bulkheads and tunnel sides; if considered necessary by the inspector, all of the ceiling shall be removed; removal of additional ceiling and of fastenings, at the discretion of the inspector, shall apply also in the case of wooden vessels; **(HCR s. 7, 9, 10)**

2.1.2.1.2.1.2 Examine vessels with a single bottom by removing one additional strake of the limber board and ceiling all the way fore and aft on each side; **(HCR s. 7, 9, 10)**

2.1.2.1.2.1.3 Examine all tanks that are used exclusively for oil fuel or oil fuel and fresh water, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCRs. 13, 83)**

2.1.2.1.2.1.3.1 In the case of double bottom tanks used exclusively for oil fuel or oil fuel and fresh water, where the foremost such tank has been thoroughly cleaned, gas-freed, inspected internally and found satisfactory to the inspector, the cleaning, gas-freeing and internal examination of the other double bottom tanks used for such purpose shall not be necessary where, upon a general external examination, the inspector finds their condition to be satisfactory, and; **(HCR s. 11,13, 83)**

2.1.2.1.2.1.3.2 In the case of tanks used exclusively for oil fuel or oil fuel and fresh water, other than double bottom and peak tanks, the cleaning, gas-freeing and internal examination of those tanks shall not be necessary where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s. 7, 13, 83)**

2.1.2.1.2.1.4 Lubricating oil tanks need not be examined internally where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s. 13, 83)**

2.1.2.1.2.1.5 Examine plating in way of the side scuttles by having it exposed for examination. **(HCR s. 7, 19, 20)**

2.1.2.1.3 **Inspection of vessels over 10 years old but not over 24 years old**

2.1.2.1.3.1 At a four year inspection of a vessel over 10 years old but not over 24 years old, in addition to the requirements of sections 2.1.2.1.1and 2.1.2.1.2, the following requirements shall apply;

2.1.2.1.3.1.1 Examine all steel work by having it cleaned and all rust removed, to the extent required by the inspector for a proper examination; **(HCR s. 7)**

2.1.2.1.3.1.2 Examination may require casings of pipes, spar ceiling and lining in way of the side scuttles to be removed; **(HCRs. 7, 19, 20)**

2.1.2.1.3.1.3 Examination of steel work will require that all the ceiling in the bunkers be removed; portions of the ceiling in the holds shall be removed to establish the condition of the steel work, and unless found free from rust and in good condition all of the ceiling shall be removed; **(HCR s. 7, 9, 10)**

2.1.2.1.3.1.4 examine, beneath vessel's side discharges, in way of boilers, steam pumps, watertight doors in machinery spaces, and in any locality where there is leakage from pipes and machinery or where continuous condensation occurs; **((HCR s. 7, 15, 18, 19)**

2.1.2.1.3.1.5 Subject to paragraph 2.1.2.1.3.1.6, all tanks that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that; **(HCR s. 7, 13, 83)**

2.1.2.1.3.1.5.1 In the case of a vessel not more than 15 years old, its tanks, other than peak tanks, that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil need not all be examined internally if, after a general inspection and testing and after an internal examination of one double bottom tank forward, one double bottom tank aft and one deep tank, the inspector finds their condition to be satisfactory, and **(HCR s. 9, 10, 13, 83)**

2.1.2.1.3.1.5.2 In the case of a vessel more than 15 but not more than 20 years old, only one oil fuel double bottom tank amidships, one forward and one aft, and one deep tank need be examined internally, and such tanks should be selected so that as many different tanks as possible are examined internally before the vessel is 20 years old; **(HCR s. 7, 9, 10, 11, 13)**

2.1.2.1.3.1.6 For a vessel where the interval between periodical inspections is four years, oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally when the vessel is 15 years old, except that where, upon external examination, an inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary **(HCR s. 7, 13, 83)**

2.1.2.1.3.1.7 For a vessel 20 years old and over making unlimited voyages, Near coastal voyage, Class 1, Near coastal voyage, Class 2, other than an inland non-passenger vessel making extended Near Coastal voyages within the Gulf of St. Lawrence, all tanks shall be examined internally at each four year inspection; **(HCR s. 7, 13, 83)**

2.1.2.1.3.1.8 Examination in the case of wooden vessels, the requirements for boring, fastening and removal of ceiling, as specified for previous four year inspection, shall be augmented to the extent considered necessary by the inspector; hull sheathing shall be removed as considered necessary to facilitate complete examination of the hull **(HCR s. 7)**

2.1.2.1.3.1.9 Examination of adjacent steel work may require portions of the cement chocks at the vessel's sides shall be removed; **(HCR s. 7)**

2.1.2.1.3.1.10 Where the holds are insulated for the purpose of carrying refrigerated cargo and the hull in way of the insulation was inspected when the insulation was fitted,

enough insulation shall be removed from each of the chambers, and the framing and plating exposed so that their condition may be ascertained; and **(HCR s. 7, 9, 10)**

2.1.2.1.3.1.11 All mast and bowsprit wedging shall be removed; where the plating is doubled in way of the wedging, the wedging only need be removed. **(HCR s. 7)**

2.1.2.1.4 **Inspection of vessel over 24 years old**

2.1.2.1.4.1 Where the interval between periodically inspections of a vessel is four years, it shall be inspected:

2.1.2.1.4.1.1 In accordance with the requirements of sections 2.1.2.1.1, 2.1.2.1.2 and 2.1.2.1.3, at each four year inspection; and

2.1.2.1.4.1.2 In accordance with the requirements of subsection 2.1.2.1.4.2:

2.1.2.1.4.1.2.1 At the first four year inspection after the vessel is 24 years old; and

2.1.2.1.4.1.2.2 Every 12 years after the inspection referred to in subparagraph 2.1.2.1.4.1.2.1.

2.1.2.1.4.1.3 The oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally at the first five year inspection after the vessel is 24 years old, after the next 10 years, after the next nine years, and every eight years thereafter, except that where, upon external examination, the inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary. **(HCR s. 7, 13, 83)**

2.1.2.1.4.2 At the inspection referred to in paragraph 2.1.2.1.4.1.3 and the following requirements apply:

2.1.2.1.4.2.1 Subject to paragraph 2.1.2.1.4.2.2, the shell plating of a vessel shall be tested using non-destructive testing at such parts as may be considered necessary to ascertain its thickness and for this purpose the following requirements apply: **(HCR s. 7)**

2.1.2.1.4.2.1.1 The number of non-destructive testing test spots on each side of the vessel shall in no case be less than three in each strake of plating not covered with cement, **(HCR s. 7)**

2.1.2.1.4.2.1.2 The testing shall be about amidships and in the vicinity of the peak bulkheads,

2.1.2.1.4.2.1.3 All paint and rust shall be removed from the area of the plating surrounding the holes before the thickness of the plating is gauged, **(HCR s. 7)**

2.1.2.1.4.2.1.4 The thickness of the plating at all non-destructive testing, test spots shall be recorded by the inspector, and **(HCR s. 7)**

2.1.2.1.4.2.1.5 The plating covered with cement in the bottom of a vessel need not be tested using non-destructive testing, if in the opinion of the inspector, the cement is adhering to the plating and it is unnecessary to tested at that place; **(HCR s. 7)**

2.1.2.1.4.2.2 In the case of a Great Lakes vessel, the inspector shall satisfy himself that the condition of the shell plating is satisfactory and in so doing he shall: **(HCR s. 7)**

2.1.2.1.4.2.2.1 Give special attention to those parts of the vessel that are subject to damage in canals and locks and to all parts of the vessel that are particularly subject to excessive corrosion or wear and tear, and **(HCR s. 7)**

2.1.2.1.4.2.2.2 Ascertain the thickness of the shell plating by non-destructive testing in such places as he deems necessary; **(HCR s. 7)**

2.1.2.1.4.2.3 Where the holds of a vessel are insulated for the purpose of carrying refrigerated cargo, if the hull covered by insulation was inspected when the insulation was fitted, insulation additional to that removed pursuant to paragraph 2.1.2.1.3.1.10 shall be removed in each of the chambers in order to allow the condition of the framing and plating to be ascertained and the shell plating shall be tested using non-destructive testing as prescribed in paragraph 2.1.2.1.4.2.1and **(HCR s. 7, 9, 10)**

2.1.2.1.4.2.4 All mast and bowsprit wedging of a vessel shall be removed whether the plating in way is doubled or not. **(HCR s. 7)**

2.1.2.2 **(MR) Machinery Renewal**

2.1.2.2.1 Refer to Appendix 3 Machinery Schedules Part IV Division II Subdivision I and Subdivision II of the applicable schedule of Schedules II to IV and VI to XV **(MMR s. 4, 5)**

2.1.2.3 **(FR) Fire Safety Renewal**

2.1.2.3.1.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

2.1.2.3.1.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

2.1.2.3.1.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

2.1.2.3.1.2 Inspect all structural fire protection arrangements: (**VFSR s. 307 HCR s.156, s.158, s.172, s.182, s.218, s.220, s.233)**

2.1.2.3.1.2.1 Check the fire control plan or booklet against the vessel. (**VFSR s. 308, HCR s.40)**

2.1.2.3.1.3 Verify that the primary and emergency exits of all spaces are unobstructed; able to be opened from both sides; and able to be kept in an open position while being used as part of an escape route. **(VFSR s. 313 HCR s.84)**

2.1.2.3.2 Inspect all fire protection systems and equipment by verifying that: **VFSR s. 313)**

2.1.2.3.2.1 Verify all systems and equipment are in operational condition; **(VFSR s. 307) (FDEERs.21-36, s.37-49, s.50-52, s.54-55, s.85-95, s.96, s.97-103, s.104-109)**

2.1.2.3.2.2 Verify safety and operating instructions are posted; and **(VFSR s. 343,(FDEER Schedule I s.3(2), Schedule III s.2(4), s.3(11), Schedule V s.2(2), Schedule VI s.28)**

2.1.2.3.2.3 Verify all equipment servicing and testing dates are valid. **(VFSR s. 307) (FDEER s. 10, s.11)**

2.1.2.3.3 Verify that each portable fire extinguisher is:

2.1.2.3.3.1 Mounted securely and the quick release is easily operable; **(VFSR s. 307)**

2.1.2.3.3.2 Stored in a readily accessible location where its operation will not be affected by icing or cold temperature, and if no other fire extinguisher is located in the same space, it is near the entrance to the space; and **(VFSR s. 307)**

2.1.2.3.3.3 Identified, marked and tagged, as applicable. **(VFSR s. 307)**

2.1.2.3.4 Inspect and test means of closing main inlets and outlets of ventilation systems and for stopping ventilation fans from outside the spaces being served; and **(VFSR s. 329) (HCR s.50)**

2.1.2.3.5 Examine the bilges and tank tops in machinery spaces containing internal combustion engines, boilers or oil fuel units to see that there is no accumulation of oil which might create a fire hazard. **(VFSR s. 307)(FDEER s. 10, s.11)**

2.1.2.3.6 **Servicing of Equipment**

2.1.2.3.6.1 Verify that all fixed and portable fire extinguishing equipment requiring servicing were serviced as following; **(VFSR s. 307)**

2.1.2.3.6.2 Fixed fire-extinguishing systems must be serviced as required by the standard to which they have been certified[16] by a product certification body, or used for type approval by RO, and according to the equipment manufacturer's instructions or recommendations. **(VFSR s. 307)(FDEER s.30(1), s.31.1(2), s.46.1(2), s.51.1(2), s.81(1)(e), s.82.1(2), s.94.1(2))**

2.1.2.3.6.3 Fire extinguishers must be serviced as required by the standard to which they have been certified by a product certification body, or used for type approval by the U.S. Coast Guard or a RO, and according to the equipment manufacturer's instructions or recommendations. **(VFSR s. 307)**

2.1.2.3.7 **In addition to the above inspection items the below tables applies to;**

2.1.2.3.7.1 Cargo (Non-passenger) vessels of more than 15 GT that carry dangerous goods, other than in limited quantities, and that are referred to in regulation 19.2.2 of

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[16] NOTE: Fire extinguishing systems and extinguishers certified or approved using a standard that do not include servicing requirements must be serviced in accordance with the NFPA standard appropriate for the type of systems and equipment.

NOTE: Pressure containers must be serviced according to the applicable requirements of the *Transportation of Dangerous Goods Regulations (TDGR)* or in accordance with the alternative regulations and standards for which it has been marked.

Note: If the alternative regulations and standards used for the marking of the pressure container do not include servicing requirements, the pressure containers must be serviced in accordance with the *Transportation of Dangerous Goods Regulations (TDGR)* requirements.

Chapter II-2 of SOLAS or have cargo spaces referred to in that regulation. as per Part 1 Vessels of the VFSR

The following provisions of the HSSC apply as per Part 1 of the *VFSR*		
(EA)	1.2.1.16 – 1.2.1.22, 1.2.1.24	Examination of current certificates and other records
(EA)	1.2.2.1 – 1.2.2.11, 1.2.2.13 – 1.2.2.15, 1.2.2.28	Inspection of equipment
(EA)	1.2.3.1 – 1.2.3.7, 1.2.3.9	Additional Inspection of equipment required for Oil Tankers
(CA)	2.2.1.16, 2.2.1.17	Examination of current certificates and other records
(CA)	2.2.2.8.1, 2.2.2.9, 2.2.2.26 – 2.2.2.29	Inspection of equipment
(CA)	2.2.3.3 – 2.2.2.3.5, 2.2.3.8, 2.2.3.11	Additional Inspection of equipment required for Oil Tankers
(ER)	1.4	Renewal Inspection
(ER)	1.4.1.1	Examination of current certificates and other records as required by: (EA) 1.2.1.16 – 1.2.1.22, (EA) 1.2.1.24
(ER)	1.4.2.1	Inspection and Testing of equipment as required by: (EP) 1.3.2.2 – 1.3.2.8
(ER)	1.4.3.1	Additional Inspection of equipment required for Oil Tankers as required by: (EP) 1.3.3.2

(ER)	1.4.3.2	Additional Inspection of equipment required for Oil Tankers

2.1.2.4 **(LR) Life Saving Renewal**

2.1.2.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 2.1.1.4 (LI) Life Saving Initial.

2.1.2.5 **(NR) Navigation and Communication Equipment Renewal**

2.1.2.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020* (NSR 2020).

2.2 SMALL FISHING VESSELS THAT ARE MORE THAN 15 GT BUT NOT MORE THAN 150 GT AND NOT MORE THAN 24.4 M IN LENGTH

2.2.1 Initial Inspections

2.2.1.1 **(HI) Hull Initial Inspection**

2.2.1.1.1 Every fishing vessel shall be inspected during construction at such times as the inspector deems advisable[17]. **(FVSR Parts 0.1 and 3.03)**

2.2.1.1.2 Witness the following operations during the hull initial inspection;

2.2.1.1.2.1 Dock trials and sea trials of a fishing vessel, the bilge and fire pumps, the steering and stopping powers of the vessel, the launching appliance for the life raft, recovery boat, emergency boats, rescue boat or seine skiffs shall be tested. The safe operation of the vessel for the purpose to which it is intended to be verified taking into consideration, the fishing vessel's area of operation and seaworthiness. (**FVSR Part 0.1 Divisions 1and 2)**

2.2.1.1.3 Verify the vessel that is required to undergo a stability assessment, that the vessel has on board a copy of a stability booklet or record of stability conducted, signed by a competent person and that a stability notice is posted in a conspicuous location; all of which shall meet the requirements of **(FVSR Part 0.1 Division 3 (s. 3.51, 3.52))**

2.2.1.1.4 Verify the requirements of the FVSR have been met and the vessel is constructed in accordance with the approved data and plans and technical documents required to be submitted under Appendix 1 (Submission of Plans and Technical Documents

[17] Notification from the AR is to be received at least one week in advance of the inspection for the following;
- The commencement of framing, or similar stage of construction;
- The commencement of planking or plating, or similar stage of construction;
- The launching; and
- The dock and sea trials.

for Approval for Passenger Vessels, Non-passenger Vessels, and Fishing Vessels) of this standard. **(CSA 2001 s. 119)**

2.2.1.1.5 Following the inspection, and if the inspector is satisfied that the vessel complies with the requirements of the FVSR and the requirements of this standard, the inspector will issue a Safety inspection certificate valid for a period not exceeding four years from the date of completion of the inspection. (**FVSR Part 0.1)**

2.2.1.2 **(MI) Machinery Initial**

2.2.1.2.1 Inspection of a new construction, the inspector may accept any machinery or any electrical installation, equipment or appliance, without requiring it to be opened for inspection, if (**FVSR Parts 0.1 s.3.04 and, Part 1 s.44.1)**

2.2.1.2.1.1 Plans and technical documents in respect of the machinery or the electrical installation, equipment or appliance are not required to be submitted under Appendix 1 of this standard; and **(CSA 2001 s. 119)**

2.2.1.2.1.2 The inspector has verified that the machinery or electrical installation, equipment or appliance is safe and suitable for the purpose for which it is intended; or **(FVSR Part 0.1 s. 3.04 and Part 1 s.44.1)**

2.2.1.2.1.3 It has been type approved or accepted by the Regional Technical Services Manager, a RO or a product certification body. (**FVSR Part 0.1 s.3.04 and Part 1 s.44.1)**

2.2.1.3 **(FI) Fire Safety Initial**

2.2.1.3.1 Inspect all equipment and verify all equipment is compliant (**FVSR Part 0.1 s.3.37-3.43 and Part 1 s.38, 39)** and;

2.2.1.3.2 Witness the testing of the bilge and fire pumps. (**FVSR Part 0.1 s. (3.37-3.43 and Part 1 s. 38, 39)**

2.2.1.4 **(LI) Life Saving Initial**

2.2.1.4.1 All life-saving equipment shall be inspected to verify that it is compliant **(FVSR Part 0.1 s.3.22, 3.25 - 3.31 and Part 1 s.43.1)**

2.2.1.5 **(NI) Navigation and Communication Equipment Initial**

2.2.1.5.1 All navigation and communication equipment shall meet the requirements as set out in the *Navigation Safety Regulations, 2020* (NSR 2020) along with the requirements in the *Fishing Vessel Safety Regulations (**FVSR Part 0.1 s.3.35, 3.36)***.

2.2.1.5.2 Verify that written safety procedures specific to the vessel have been developed as required **(FVSR Part 0.1 s. 3.16)**

2.2.2 Periodic (Renewal) Inspections

2.2.2.1 **(HP) Hull Periodic**

2.2.2.1.1 Every small fishing vessel shall be inspected once every four years as follows:

2.2.2.1.2 Examine the hull while the vessel is in dry dock or while it is beached; **(FVSR Part 0. 1 s. 3.03)**

2.2.2.1.3 Examine the rudder in place, the wear down of the tailshaft measured and all sea connections opened up for inspection; **(FVSR Part 0.1 s. 3.03and Part 1 s. 15, 16, 17)**

2.2.2.1.4 Verify the safe operation of the vessel for the purpose to which it is intended, taking into consideration, the fishing vessel's area of operation and seaworthiness; **(FVSR Part 0. 1 s. 3.03)**

2.2.2.1.5 Verify the vessel that is required to undergo a stability assessment, the inspector will verify that the vessel has on board a copy of an up-to-date stability booklet or record of stability conducted, signed by a competent person (as defined in Sections 3.51 & 3.52 of the FVSR), and that a stability notice is posted in a conspicuous location; all of which shall meet the requirements **(FVSR Part 0.1 Division 3 and Part 0.1 (s. 3.51, 3.52))**

2.2.2.1.6 For existing small fishing vessels that are not required to undergo a stability assessment, the Inspector should note whether the vessel's stability and, if applicable, its buoyancy and flotation appear to be adequate to safely carry out its intended operation. If clearly so, no further action is required by the Inspector as it's the sole responsibility of a vessel's AR and master to demonstrate that the stability of such vessels is adequate. Where the adequacy of the vessel's stability isn't clear, the Inspector should request that it be demonstrated by the AR or master.

2.2.2.1.7 Inspect tailshafts of a small fishing vessel as follows:

2.2.2.1.7.1 Carbon steel tailshafts, where used in salt water, shall be completely withdrawn for inspection and the propeller removed at least once every four years; **(FVSR Part 1 s. 18, 19)**

2.2.2.1.7.2 When the owner of a small fishing vessel has, for any purpose, caused the tailshafts referred to in paragraph 2.2.2.1.7.1to be withdrawn, he shall, in order to facilitate the inspection required by paragraph 2.2.2.1.7.1, notify the inspector that the tailshafts have been withdrawn and the propeller removed; **(FVSR Part 1 s.18, 19)**

2.2.2.1.7.3 Bronze, monel, stainless steel or other non-corrosive tail shafts used in salt or fresh water and carbon steel tail shafts used in fresh water shall, if considered necessary by the inspector, be partially or completely withdrawn for inspection once every four years and the propeller shall, if considered necessary by the inspector, be removed once every four years; and **(FVSR Part 1 s.18, 19)**

2.2.2.1.7.4 When the owner of a small fishing vessel has, for any purpose, caused the tailshafts referred to in paragraph 2.2.2.1.7.3 of this Appendix to be withdrawn, he shall, in order to facilitate the inspection referred to in paragraph 2.2.2.1.7.3 of this Appendix, notify the inspector that the tailshafts have been withdrawn. **(FVSR Part 1 s. 18, 19)**

2.2.2.1.8 No safety inspection certificate will be issued in respect of a small fishing vessel which has undergone a major modification as defined in subsection 3.48(3) of the FVSR unless: **(CSA 2001 s. 119)**

2.2.2.1.8.1 The scantlings, information, data, plans and technical documents required to be submitted under Appendix 1 section 3.1 of this standard (Submission of Plans and Technical Documents for Small Fishing Vessels) have been submitted and approved; **(CSA 2001 s. 119)**

2.2.2.1.8.2 The vessel is modified in accordance with: **(CSA 119)**

2.2.2.1.8.2.1 The scantlings, information, data, plans and technical documents referred to in paragraph 2.2.2.1.8.1; and the requirements of the FVSR.

2.2.2.1.9 Following a periodic inspection, if the Inspector is satisfied that the vessel complies with the requirements of the this standard, the Inspector will issue a safety inspection certificate for a period not exceeding four years from the date of completion of the inspection.

2.2.2.2 **(MP) Machinery Periodic**

2.2.2.2.1 Subject to subsection 2.2.2.2.1.1every small fishing vessel shall be inspected once every four years as follows: **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.1 The periodic inspection required by paragraph 2.2.2.2.1.2 in respect of a new air receiver shall commence ten years after the date of the first inspection of the air receiver. **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.2 Test air receivers by hydraulic pressure to 1½times the working pressure but the inspector may waive that test if the air receiver has a manhole or other opening that permits a thorough examination of the interior and the Inspector is satisfied that it is in a safe and sound condition; **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.3 Test engine by trial and if the engine is found in good operating condition the inspector may accept it without opening it up for inspection, but where the running trial demonstrates that the engine is not in good operating condition , the inspector may require that the engine, or any part thereof, be opened up for inspection; in lieu the Inspector may accept the service/maintenance report from The engine manufacturer or authorized service representative indicating that the engine is in good order. **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.4 Examine the engine when it is opened up for overhaul; **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.5 Verify that air compressor relief valves and air receiver relief valves are set to blow off at the assigned working pressure; **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.6 Test bilge pumps by trial and overhaul if necessary; **(FVSR Part 0.1 s. 3.04)**

2.2.2.2.1.7 Inspect the electrical equipment, installations and appliances in accordance with TP 127 as it reads on the day on which the inspection is made; **(FVSR Part 1 s. 44.1)**

2.2.2.3 **(FP) Fire Safety Periodic**

2.2.2.3.1 Inspect all, fire-extinguishing equipment to verify that it is compliant **(FVSR Part 0.1 s.3.37-3.43 and, Part 1 s. 38, 39)** and

2.2.2.3.2 Test fire pumps by trial and overhaul if necessary; **(FVSR Part 0.1 s.3.37-3.43 and Part 1 s. 38, 39)**

2.2.2.4 **(LP) Life Saving Periodic**

2.2.2.4.1 All life-saving equipment shall be inspected to verify that it is compliant **(FVSR Part 0.1 s. 3.22, 3.25 - 3.31 and Part 1 s.43.1)**

2.2.2.5 **(NP) Navigation and Communication Equipment Periodic**

2.2.2.5.1 All navigation and communication equipment shall meet the requirements as set out in the *Navigation Safety Regulations, 2020* (NSR 2020) along with the requirements in the *Fishing Vessel Safety Regulations* **(FVSR Part 0.1, 3.35, 3.36)**

2.2.2.5.2 Verify that written safety procedures specific to the vessel have been developed as required **(FVSR Part 0.1 s. 3.16)**

3. REQUIREMENTS FOR INSPECTIONS FOR A VESSEL EXCEEDING (> 24M) 150 GT PLYING AS A NON-PASSENGER VESSEL OR A FISHING VESSEL (>24.4M)[18]

3.1 NON-PASSENGER VESSELS 24 METRES AND GREATER (GREATER THAN 150 GT) (Excluding Fishing Vessels)

3.1.1 Initial Inspections

3.1.1.1 **(HI) Hull Initial Inspection**

3.1.1.1.1 Before a new vessel is launched, the compartments within the main hull shall be subjected to hose or pressure tests as follows: **(HCR s. 7, 13(1))**

3.1.1.1.1.1 Double bottoms that are not to be used for the carriage of oil: a head of water which shall be equal to the maximum head that can be experienced in service. **(HCR s. 11)**

3.1.1.1.1.2 Deep tanks and peak tanks used for the carriage of water, and deep tanks and double bottom tanks arranged for the carriage of oil fuel: a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m. **(HCR s. 10, 11, 13)**

3.1.1.1.1.3 Peak bulkheads and stepped bulkheads, which do not form the boundaries of tanks, by filling the peaks with water to the level of the load waterline; **(HCR s. 9, 10)**

[18] Form number 85-0432

3.1.1.1.1.4 Watertight bulkheads, including recesses and watertight flats, watertight tunnels, weather decks and waterways, with a pressure of water in the hose shall be not less than 207 kPa; **(HCR s.13)**

3.1.1.1.1.5 Cargo tanks in tankers with water to a head of 2.4 m above the highest point of the tanks, excluding the hatchways; **(HCR s.7, 13, 83)**

3.1.1.1.1.6 Cofferdams in tankers shall be filled with water to the top of the hatchways; **(HCR s. 7, 13)**

3.1.1.1.2 Testing of tanks where tanks are to be cemented shall be carried out before the cementing is commented. **(HCR s. 7, 13)**

3.1.1.1.3 Verify inspection of the underwater portion of the vessel and Draft Marks before the Vessel is floated for the issue of a Safety inspection certificate. **(HCR s. 22 and LLR s. 4, 16)**

3.1.1.1.4 Examine all sea connections and discharge openings in the hull before the vessel is floated. **(HCR s. 19, 20)**

3.1.1.1.5 Examine means for closing openings in the hull, decks and superstructures before the vessel goes into service, and; **(HCR s. 15, 16, 19, 20)**

3.1.1.1.6 Test watertight openings by hose-test; the pressure of the water in the hose shall be not less than 207 kPa **(HCR s. 13, 14, 15, 18)**

3.1.1.1.7 Inspect all watertight doors within the hull, tried under working conditions and hose tested; the pressure of the water in the hose shall be not less than 207 kPa. **(HCR s. 16, 17, 18)**

3.1.1.1.8 Test the means for pumping before the inspection is completed. **(MMR s. 4, 5)**

3.1.1.1.9 Examine the hydraulic steering arrangements during construction and test under working conditions; **(HCR s. 89, 90 and MMR Schedule VII Part I)**

3.1.1.1.10 Examine the rod and chain steering gear leads and verify the spare parts a provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on home-trade voyages, Class III, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on home-trade voyages, Class III, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule VII Part I)**

3.1.1.1.11 Inspect masts and rigging during construction, verify tests of the cargo gear were made in the presence of a competent person, as prescribed in the *Cargo, Fumigation and Tackle Regulations*. **(CFTR s. 303, 304, 305*)***

3.1.1.2 **(MI) Machinery Initial**

3.1.1.2.1 Refer to Appendix 3 Machinery Schedules Part II, Part III Division I and Division II of the applicable schedule of Schedules I to XV **(MMR s. 4, 5)**

3.1.1.3 **(FI) Fire Safety Initial**

3.1.1.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

3.1.1.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

3.1.1.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

3.1.1.3.2 Inspect Fire-resisting bulkheads and fire-resisting doors **(VFSR s.120, 121, 205, 206 207)(HCR s. 43, 44, 47, 48, 62, 147, 148, 207)**

3.1.1.3.3 Test self-closing arrangements for fire-resisting doors **(VFSR s. 212)(HCR s. 14, 15, 18, 19, 20, 21, 43, 45, 61, 71, 160, 161, 170, 171, 172, 220, 222, 223)**, and

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(EI)	1.1.1 - 1.1.1.11, 1.1.1.13 - 1.1.1.14, 1.1.1.16, 1.1.1.21	Examination of plans and designs of cargo vessels
(EI)	1.1.2	Additional examination of plans and designs for Oil Tankers
(EI)	1.1.3.1 - 1.1.3.13, 1.1.3.24	Inspections during construction and after installation
(EI)	1.1.4	Additional inspection requirements for Oil Tankers during construction and after installation
(EI)	1.1.5.1 – 1.1.5.5	Documentation required to be placed on Board
(EI)	1.1.6	Additional documentation required to be placed on Board for Oil Tankers
(CI)	2.1.1.7 – 2.1.1.12, 2.1.1.14, 2.1.1.26	Examination of plans and designs of cargo vessels
(CI)	2.1.2.3, 2.1.2.4	Additional requirements for Oil Tankers examination of plans and designs
(CI)	2.1.3.8.1, 2.1.3.10,	Inspections during construction and after installation

	2.1.3.46 – 2.1.3.49, 2.1.3.55 – 2.1.3.61	
(CI)	2.1.4.4 – 2.1.4.6	Additional inspection requirements for Oil Tankers, Chemical Tankers and Gas carriers during construction and after installation
(CI)	2.1.6.11	Documentation required to be placed on Board

3.1.1.4 **(LI) Life Saving Initial**

3.1.1.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as follows;

3.1.1.4.1.1 **Survival Craft**

3.1.1.4.1.1.1 Witness Survival Craft being swung out and lowered into the water at every inspection except that in exceptional circumstances lowering of the survival craft may be waived at the discretion of the inspector who shall, however, satisfy himself regarding the length and condition of all lifeboats, falls and lifelines; **(LSER s. 140, 141, 142, 143, 144, 148)**

3.1.1.4.1.1.2 Verify all movable equipment has been removed before the inspection of the Survival craft; **(LSER Schedules II and XV s. (16)(b)**

3.1.1.4.1.1.3 Inspect all survival craft equipment and properly re-store; **(LSERs. 130)**

3.1.1.4.1.1.4 Verify all Survival Craft markings; **(LSER Schedule V, V.1)**

3.1.1.4.1.1.5 Test new Survival Craft as per the revised recommendation on testing of Life Saving appliance (resolution MSC 81(70)) or installations with the full equipment and distributed weights representing the complement required to be on at the time of launching, plus 10 per cent of the complement weight (the weight of an adult shall be taken as 82.5 kg: and **(LSER Schedules V and IX)**

3.1.1.4.1.1.6 Verify all flotation material, or approved portable substitutes therefor, has been removed from Survival Craft for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the Survival Craft, the inspector shall use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material. **(LSER s.114)**

3.1.1.4.1.2 **Life rafts**

3.1.1.4.1.2.1 Verify the life rafts, equipment and stowage arrangements and test the means provided for placing them in the water; **(LSER s.145 and, Schedules I, and VIII)**

3.1.1.4.1.2.2 Verify all life raft markings; and **(LSER Schedule VIII)**

3.1.1.4.1.2.3 Verify all flotation material, or approved portable substitutes therefor, have been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the life raft the inspector shall take use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material. **(LSER s. 114, 145, and Schedule VIII)**

3.1.1.4.1.3 **Buoyant apparatus**

3.1.1.4.1.3.1 Inspect all buoyant apparatus **(LSER s.122)**

3.1.1.4.1.3.2 Verify buoyant apparatus markings; and **(LSER s.122)**

3.1.1.4.1.3.3 Verify all flotation material, or approved substitutes therefor, has been removed for complete inspection and testing at intervals not exceeding four years; and where the approved substitute for flotation material forms an integral part of the buoyancy unit, the inspector shall use non-destructive testing as the inspector considers necessary to determine the condition of the substitute material. **(LSER s.114, 122)**

3.1.1.4.1.3.4 Verify repairs to a lifeboat, life raft or buoyant apparatus that are necessary, are made before a certificate is issued. **(LSER s.114)**

3.1.1.4.1.3.5 Examine the provision, disposition, stowage and condition of the Lifejackets, lifebuoys with their lights and lines, line-throwing appliances; including those fitted with self-igniting lights, self-activating smoke signals, buoyant lines, immersion suits, anti-exposure suits and thermal protective aids, their associated batteries are not out of date and the means provided for stowage **(LSER s. 127.1, 131 and, Schedule XII)**

3.1.1.5 **(NI) Navigation and Communication Equipment Initial**

3.1.1.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020 (NSR 2020).*

3.1.2 Annual Inspections

3.1.2.1 **(HA) Hull Annual Inspection**

3.1.2.1.1 The annual inspection is to be carried out as follows:

3.1.2.1.1.1 Examination and inspection of the vessel externally and internally such as structure, sea chest, scuppers, valves, etc. as far as may be possible without extensive opening up, and tests, if found necessary, shall be conducted in the presence of the inspector. Where a definite standard of subdivision has been approved, inspection shall be made to ensure that the watertight compartments and all arrangements and details connected with the subdivision are in order and that no changes affecting them have been made; **(HCR s. 9, 13, 14, 15, 16)**

3.1.2.1.1.2 Verify alterations in approved subdivision arrangements and details, including watertight and non-watertight longitudinal bulkheads if fitted, appropriation of space below the bulkhead deck, and other alterations that have been made since the previous inspection shall be reported in detail; special attention shall be given

to parts in the structure that are particularly subject to excessive deterioration from such causes as chafing, lying on the ground, or the handling of cargo; **(HCR s. 9, 13, 14, 15,16, 18)**

3.1.2.1.1.3 Examine all side scuttles, and where they are required to have special locking arrangements, the locking arrangements shall be tested and the inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted; **(HCR s. 19)**

3.1.2.1.1.4 Examine, scupper and sanitary discharge valves and any other appliances intended to prevent accidental admission of water into the hull, shall be examined in place and shall be opened up for inspection at least once every five years. **(HCR s. 19)**

3.1.2.1.1.5 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR s. 89, 90 and MMR Schedule VII Part I)**

3.1.2.1.1.6 Inspect all watertight doors and other means for closing openings in the watertight subdivision and their condition and efficiency ascertained; the doors shall be tried by hand, and also by power, if operated by power; **(HCR s.14, 15, 16)**

3.1.2.1.1.7 Test warning signals, hand gear indicators showing when watertight doors are closed, and indicators at central closing stations **(HCR s. 17)**

3.1.2.1.1.8 Inspect hinged watertight doors and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s. 15, 18)**

3.1.2.1.1.9 Inspect a watertight door when it is removed for repairs and replaced, and, if practicable, shall be subjected to a hydraulic test; **(HCR s. 16, 18)**

3.1.2.1.1.10 Inspect fire-resisting bulkheads, fire-resisting doors, and test self-closing arrangements for fire-resisting doors**; (VFSR s. 120, 121, 205, 206 207, 212)**

3.1.2.1.1.11 Inspect hatchways with their closing and securing appliances, ventilators and other deck openings, casings and superstructure bulkheads with their closing appliances, windlass and anchor equipment, cargo and other openings in the shell plating, rudder, main and auxiliary steering gear; **(HCR s. 121, 122, 123, 124, 125, 126)**

3.1.2.1.1.12 All parts of rod and chain steering gear shall be inspected; the chain in the vicinity of the blocks shall be cleaned to allow proper inspection, and where any chain is

so worn that the diameter at any part is reduced to the size shown schedule C of Appendix 5 of this standard, that part shall be renewed and a detailed examination or all steering gear leads as follows; **(HCR s. 89, 90 and MMR Schedule VII Part 1)**

3.1.2.1.1.12.1 Examine all steering gear leads. To permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix of this standard, these tests shall be carried out by an authority[19] accepted by the Regional Technical Services manager and certificates of tests shall be issued; **(HCR s. 89, 90 and MMR Schedule VII Part 1)**

3.1.2.1.1.13 Test, assemble and connect the means for auxiliary steering; **(HCR s. 89, 90 and MMR Schedule VII Part 1)**

3.1.2.1.1.14 Verify the condition of the bottom plating where cement is removed from the bottom plating before new cement is laid; **(HCR s.7)**

3.1.2.1.1.15 Inspect masts, spars and rigging; **(CFTR s. 303, 304, 305*)***

3.1.2.1.1.16 Annual inspections for free board shall, whenever possible, be made at the time of the annual inspection; **(LLR s. 12, 17)**

3.1.2.1.1.17 Examination in the case of wooden vessels, parts of the ceiling shall be removed at the discretion of the inspector in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained. **(HCR s. 7)**

3.1.2.2 **(MA) Machinery Annual**

3.1.2.2.1 No inspection, shall be carried out pursuant to the Act unless a component inspection certificate has been issued for each component**. (MMR s. 16)**

3.1.2.2.2 Where machinery referred to in Schedules III to XV is subject to an inspection referred to in subsection 3.1.2.2.1 at specified intervals, an inspector shall carry out a periodic general inspection that consists of an external inspection of the machinery comprising an inspection or the completion of each item set out in Appendix 3 Machinery Schedules Division I of Part IV of the applicable schedule of Schedules I to XV **(MMRs. 16)**

3.1.2.3 **(FA) Fire Safety Annual**

3.1.2.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

[19] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

3.1.2.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

3.1.2.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(EA)	1.2.1.16 – 1.2.1.22, 1.2.1.24	Examination of current certificates and other records
(EA)	1.2.2.1 – 1.2.2.11, 1.2.2.13 – 1.2.2.15, 1.2.2.28	Inspection of equipment
(EA)	1.2.3.1 – 1.2.3.7, 1.2.3.9	Additional Inspection of equipment required for Oil Tankers
(CA)	2.2.1.16, 2.2.1.17	Examination of current certificates and other records
(CA)	2.2.2.8.1, 2.2.2.9, 2.2.2.26 – 2.2.2.29	Inspection of equipment
(CA)	2.2.3.3 – 2.2.2.3.5, 2.2.3.8, 2.2.3.11	Additional Inspection of equipment required for Oil Tankers

3.1.2.4 **(LA) Life Saving Annual**

3.1.2.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 3.1.1.4 (LI) Life Saving Initial.

3.1.2.5 **(NA) Navigation and Communication Equipment Annual**

3.1.2.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020 (NSR 2020).*

3.1.3 Intermediate Inspection (between the 2nd and 3rd year)

3.1.3.1 **(HIn) Hull Intermediate**

3.1.3.1.1 Inspection of the hull shall be generally inspected as specified under 3.1.2.1(HA) Hull Annual as necessary relevant to the particular certificate for which the vessel is intended.

3.1.3.2 **(MIn) Machinery Intermediate**

3.1.3.2.1 Inspection of the Machinery shall be generally inspected as specified under 3.1.2.2 (MA) Machinery Annual as necessary relevant to the particular certificate for which the vessel is intended.

3.1.3.3 **(FIn) Fire Safety Intermediate**

3.1.3.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

3.1.3.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

3.1.3.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(EP)	1.3.1.1	Examination of current certificates and other records as required by: (EA) 1.2.1.16 – 1.2.1.22, (EA) 1.2.1.24
(EP)	1.3.2.1	Inspection of equipment as required by: (EA) 1.2.2.1 – 1.2.2.11, (EA) 1.2.2.13 – 1.2.2.15, (EA) 1.2.2.28
(EP)	1.3.2.2 – 1.3.2.8	Inspection and Testing of equipment
(EP)	1.3.3.1	Additional Inspection of equipment required for Oil Tankers as required by: (EA) 1.2.3.1 – 1.2.3.7, (EA) 1.2.3.9
(EP)	1.3.3.2	Additional Inspection of equipment required for Oil Tankers

3.1.3.4 **(LIn) Life Saving Intermediate**

3.1.3.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 3.1.1.4 under (LI) Life Saving Initial.

3.1.3.5 **(NIn) Navigation and Communication Equipment Intermediate**

3.1.3.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020 (NSR 2020).*

3.1.4 Renewal Inspections

3.1.4.1 **(HR) Hull Renewal**

3.1.4.1.1 **Inspection of a Vessel not over five years old**

3.1.4.1.1.1 At a five year inspection of a vessel not over five years old, the following requirements shall apply:

3.1.4.1.1.1.1 In accordance with the provisions of (HA) 3.1.2.1

3.1.4.1.1.1.2 Verify all holds and peaks shall be cleared **(HCR s. 9, 10)**

3.1.4.1.1.1.3 Confirm in vessels with a single bottom, limber board and ceiling equal to not less than two strakes fore and aft on each side shall be removed, and one such strake shall be taken from the bilges; where the ceiling is fitted in hatches, the whole of the hatches and one strake of ceiling at the bilges has been removed; **(HCR s. 7, 9, 10)**

3.1.4.1.1.1.4 Verify in vessels with a double bottom, a sufficient amount of ceiling shall be removed to enable the condition of the tank top to be ascertained and, if it is found that the plating is free from dirt and rust, the removal of the remainder of the ceiling may be dispensed with; all bilges and limbers fore and aft has been cleaned; **(HCR s. 7, 11)**

3.1.4.1.1.1.5 Verify ceiling removed as in the holds; in the case of Great Lakes vessels, however, cleaning and ceiling removal shall be at the discretion of the inspector; **(HCR s. 7, 9, 10)**

3.1.4.1.1.1.6 Inspect all steel work. Steel work shall be exposed and cleaned to the extent required by the inspector for a proper examination; special attention shall be given to shell plating in way of openings; **(HCR s. 7, 19)**

3.1.4.1.1.1.7 Examination and inspection in the case of a wooden vessel, require parts of the ceiling shall be removed at the discretion of the inspector in order that the condition of the hull, timbers, floors, etc., particularly in the engine room, boiler room, may be ascertained;**(HCRs. 7)**

3.1.4.1.1.1.8 Inspect and examine all scupper and sanitary discharge valves, excluding those connected to the machinery, not recorded as having been inspected since the first inspection, shall be opened up. All side scuttles shall be examined and, where required to have special locking arrangements, those locking arrangements shall be tested and the inspector shall take such steps as are necessary to ensure that proper instructions with regard to these arrangements are posted. **(HCR s. 19, 20)**

3.1.4.1.1.1.9 Verify signs of wastage a in any part of a vessel's structure, non-destructive testing may be required, and if any part is found to be defective, or if material is reduced in thickness[8], the defect shall be replaced by material equal in scantling and quality to that of the original construction; **(HCR s. 7)**

3.1.4.1.1.1.10 Inspect the inner surface of the bottom plating covered with cement or asphalt. This will require the removal of the covering and be dispensed with when it is

found, by heating or chipping, to be sound and adhering satisfactorily to the steel; **(HCR s. 7)**

3.1.4.1.1.1.11 Test double bottom tanks that are not used for the carriage of oil fuel by a head of water to the light water line, but in no case less than 2.44 m above the inner bottom; in the case of Great Lakes vessels, the testing of tank tops may be waived at the discretion of the inspector, having regard to the voyages the vessel makes; **(HCR s. 7, 11)**

3.1.4.1.1.1.12 Test double bottom compartments used for the carriage of oil fuel by a head of water or oil extending to the load water line, or by a head sufficient to give the maximum pressure that they may be required to bear at any time, whichever is the greater; **(HCR 11)**

3.1.4.1.1.1.13 Test the water tightness of peak tanks or deep tanks for carrying water ballast by a head of water equal to the maximum head to which the tanks can be subjected in service but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 0.9 m where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 m and 3.0 m; **(HCR s. 10, 11, 13, 83)**

3.1.4.1.1.1.14 Test of peak tanks or deep tanks in the case of Great Lakes vessels, may be waived if considered unnecessary by the inspector after inspection of the structure; **(HCR s. 7, 10, 11, 13, 83)**

3.1.4.1.1.1.15 Inspect all water ballast tanks. All tanks shall be cleaned in order that their interior may be adequately inspected; special attention shall be given to tanks under boiler spaces; **(HCR s. 7)**

3.1.4.1.1.1.16 Inspect and test deep tanks constructed for carrying oil or oil and fresh water, but not used solely for that purpose, and peak tanks used for carrying oil fuel, by a head of water or oil sufficient to give the maximum pressure that can be experienced in service, or 2.4 m, whichever is the greater; **(HCR s. 10, 13)**

3.1.4.1.1.1.17 Test and inspect double bottom and deep tanks used exclusively for oil fuel or for oil fuel and fresh water, and oil fuel bunkers, need not be examined internally if after a general inspection and testing as required by paragraphs 3.1.4.1.1.1.12 or 3.1.4.1.1.1.16 their condition is found to be in good order; **(HCR s.10, 11, 13**

3.1.4.1.1.1.18 Inspect all watertight bulkheads, decks, tunnels and other subdivision arrangements to ascertain their condition, and if their watertightness has been impaired, any part found deficient shall be restored to its original condition; **(HCR s. 9, 10, 13)**

3.1.4.1.1.1.19 Verify where a definite standard of subdivision has been approved, the watertight compartments and all arrangements and details connected with the subdivision has been checked; **(HCR s. 9, 10)**

3.1.4.1.1.1.20 Inspect all masts, spars and rigging; **(CFTR s. 303, 304, 305*)***

3.1.4.1.1.1.21 Inspect anchors, other equipment and chain cable. Where any length of chain cable is found to be reduced in diameter at any part to the extent indicated in

schedule C of Appendix 5 of this standard, it shall be renewed; where renewal of anchors or cables is required, a certificate shall be produced to show that the replacement has been tested as prescribed by schedule A, schedule B,: or schedule D of Appendix 5 of this standard:; the interior of the chain locker shall be cleared and cleaned and the compartment inspected; **(HCR s. 142, 143)**

3.1.4.1.1.1.22 Inspect hatch covers and supports, tarpaulins, cleats, battens, and other means of securing all hatches; **(HCR s. 116, 117, 118, 119, 121, 122, 123, 124, 125)**

3.1.4.1.1.1.23 Inspect ventilator coamings and covers **(HCR s. 126)**

3.1.4.1.1.1.24 Inspect the rudder, its means of support, and the pintles and gudgeons, and, if considered necessary by the inspector for proper examination, the rudder shall be lifted; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

3.1.4.1.1.1.25 Examine all steering gear leads. To permit a detailed examination of all parts all steering gear leads ; where any length of chain is so worn that the diameter at any part is reduced to the size shown in schedule C of Appendix 5 of this standard , that part shall be renewed; all replacements of steering gear chain, or chain that has been repaired, shall be subjected to the proof and breaking tests specified in schedule A or, schedule B of Appendix of this standard, these tests shall be carried out by an authority[20] accepted by the Regional Technical Services Manager and certificates of tests shall be issued; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

3.1.4.1.1.1.26 Examine the Rod and chain steering gear leads and verify the spare parts provided as follows; one spring buffer and one extra spring, two tested chains each equal to the longest length in the gear, two turnbuckles, four shackles, four connecting links and four rod pins; provided that in ocean-going vessels, the speed of which is 12 knots or more, one buffer spring, one turnbuckle, and one length of chain may be dispensed with, and that in vessel engaged on Near coastal voyage, Class 2 Voyage, having either a main gear, which is hand-operated, or an auxiliary gear, independent of the rods and chains, that can be effectively operated, the spare gear may be confined to sufficient shackles or split links to enable repair of the gear to be readily effected in the event of a breakdown; and provided, further, that in all other vessel engaged on Near coastal voyage, Class 2 Voyage, the spare gear shall be as required for vessels the speed of which is 12 knots or more. **(HCR a. 89, 90 and MMR Schedule XII Part I)**

3.1.4.1.1.1.27 Test the main steering gear; **(HCR s. 89, 90 and MMR Schedule XII Part I)**

3.1.4.1.1.1.28 Test the means for auxiliary steering by assembling and connecting for testing. **(HCR s. 90 and MMR Schedule XII Part I)**

3.1.4.1.1.1.29 Inspect and open sluice valves and protective casings around air and sounding pipes; **(HCR s. 7)**

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[20] A testing authority approved by a classification society will be acceptable to the Minister. In a case where testing by such an authority is not possible full particulars shall be submitted to the Regional Technical Services Manager

3.1.4.1.1.1.30 Inspect all watertight doors and other means for closing openings in watertight subdivisions and their condition and efficiency ascertained, the doors shall be tried by hand, and also by power, if operated by power; **(HCR s. 15,16, 17, 18)**

3.1.4.1.1.1.31 Inspect and test warning signals, hand gear indicators showing when doors are closed, and indicators at central closing stations, **(HCR s. 17)**

3.1.4.1.1.1.32 Inspect hinged watertight door and operated to ensure that lever-operated clips are in good order and that all joints are watertight; **(HCR s.15, 18, 19, 34, 119, 120)**

3.1.4.1.1.1.33 Inspect and hose test when a watertight door is removed for repair and replaced, if practicable, shall be subjected to a hydraulic test; **(HCR s.7, 15, 18)**

3.1.4.1.1.1.34 Inspect fire-resisting bulkheads and fire-resisting doors and test self-closing arrangements for fire-resisting doors; **(VFSR s.120, 121, 205, 206 207, 212)**

3.1.4.1.1.1.35 Examine striking plates under sounding pipes and renewed when necessary; **(HCR s, 7)**

3.1.4.1.1.1.36 Inspect holds that are insulated for the purpose of carrying refrigerated cargoes and if the hull in way of the insulation was inspected when the insulation was fitted, it shall be sufficient to remove the limbers and hatches to expose the plating in way of these parts. **(HCR s.7, 9, 10)**

3.1.4.1.1.2 **Oil tankers are subject to the following additional requirements;**

3.1.4.1.1.2.1 Verify the cargo tanks are cleaned, gas-free and the strums of the cargo suction pipes are removed to facilitate inspection of the shell plating and bulkheads in their vicinity; **(HCR s.7, 19)**

3.1.4.1.1.2.2 Test each oil compartment and cofferdam, except in a case where the cofferdam between the engine room and the cargo tanks is used as a pump room, by filling with water to the top of the hatchway in the expansion trunk or cofferdam; provided that the tanks may be filled to the light water line when the vessel is in dry dock and the remainder of the test carried out afloat; the centre line bulkhead need not be tested independently. Where a pump room forms the cofferdam between cargo tanks and the machinery space, the inspector shall be satisfied that the integrity of the engine room bulkhead is being maintained; and **(HCR 7, 10, 13)**

3.1.4.1.1.2.3 Test where extensive repairs have been made to the shell plating, the tanks shall be tested by being filled when the vessel is in dry dock; where this is not practicable, particulars of any method proposed to be used in testing the tanks shall be submitted for the approval. **(HCR s. 7, 13, 19)**

3.1.4.1.2 **Inspection of vessel over five years old but not over 10 years old**

3.1.4.1.2.1 At a five-year inspection of a vessel over five years old but not over 10 years old, in addition to the requirements of section 3.1.4.1.1 the following requirements shall apply:

3.1.4.1.2.1.1 In accordance with the provisions of (HA) 3.1.2.1

3.1.4.1.2.1.2 Examine by removing the additional ceiling holds to enable the condition of the inner bottom plating, pillar feet and the bottom plating of bulkheads and tunnel sides; if considered necessary by the inspector, all of the ceiling shall be removed; removal of additional ceiling and of fastenings, at the discretion of the inspector, shall apply also in the case of wooden vessels. **(HCR s.7, 9, 10)**

3.1.4.1.2.1.3 Examine vessels with a single bottom by removing one additional strake of the limber board and ceiling all the way fore and aft on each side. **(HCR s.7, 9, 10)**

3.1.4.1.2.1.4 Examine all tanks that are used exclusively for oil fuel or oil fuel and fresh water, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that: **(HCR s.13, 83)**

3.1.4.1.2.1.4.1 In the case of double bottom tanks used exclusively for oil fuel or oil fuel and fresh water, where the foremost such tank has been thoroughly cleaned, gas-freed, inspected internally and found satisfactory to the inspector, the cleaning, gas-freeing and internal examination of the other double bottom tanks used for such purpose shall not be necessary where, upon a general external examination, the inspector finds their condition to be satisfactory, and; **(HCR s. 11, 13, 83)**

3.1.4.1.2.1.4.2 In the case of tanks used exclusively for oil fuel or oil fuel and fresh water, other than double bottom and peak tanks, the cleaning, gas-freeing and internal examination of those tanks shall not be necessary where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s.7, 13, 83)**

3.1.4.1.2.1.5 Lubricating oil tanks need not be examined internally where, upon external examination, the inspector finds their condition to be satisfactory; **(HCR s.13, 83)**

3.1.4.1.2.1.6 Examine plating in way of the side scuttles by having it exposed for examination. **(HCR s. 7, 19, 20)**

3.1.4.1.3 **Inspection of vessels over 10 years old but not over 25 years old**

3.1.4.1.3.1 At a five year inspection of a vessel over 10 years old but not over 25 years old, in addition to the requirements of sections 3.1.4.1.1and 3.1.4.1.2 the following requirements shall apply;

3.1.4.1.3.1.1 In accordance with the provisions of (HA) 3.1.2.1

3.1.4.1.3.1.2 Examine all steel work by having it cleaned and all rust removed, to the extent required by the inspector for a proper examination; **(HCR s.7)**

3.1.4.1.3.1.3 Examination may require casings of pipes, spar ceiling and lining in way of the side scuttles to be removed; **(HCR s.7, 19, 20)**

3.1.4.1.3.1.4 Examination of steel work will require that all the ceiling in the bunkers be removed; portions of the ceiling in the holds shall be removed to establish the condition of the steel work, and unless found free from rust and in good condition all of the ceiling shall be removed; **(HCR s.7, 9, 10)**

3.1.4.1.3.1.5 Examine, beneath vessel’s side discharges, in way of boilers, steam pumps, watertight doors in machinery spaces, and in any locality where there is leakage

from pipes and machinery or where continuous condensation occurs; **(HCR s. 7, 15, 18, 19)**

3.1.4.1.3.1.6 Subject to paragraph 3.1.4.1.3.1.7, all tanks that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil, and all cofferdams adjacent to such tanks, shall be thoroughly cleaned, gas-freed and examined internally, except that: **(HCR s. 7, 13, 83)**

3.1.4.1.3.1.6.1 In the case of a vessel not more than 15 years old, its tanks, other than peak tanks, that are used exclusively for oil fuel, oil fuel and fresh water or lubricating oil need not all be examined internally if, after a general inspection and testing and after an internal examination of one double bottom tank forward, one double bottom tank aft and one deep tank, the inspector finds their condition to be satisfactory, and **(HCR s. 9, 10, 13, 83)**

3.1.4.1.3.1.6.2 In the case of a vessel more than 15 but not more than 20 years old, only one oil fuel double bottom tank amidships, one forward and one aft, and one deep tank need be examined internally, and such tanks should be selected so that as many different tanks as possible are examined internally before the vessel is 20 years old; **(HCR s.7, 9, 10, 11 13)**

3.1.4.1.3.1.7 For a vessel where the interval between periodical inspections is five years, oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally when the vessel is 15 years old, except that where, upon external examination, an inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary **(HCR s.7, 13, 83)**

3.1.4.1.3.1.8 For a vessel 20 years old and over making unlimited voyages, Near coastal voyage, Class 1, Near coastal voyage, Class 2 , other than an inland non-passenger vessel making extended Near Coastal voyages within the Gulf of St. Lawrence, all tanks shall be examined internally at each five year inspection; **(HCR s. 7, 13, 83)**

3.1.4.1.3.1.9 Examination in the case of wooden vessels, the requirements for boring, fastening and removal of ceiling, shall be augmented to the extent considered necessary by the inspector; hull sheathing shall be removed as considered necessary to facilitate complete examination of the hull **(HCR s.7)**

3.1.4.1.3.1.10 Examination of adjacent steel work may require portions of the cement chocks at the vessel's sides shall be removed; **(HCR s.7)**

3.1.4.1.3.1.11 Where the holds are insulated for the purpose of carrying refrigerated cargo and the hull in way of the insulation was inspected when the insulation was fitted, enough insulation shall be removed from each of the chambers, and the framing and plating exposed so that their condition may be ascertained; and **(HCR s. 7, 9, 10)**

3.1.4.1.3.1.12 All mast and bowsprit wedging shall be removed; where the plating is doubled in way of the wedging, the wedging only need be removed. **(HCR s. 7)**

3.1.4.1.4 **Inspection of vessel over 25 years old**

3.1.4.1.4.1 Where the interval between periodically inspections of a vessel is five years, it shall be inspected:

3.1.4.1.4.1.1 In accordance with in accordance with the provisions of (HA) 3.1.2.1

3.1.4.1.4.1.2 In accordance with the requirements of sections 3.1.4.1.1, 3.1.4.1.2 and 3.1.4.1.3 each five year inspection; and

3.1.4.1.4.1.2.1 In accordance with the requirements of subsection 3.1.4.1.4.2,

3.1.4.1.4.1.2.2 At the first five year inspection after the vessel is 25 years old,

3.1.4.1.4.1.2.3 At the first five year inspection 15 years after the inspection referred to in clause 3.1.4.1.4.1.2.2, and

3.1.4.1.4.1.2.4 Every 12 years after the inspection referred to in clause 3.1.4.1.4.1.2.3; and

3.1.4.1.4.1.3 The oil fuel bunkers shall be gas-freed, thoroughly cleaned and examined internally at the first five year inspection after the vessel is 25 years old, after the next 10 years, after the next nine years, and every eight years thereafter, except that where, upon external examination, the inspector finds the condition of the bunkers to be satisfactory, the gas-freeing, cleaning and internal examination is not necessary. **(HCR s. 7, 13, 83)**

3.1.4.1.4.2 At the inspection referred to in subparagraph 3.1.4.1.4.1.2.1 the following requirements apply:

3.1.4.1.4.2.1 Subject to paragraph 3.1.4.1.4.2.2, the shell plating of a vessel shall be tested using non-destructive testing at such parts as may be considered necessary to ascertain its thickness and for this purpose the following requirements apply: **(HCR s.7)**

3.1.4.1.4.2.1.1 The number of non-destructive testing test spots on each side of the vessel shall in no case be less than three in each strake of plating not covered with cement, **(HCRs. 7)**

3.1.4.1.4.2.1.2 The testing shall be about amidships and in the vicinity of the peak bulkheads, **(HCR s.7)**

3.1.4.1.4.2.1.3 All paint and rust shall be removed from the area of the plating surrounding

3.1.4.1.4.2.1.4 The thickness of the plating at all non-destructive testing, test spots shall be recorded by the inspector, and **(HCR s.7)**

3.1.4.1.4.2.1.5 The plating covered with cement in the bottom of a vessel need not be tested using non-destructive testing, if in the opinion of the inspector, the cement is adhering to the plating and it is unnecessary to test at that place; (**HCR s.7)**

3.1.4.1.4.2.2 In the case of a Great Lakes vessel, the inspector shall satisfy himself that the condition of the shell plating is satisfactory and in so doing he shall (**HCR s.7)**

3.1.4.1.4.2.2.1 Give special attention to those parts of the vessel that are subject to damage in canals and locks and to all parts of the vessel that are particularly subject to excessive corrosion or wear and tear, and **(HCR s.7)**

3.1.4.1.4.2.2.2 Ascertain the thickness of the shell plating by non-destructive testing in such places as he deems necessary **(HCR s.7)**

3.1.4.1.4.2.3 Where the holds of a vessel are insulated for the purpose of carrying refrigerated cargo, if the hull covered by insulation was inspected when the insulation was fitted, insulation additional to that removed pursuant to paragraph 3.1.4.1.3.1.11 shall be removed in each of the chambers in order to allow the condition of the framing and plating to be ascertained and the shell plating shall be tested using non-destructive testing as prescribed in paragraph 3.1.4.1.4.2.1and(**HCR s. 7, 9, 10)**

3.1.4.1.4.2.4 All mast and bowsprit wedging of a vessel shall be removed whether the plating in way is doubled or not **(HCR s. 7)**

3.1.4.2 **(MR) Machinery Renewal**

3.1.4.2.1 Refer to Appendix 3 Machinery Schedules Part IV Division II Subdivision I and Subdivision II of the applicable schedule of Schedules I to XV **(MMR s. 4, 5)**

3.1.4.3 **(FR) Fire Safety Renewal**

3.1.4.3.1 The *Vessel Fire Safety Regulations* (VFSR) applies to equipment, system and structure fire protection, the vessel must:

3.1.4.3.1.1 Comply with the VFSR (equipment, system and structural Fire Protection (FP)), or

3.1.4.3.1.2 Comply with the FDEER (equipment, system) and HCR (structural FP) if grandfathered.

The following provisions of the HSSC apply as per Part 1 and 2 of the VFSR		
(ER)	1.4.1.1	Examination of current certificates and other records as required by: (EA) 1.2.1.16 – 1.2.1.22, (EA) 1.2.1.24
(ER)	1.4.2.1	Inspection and Testing of equipment as required by: (EP) 1.3.2.2 – 1.3.2.8
(ER)	1.4.3.1	Additional Inspection of equipment required for Oil Tankers as required by: (EP) 1.3.3.2
(ER)	1.4.3.2	Additional Inspection of equipment required for Oil Tankers

3.1.4.4 **(LR) Life Saving Renewal**

3.1.4.4.1 Life Saving Equipment on board shall be as per the requirements specified in the *Life Saving Equipment Regulations* (LSER) and shall be inspected as specified under section 3.1.1.4 (LI) Life Saving Initial.

3.1.4.5 **(NR) Navigation and Communication Equipment Renewal**

3.1.4.5.1 Navigation and Communication Equipment on board shall be as per the specifications in the *Navigation Safety Regulations, 2020 (NSR 2020).*

3.2 LARGE FISHING VESSELS GREATER THAN 150 GT OR GREATER THAN 24.4 METRES IN LENGTH

3.2.1 Initial Inspections

3.2.1.1 **(HI) Hull Initial Inspection**

3.2.1.1.1 Inspect every fishing vessel during construction at such times as the inspector deems advisable. **(CSA 2001 s. 119)**

3.2.1.1.2 Notification from the AR is to be received at least one week in advance of the inspection for the following:

3.2.1.1.2.1 The commencement of framing;

3.2.1.1.2.2 The commencement of planking or plating;

3.2.1.1.2.3 The launching; and

3.2.1.1.2.4 The dock and sea trials.

3.2.1.1.3 Witness dock trials and sea trials of a fishing vessel , at which time the bilge and fire pumps shall be tested, the speed in knots estimated, the steering and stopping powers of the vessel tested and the launching arrangements for the lifeboats, boats, dories or skiffs tried out, and such further tests shall be made as the inspector considers necessary to determine that the vessel is safe and suitable for the voyages intended **(LFVIR s. 10.1, 14, 24, 25 and MMR s. 4, 5)**

3.2.1.1.4 No safety inspection certificate shall be issued in respect of a fishing vessel unless;

3.2.1.1.4.1 The plans, data and technical documents submitted under this section have been accepted by the Regional Technical Services Manager; **(CSA 2001 s. 119)**

3.2.1.1.4.2 The vessel is constructed in accordance **(CSA 2001 s.119)**

3.2.1.1.4.2.1 with such plans, data and technical documents, and

3.2.1.1.4.2.2 with the requirements of this standard; and

3.2.1.1.4.3 The vessel is, in the opinion of an inspector, safe for the voyages for which it is intended.

3.2.1.1.5 **Tests of Watertight Compartments**

3.2.1.1.5.1 Hose and pressure test using various approved testing methods, the compartments within the main hull of a steel fishing vessel before the vessel is launched and before the cementing, painting, insulating is commenced as follows:

3.2.1.1.5.1.1 Double bottoms that are not to be used for the carrying of oil shall be tested to a head of water equal to the maximum head that can be experienced in service; **(CSA 2001 s. 120 (1) (a))**

3.2.1.1.5.1.2 Deep tanks and peak tanks used for carrying water, and deep tanks and double bottom tanks arranged for carrying oil fuel shall be tested to a head of water equal

to the maximum head to which the tanks can be subjected in service, but not less than 2.4 m above the crown of the tanks where the moulded depth to the strength deck exceeds 4.9 m, and 915 mm where the moulded depth does not exceed 3.0 m; intermediate heads may be obtained by interpolation between 4.9 and 3.0m; (**LFVIR s. 15 and(CSA 2001 s. 120 (1) (a))**

3.2.1.1.5.1.3 Peak bulkheads that do not form the boundaries of tanks shall be tested by filling the peaks with water to the level of the load water line; (**LFVIRs. 19)**

3.2.1.1.5.1.4 Watertight bulkheads, including recesses and watertight flats, watertight tunnels, weather decks and waterways, shall be hose tested; the pressure of water in the hose shall not be less than 207 kPa; (**LFVIR s. 19)**

3.2.1.1.5.1.5 Watertight doors shall be tried under working conditions and hose tested; the pressure in the hose shall not be less than 207 kPa. (**LFVIR s. 19)**

3.2.1.2 **(MI) Machinery Initial**

3.2.1.2.1 **Boilers, Engines and Auxiliaries**

3.2.1.2.1.1 Verify construction of boilers, boiler mountings, main steam pipes, main feed pipes, evaporators, feed heaters, boiler feed systems, main shafting, main engines and oil fuel systems are constructed and inspected during construction as required by this standard. **(MMR s. 4, 5)**

3.2.1.2.1.2 Verify by actual examination, and by a series of calculations when required that;

3.2.1.2.1.2.1 The working pressure assigned to boilers, superheaters, air receivers and other pressure vessels subject to inspection can be safely carried, and is suitable for the piping and machinery; **(MMR s. 4, 5)**

3.2.1.2.1.2.2 The propelling machinery is sufficient in power and capacity to enable the vessel to be maneuvered and handled at sea with a proper degree of safety, having regard to the voyages the vessel is to make; and **(MMR s. 4, 5)**

3.2.1.2.1.2.3 The machinery has been installed in a satisfactory manner and is sufficient and suitable for the voyages intended. **(MMR s. 4, 5)**

3.2.1.2.1.3 Witness that the safety valves are set, to blow off at a pressure not in excess of the working pressure assigned. **(MMR s. 4, 5)**

3.2.1.2.1.4 Examination of a boiler where an inspector is unable to enter a boiler because the manholes are not large enough or are improperly placed, the boiler shall not be accepted until adequate means of access to the boiler is provided, except in the case of a boiler so small that entrance thereto is impossible. **(MMR s. 4, 5)**

3.2.1.2.1.5 Boilers, boiler mountings, air receivers, main and auxiliary pipes over 75 mm in diameter, and other pressure vessels that are subject to and inspection and are being inspected for the first time shall be tested by hydraulic pressure as specified in schedule E of Appendix 4 of this standard, after the working pressures have been ascertained. **(MMR s. 4, 5)**

3.2.1.2.1.6 Safety valves on cylindrical boilers being inspected for the first time, or new safety valves fitted to cylindrical boilers, shall be subjected to the following

accumulation test after the safety valves have been set to the assigned pressure; **(MMR s. 4, 5)**

3.2.1.2.1.6.1 During a test of 15 minutes with the stop valves closed and under full firing conditions, the accumulation of pressure shall not exceed 10 per cent of the rated pressure; **(MMR s. 4, 5)**

3.2.1.2.1.6.2 During the test referred to in paragraph 3.2.1.2.1.6.1, no more feed water shall be supplied than is necessary to maintain a safe working water level. **(MMR s. 4, 5)**

3.2.1.2.1.7 Subject to subsection 3.2.1.2.1.8 safety valves on water tube boilers being inspected for the first time, or new safety valves fitted to water tube boilers, shall be subjected to the following accumulation test, after the safety valves have been set to the assigned pressure: **(MMR s.4, 5)**

3.2.1.2.1.7.1 During a test with the stop valve closed and under full firing conditions, for as long a time as the water supply in the boiler permits, the accumulation of pressure shall not exceed 10 per cent of the working pressure; and **(MMR s. 4,5)**

3.2.1.2.1.7.2 In no case need the test referred to in paragraph 3.2.1.2.1.7.1exceed seven minutes. **(MMR s. 4, 5)**

3.2.1.2.1.8 Where accumulation tests may endanger the superheater, oilfired boilers may be exempted therefrom if application for exemption is made when the boiler plans and technical documents and sizes of safety valves are submitted for approval, and the safety valves are of an approved type; **(MMR s. 4, 5)**

3.2.1.2.1.8.1 For which the capacity has been established by test in the presence of an inspector or an approved independent authority; or **(MMR s. 4, 5)**

3.2.1.2.1.8.2 For which the inspector has verified that the capacity is adequate **(MMR s. 4, 5)**

3.2.1.2.1.9 Where exemption is granted pursuant to subsection 3.2.1.2.1.8, **(MMR s. 4, 5)**

3.2.1.2.1.9.1 The valve makers shall be required to provide a statement for each safety valve, stating the rated capacity at the approved working conditions of the boiler; and (**MMR s. 4, 5)**

3.2.1.2.1.9.2 The boilermakers shall be required to provide a statement for each boiler, stating the maximum evaporation. (**MMR s. 4, 5)**

3.2.1.2.1.10 The safety valves referred to in subsections 3.2.1.2.1.8 and 3.2.1.2.1.9 must be found to operate satisfactorily under working conditions during the trials of the machinery on board vessel and the area of the valves shall not in any case be less than that required by Appendix 3 of this standard. (**MMR s. 4, 5)**

3.2.1.2.1.11 Test main engines, reduction, reverse gearing and main shafting in accordance with Appendix 3 of this standard. Air receivers and other pressure vessels that are subject to inspection and are being inspected for the first time shall be tested by hydraulic pressure as specified in Schedule E of Appendix 4 of this standard after the working pressure has been ascertained. **(MMR s. 4, 5)**

3.2.1.2.1.12 An inspector shall verify by actual examination, and by a series of calculations when required, that;

3.2.1.2.1.12.1 The working pressure assigned to air receivers and other pressure vessels subject to inspection can be safely carried and is suitable for the piping and machinery; **(MMR s. 4, 5)**

3.2.1.2.1.12.2 The propelling machinery is sufficient in power and capacity to enable the vessel to be maneuvered and handled at sea with a proper degree of safety, having regard to the voyages the vessel is to make; and **(MMR s. 4, 5)**

3.2.1.2.1.12.3 The machinery has been installed in a satisfactory manner and is sufficient and suitable for the voyages intended. **(MMR s. 4, 5)**

3.2.1.2.1.13 Witness that safety valves are set to blow off at a pressure not in excess of the working pressure assigned. **(MMR s. 4, 5)**

3.2.1.2.2 **Electrical Equipment, Installations and Appliances**

3.2.1.2.2.1 Verify that the electrical equipment, installations and appliances on the fishing vessel are constructed in accordance with the plans and technical documents specified in Appendix 1 section 3.2.4.6 (Electrical Plans and Technical Documents for Large Fishing Vessel) of this standard.

3.2.1.3 **(FI) Fire Safety Initial**

3.2.1.3.1 Inspection of all fire extinguishing equipment shall be carried out as follows; **(LFVIR s. 25)**

3.2.1.3.1.1 All Fire extinguisher shall be examined and the charges shall be renewed where there is evidence of deterioration; **(LFVIR s. 25)**

3.2.1.3.1.2 All Fire hoses and buckets shall be inspected and tested if the inspector considers it necessary; and **(LFVIR s. 25)**

3.2.1.3.1.3 All Fire equipment shall be re-stowed after the inspection. **(LFVIR s. 25)**

3.2.1.4 **(LI) Life Saving Initial**

3.2.1.4.1 Inspection of all lifesaving equipment shall be carried out as follows;

3.2.1.4.1.1 All lifeboats, boats, dories and skiffs shall be swung out and lowered into the water, except that in exceptional circumstances this requirement may be waived at the discretion of the inspector who shall, however, satisfy himself regarding the length and condition of all falls and lifelines; **(LFVIR s. 24)**

3.2.1.4.1.2 Lifeboats, boats, dories and skiffs are to be inspected and tested with the movable equipment removed; **(LFVIR s. 24)**

3.2.1.4.1.3 All equipment for lifeboats, boats, dories and skiffs shall be inspected and properly re-stowed; **(LFVIR s. 24, Schedule VII)**

3.2.1.4.1.4 All lifeboat markings shall be verified; **(LFVIR s. 24)**

3.2.1.4.1.5 All flotation material, or approved portable substitutes therefor, shall be removed from survival craft for complete inspection and testing at intervals not exceeding four years, and where the approved substitute for flotation material forms an integral part of the lifeboat, the inspector shall use non-destructive testing as

considers necessary to determine the condition of the substitute material; **(LFVIR s. 24)**

3.2.1.4.1.6 Inspect lifejackets and lifebuoys with their lights and lines and the means provided for stowage. **(LFVIR s. 24)**

3.2.1.4.1.7 All equipment shall be re-stowed after inspection. **(LFVIR s. 24)**

3.2.1.5 **(NI) Navigation and Communication Equipment Initial**

3.2.1.5.1 Navigation and communication equipment shall meet the requirements of the *Navigation Safety Regulations, 2020 (NSR 2020)* and the requirements of the *Large Fishing Vessel inspection Regulations (LFVIR)*;

3.2.1.5.1.1 All navigation instruments, distress signals and all equipment essential to the safe navigation of the ship shall be inspected; and **(LFVIR s. 27)**

3.2.1.5.1.2 All equipment shall be re-stowed after inspection. **(LFVIR s. 27)**

3.2.2 Annual Inspections

3.2.2.1 **(HA) Hull Annual Inspection**

3.2.2.1.1 Inspection of Windlass, Steering Gear **(LFVIR s. 16, 17, 28 and MMR s. 4, 5)**

3.2.2.1.1.1.1 Inspect hatchways, ventilators, doorways and other deck openings with their closing and opening appliances, superstructure bulkheads with their closing appliances, hatch coamings and door sills; **(LFVIR s. 20, 21, 22, 23)**

3.2.2.1.1.1.2 Upon inspection further opening up shall be done as in order to ensure that all is in good condition; **(LFVIR s. 20, 21, 22, 23)**

3.2.2.1.1.1.3 Verify any alterations made to the vessel since the previous inspection. These alterations shall be reported in detail by the inspector. **(CSA 2001 s. 119)**

3.2.2.1.2 **Steel Fishing vessels over 44.2M**

3.2.2.1.2.1 The inspection of the hull of Steel Fishing Vessels over 44.2M shall be inspected generally as specified in (HA) 3.1.2.1 of this standard.

3.2.2.2 **(MA) Machinery Annual**

3.2.2.2.1 Inspection of Boilers Used for Heating or other Purposes

3.2.2.2.1.1 Every fishing vessel fitted with a boiler or boilers used for heating or other purposes shall be inspected at the following intervals: **(MMR s. 4, 5)**

3.2.2.2.1.1.1 Where the boilers supply or are connected to boilers that supply steam to machinery essential to the safety of the fishing vessel, the boilers and boiler mountings shall be inspected annually and the safety valves shall be adjusted annually in the presence of the inspector; **(MMRs. 4, 5)**

3.2.2.2.1.1.2 Where the working pressure is more than 345 kPa or where the heating surface is more than 4.65 m2, the boilers and boiler mountings shall be inspected annually and the safety valves shall be adjusted annually in the presence of the inspector; **(MMR s. 4, 5)**

3.2.2.2.1.1.3 Subject to paragraph 3.2.2.2.1.1.4, where the working pressure is not more than 345 kPa and the heating surface is not more than 4.65 m2, the boilers and boiler mountings shall be inspected every four years and given a general examination and such further inspection annually as the inspector considers necessary and the safety valves shall be adjusted annually in the presence of the inspector; **(MMR s. 4, 5)**

3.2.2.2.1.1.4 Where the working pressure is not more than 103 kPa or where the boiler is of the "pipe coil" type, the boiler and boiler mountings shall be given a general examination and such further inspection annually as the inspector considers necessary and the safety valves shall be adjusted annually in the presence of the inspector. **(MMR s. 4, 5)**

3.2.2.2.1.2 Where a boiler on a fishing vessel is required to be inspected periodically the inspection shall be carried out as follows; **(MMR s. 4, 5)**

3.2.2.2.1.2.1 All mountings, where there is no valve or cock between the mountings and the boiler, and all gauge glass fittings shall be inspected; **(MMR s. 4, 5)**

3.2.2.2.1.2.2 All other principal valves and cocks shall be examined externally, and inspected if the inspector considers it necessary; (**MMR s. 4, 5)**

3.2.2.2.1.2.3 Test under working conditions oil fuel installations and a general inspection made of the fuel tank valves, deck control gear and oil discharge pipes between the pumps and the furnaces; (**MMR s. 4, 5)**

3.2.2.2.1.2.4 At all periodic inspections, the inspector shall decide after such inspection as considers necessary in the circumstances, the maximum pressure that may be carried on all boilers and other pressure vessels and the safety valves shall be set to blow off at a pressure not exceeding that maximum pressure in the presence of the inspector. (**MMR s. 4, 5)**

3.2.2.2.2 **Inspection of Main and Auxiliary Steam Pipes**

3.2.2.2.2.1 All main steam pipes shall be given a general examination in place annually. **(MMR s. 4, 5)**

3.2.2.2.2.2 Copper steam pipes required to be inspected under this section shall be annealed from time to time when considered necessary by the inspector. **(MMR s. 4, 5)**

3.2.2.2.2.3 Steam pipe to be removed for examination or testing where required and in the opinion of the inspector the bursting of such steam pipe might cause injury or loss of life. **(MMR s. 4, 5)**

3.2.2.2.3 **Inspection of Internal Combustion Engines and Auxiliaries**

3.2.2.2.3.1 The Engine and auxiliary machinery of every fishing vessel of more than 150 GT shall be inspected annually as follow: **(LFVIR s. 13 and MMR s. 4, 5)**

3.2.2.2.3.1.1 Parts that are opened up for adjustment or overhaul and are available during the attendance of the inspector, or are reported to be defective, shall be inspected; and **(LFVIR s. 13 and MMRs. 4, 5)**

3.2.2.2.3.1.2 A running trial shall be held on the main engines, steering gear, pumps essential to the safe operation of the vessel, and any other part that may be requested by the inspector, and where any part is not found to be in good operational condition, that part may be required to be opened up for inspection and overhaul. **(LFVIR s. 13 and MMR s. 4, 5)**

3.2.2.2.4 **Inspection of Electrical Equipment, Installations and Appliances**

3.2.2.2.4.1 Inspect the electrical equipment, installations and appliances on a fishing vessel in accordance Appendix 1 section 3.2.4.6 (Electrical Plans and Technical Documents for Large Fishing Vessel) of this standard.

3.2.2.3 **(FA) Fire Safety Annual**

3.2.2.3.1 Inspect all fire extinguishing equipment at the following intervals: **(LFVIR s. 25)**

3.2.2.3.1.1 Annually, in the case of fishing vessels of more than 150 GT; **(LFVIR s. 25)**

3.2.2.3.2 The inspection of fire extinguishing equipment shall be carried out as follows; **(LFVIR s. 25)**

3.2.2.3.2.1 All fire extinguishers shall be examined and the charges shall be renewed where there is evidence of deterioration; **(LFVIR s. 25)**

3.2.2.3.2.2 Dry powder and foam fire extinguishers shall be recharged annually; **(LFVIR s. 25)**

3.2.2.3.3 Fire hoses and buckets shall be inspected and tested if the inspector considers it necessary; **(LFVIR s. 25)**

3.2.2.3.4 All equipment shall be re-stowed after inspection. **(LFVIR. 25)**

3.2.2.3.5 Verify that the master of the fishing vessel has taken adequate steps to ensure that the crew understands the use of the fire extinguishing equipment and where it is located. **(LFVIR s. 25)**

3.2.2.4 **(LA) Life Saving Annual**

3.2.2.4.1 Inspect all Life Saving equipment at the following intervals: **(LFVIR s. 24)**

3.2.2.4.1.1 Annually, in the case of fishing vessels of more than 150 GT; **(LFVIR s. 24)**

3.2.2.4.2 The inspection of life saving equipment shall be carried out as follows; **(LFVIR s. 24)**

3.2.2.4.2.1 All Lifeboats, boats, dories and skiff shall be swung out and lowered into the water, except that in exceptional circumstances this requirement may be waived at the discretion of the inspector who shall be satisfied with the length and condition of all falls and lifelines **(LFVIR s. 24)**

3.2.2.4.2.2 Lifeboats, boats, dories and skiffs shall be inspected with the movable equipment; removed; **(LFVIR s. 24 and Schedule VII)**

3.2.2.4.2.3 The equipment for lifeboats, boats, dories and skiffs shall be inspected and properly re-stowed;

3.2.2.4.2.4 All Lifeboat markings to be verified ;**(LFVIR s. 24)**

3.2.2.4.2.5 All flotation material, or approved portable substitutes, shall be removed from the lifeboat for complete inspection and testing at intervals not exceeding four years, and where the approved substitute for flotation material forms an integral part of the lifeboat, the inspector shall use non-destructive testing as considered necessary by the inspector to determine the condition of the substitute material; **(LFVIR s. 24)**

3.2.2.4.2.6 Inspect all lifejackets and lifebuoys with their lights and lines and the means provided for stowage; **(LFVIR s. 24)**

3.2.2.4.2.7 All equipment shall be inspected and re-stowed after inspection. **(LFVIR s. 24)**

3.2.2.4.2.8 Verify that the master of the fishing vessel has taken adequate steps to ensure that the crew understands the use of the life saving equipment and where it is located. **(LFVIR s. 24)**

3.2.2.5 **(NA) Navigation and Communication Equipment Annual**

3.2.2.5.1 Navigation and communication equipment shall be meet the requirements of the *Navigation Safety Regulations, 2020 (NSR 2020)* and the requirements of the *Large Fishing Vessel inspection Regulations* ;**(LFVIR s. 27*)***

3.2.2.5.1.1 Navigation instruments, distress signals and all equipment essential to the safe navigation of the ship shall be inspected; and **(LFVIR s. 27)**

3.2.2.5.1.2 All equipment shall be re-stowed after inspection. **(LFVIR s. 27)**

3.2.3 Periodic (Renewal) Inspections

3.2.3.1 **(HP) Hull Periodic Inspection**

3.2.3.1.1 Inspection of Sea Connections, Windlass, Rudder, Steering Gear, Anchors and Anchor Cables **(LFVIR s. 16, 17, 28 and MMR s. 4, 5)**

3.2.3.1.1.1 Inspect all sea suction and discharge valves and cocks situated below the load water line or which exceed 50 mm in internal diameter and be opened up for inspection at least every four years. **(LFVIR s. 16)**

3.2.3.1.1.2 Examine on every occasion that a fishing vessel is dry docked in compliance with the LFVIR the sea connection fastenings, windlass, rudder, steering gear and anchors and the inspector may request any opening up that is deemed necessary. **(LFVIR s. 16, 17, 28 and MMR s. 4, 5)**

3.2.3.1.1.3 Anchor cables shall be ranged eight years after construction of the vessel and every four years thereafter and where the chain is so worn that the mean diameter at any part is reduced to the minimum size shown in schedule F of Appendix 4 of this standard as requiring renewal, that part shall be renewed. **(LFVIR s. 28)**

3.2.3.1.1.4 Steering chains, so worn that the mean diameter at any part is reduced to the minimum size shown in schedule F of Appendix 4 of this standard requiring renewal, shall be renewed at that part. **(MMR s. 4, 5)**

3.2.3.1.2 **Inspection of Screw Shafts and Tube Shafts**

3.2.3.1.2.1 Inspect screw shafts and tube shafts on fishing vessels over 150 GT, making voyages in salt water, by having the screw shafts and the tube shafts withdrawn at least once every two years, except that shafts of the following types need be withdrawn for inspection only once every three years, in the case of single screw fishing vessels and once every four years, in the case of fishing vessels having two or more screws: **(LFVIR s. 17)**

3.2.3.1.2.1.1 Shafts fitted with a continuous liner in way of the stern tube, and in way of outside bearings, where fitted; **(LFVIR s. 17)**

3.2.3.1.2.1.2 Shafts fitted with approved glands or other approved appliances at the after end to permit of their being efficiently lubricated; **(LFVIR s. 17)**

3.2.3.1.2.1.3 Shafts of bronze, monel metal, or other approved non-corrosive material; and **(LFVIR s. 17)**

3.2.3.1.2.1.4 Shafts that are fitted with non-continuous liners and that are completely covered between the liners with rubber or neoprene that has been applied and bonded by an approved method. **(LFVIR s. 17)**

3.2.3.1.2.2 Inspection of screw shafts and tube shafts, notwithstanding subsection 3.2.3.1.2.1where a single screw fishing vessel has a shaft of a type described in any of paragraphs 3.2.3.1.2.1.2 to 3.2.3.1.2.1.4 the shaft need only be drawn for inspection once every four years if **(LFVIR s. 17)**

3.2.3.1.2.2.1 The key way, if fitted, has well rounded ends or is of the sled type, has an adequate root radius and has rounded edges at the shaft surface; and **(LFVIR s. 17)**

3.2.3.1.2.2.2 At each inspection, the shaft between the after end of the liner, or the after end of the stern tube if no liner is fitted, and a position one-third of the length of the taper from the large end is examined by an efficient crack detection method and found free from defects. **(LFVIR s. 17)**

3.2.3.1.2.3 Fishing vessels not over 150 GT, making voyages in salt water, shall have the screw shafts and the tube shafts withdrawn for inspection at least once every four years. **(LFVIR s. 17)**

3.2.3.1.2.4 Fishing vessels making voyages in fresh water shall have the screw shafts and the tube shafts withdrawn for inspection at least once every four years. **(LFVIR s. 17)**

3.2.3.1.2.5 When a screw shaft or tube shaft is withdrawn for the inspection required by this section, it shall be completely removed from the stern tube and bearings and the propeller shall be taken off the shaft. **(LFVIR s. 17)**

3.2.3.1.2.6 When a fishing vessel is inspected in dry-dock and the shafts are not withdrawn for periodic inspection, the propellers and stern bearings shall be examined in place and the wear-down of the stern bearings shall be noted and reported. **(LFVIR s. 17)**

3.2.3.1.3 **Inspection of hulls of wooden Fishing vessels**

3.2.3.1.3.1 Every wooden fishing vessel over 150 GT, if operating in salt water, shall be dry-docked and inspected every two years.

3.2.3.1.3.2 Every wooden fishing vessel over 150 GT, if operating in fresh water, shall be dry docked and inspected every four years.

3.2.3.1.3.3 Every wooden fishing vessel not over 150 GT[21] shall be dry docked and inspected every four years.

3.2.3.1.3.4 **The hull inspection shall be carried out as follows:**

3.2.3.1.3.4.1 Examine the hull externally and internally in order to determine the condition of the hull, such parts of the ceiling shall be removed as the inspector may require in order that the condition of the hull, timbers, floors, etc. may be ascertained, fastenings and sheathing shall be removed where considered necessary by the inspector and boring shall be carried out where and as considered necessary by the inspector; **(CSA 2001 s. 120 (1)(a))**

3.2.3.1.3.4.2 Inspect hatchways, ventilators, doorways and other deck openings with their closing and opening appliances, superstructure bulkheads with their closing appliances, hatch coamings and door sills; **(LFVIR s. 20, 21, 22, 23)**

3.2.3.1.3.4.3 Upon inspection further opening up shall be done as in order to ensure that the hull is in good condition; **(LFVIR s. 20, 21, 22, 23)**

3.2.3.1.3.4.4 Verify that all repairs and renewals have been carried out; and **(CSA 2001 s. 120 (1) (a))**

3.2.3.1.3.4.5 Verify any alterations made to the vessel since the previous inspection. These alterations shall be reported in detail by the inspector. **(CSA 2001 s. 119)**

3.2.3.1.4 **Inspection of Hulls of Steel Fishing vessels**

3.2.3.1.5 Inspect every steel fishing vessel over 150 GT, if operating in salt water, by dry dock every two years.

3.2.3.1.6 Inspect every steel fishing vessel over 150 GT, if operating in fresh water, by dry dock every four years.

3.2.3.1.7 Inspect every steel fishing vessel not over 150 GT[22], shall be dry docked and inspected every four years.

3.2.3.1.8 **Steel Fishing vessels not over 44.2M**

3.2.3.1.8.1 The hulls of steel fishing vessels not over 44.2 m in length shall be inspected as follows:

3.2.3.1.8.1.1 Examine the hull externally and internally in order to determine the condition of the hull, such parts of the ceiling shall be removed as the inspector may require in order that the condition of plating, frames, floors, tank tops etc. may be

[21] 24.4M

[22] 24.4M

ascertained and non-destructive testing of the plates shall be carried out where considered necessary by the inspector**; (CSA 2001 s. 120 (1) (a))**

3.2.3.1.8.1.2 Inspect hatchways, ventilators, doorways and other deck openings with their closing and opening appliances, superstructure bulkheads with their closing appliances, hatch coamings and door sills; **(LFVIR s. 20, 21, 22, 23)**

3.2.3.1.8.1.3 Verify that the fore and after peaks, bunkers, double bottom tanks and bilges are cleaned were necessary to be examined; **(LFVIR s. 14, 19)**

3.2.3.1.8.1.4 Steel work shall be cleaned and exposed for examination where considered necessary by the inspector; **(CSA 2001 s. 120 (1) (a))**

3.2.3.1.8.1.5 Test double bottom tanks by a head of water at least to the light water line but not less than 2.4 m above the inner bottom, and peak tanks used for water ballast shall be tested to a head of water not less than 2.4 m above the crown of the tank where the inspector considers necessary **(CSA 2001 s. 120 (1) (a))**

3.2.3.1.8.1.6 Examination may require further opening up in order to determine that the hull is in good condition; **(CSA 2001 s. 120 (1) (a))**

3.2.3.1.8.1.7 All repairs and renewals have been carried out, and **(CSA 2001 s. 120 (1) (a))**

3.2.3.1.8.1.8 Verify and report any alterations made to the vessel since the previous inspection. **(CSA 2001 s.119)**

3.2.3.1.9 **Steel Fishing vessels over 44.2M**

3.2.3.1.9.1 The inspection of the hull of Steel Fishing Vessels over 44.2M shall be inspected generally as specified in (HR) Hull Renewal 3.1.4.1of this standard.

3.2.3.2 **(MP) Machinery Periodic**

3.2.3.2.1 **Inspection of Boilers Used for Heating or other Purposes**

3.2.3.2.1.1 Where a boiler on a fishing vessel is required to be inspected periodically, the inspection shall be carried out as follows: **(MMR s. 4, 5)**

3.2.3.2.1.1.1 The owner, or his agent, shall have the shall be boiler opened up, the outside and inside plates cleaned and furnace grates and bridges removed as required by the inspector so that a satisfactory and efficient inspection may be made and where bulkheads are so placed as to prevent a close examination of the boiler, they shall be removed or some other satisfactory arrangement made to enable a thorough inspection to be made; **(MMR s. 4, 5)**

3.2.3.2.1.1.2 The inspector shall, enter the boiler, if possible, and make a thorough examination with the bridges and fire bars removed; the furnaces, combustion chambers, shell plates and other parts shall be examined using non-destructive testing to test the thickness when the inspector considers it necessary, to ascertain the actual thickness thereof, and, to confirm the strength and internal condition of a boiler, the inspector shall, if considered necessary, order pieces to be cut from the boiler for inspection and testing; **(MMR s. 4, 5)**

3.2.3.2.1.1.3 Where stays alone prevent an inspector from entering a boiler, the inspector shall require that they be removed to permit access to the boiler and the inspector shall witness them being properly replaced after the inspection has been completed, and where any other part of a boiler is so constructed that the inspector cannot inspect the boiler, the Inspector may refer the matter to the Regional Inspection Services Manager; **(MMR s. 4, 5)**

3.2.3.2.1.1.4 Where a boiler is so placed that the outside of the bottom cannot be inspected, the inspector shall order the boiler to be lifted for examination as often as considers necessary; particular attention shall be paid to the part of the boiler shell in contact with the chocks, and if signs of heavy corrosion are noticed the boiler shall be lifted clear of the chocks for examination so that the inspector can verify the condition; where an owner objects to the lifting of a boiler at the request of an inspector, the matter shall be referred to the Regional Inspection Services manager; **(MMR s. 4, 5)**

3.2.3.2.1.1.5 All mountings, where there is no valve or cock between the mountings and the boiler, and all gauge glass fittings shall be inspected; **(MMR s. 4, 5)**

3.2.3.2.1.1.6 All other principal valves and cocks shall be examined externally, and inspected if the inspector considers it necessary; **(MMR s. 4, 5)**

3.2.3.2.1.1.7 Oil fuel installations shall be tested under working conditions and a general inspection made of the fuel tank valves, deck control gear and oil discharge pipes between the pumps and the furnaces; **(MMR s. 4, 5)**

3.2.3.2.1.1.8 Hydraulic tests shall be carried out on any boiler, boiler mounting or other part, as required by the inspector, and the test pressure shall not be more than that set out in schedule E of Appendix 4 of this standard. **(MMR s. 4, 5)**

3.2.3.2.1.1.9 The working pressure allowed on a boiler shall in no circumstances be increased unless authorized, where an inspector is of the opinion that an increased pressure could be allowed with safety, shall communicate with the inspector who last inspected the boiler and if, on learning why the existing pressure was given, is still of the opinion that it might be increased, shall communicate all the facts of the matter to the Regional Inspection Services Manager; and **(MMR s. 4, 5)**

3.2.3.2.1.1.10 At all periodic inspections, the inspector shall decide after such inspection as considers necessary in the circumstances, the maximum pressure that may be carried on all boilers and other pressure vessels and the safety valves shall be set to blow off at a pressure not exceeding that maximum pressure in the presence of the inspector **(MMR s. 4, 5)**.

3.2.3.2.2 **Inspection of Main and Auxiliary Steam Pipes**

3.2.3.2.2.1 Inspect Steam pipes connecting two or more boilers together or connecting boilers to the propelling machinery auxiliary, and steam pipes exceeding 75 mm in internal diameter subjected to a working pressure of more than 1 035 kPa shall be removed for inspection and tested by hydraulic pressure to twice the working pressure **(LFVIR s. 14 and MMR s. 4, 5)**

3.2.3.2.2.1.1 If the pipes are made of iron, steel or solid drawn copper, every six years, or a selected number as requested by the inspector, every four years, **(LFVIR s. 14) (MMR s. 4, 5)**

3.2.3.2.2.1.2 If the pipes are made of copper and have a brazed longitudinal joint, every four years, and to facilitate the inspection; **(LFVIR s. 14 and MMR s. 4, 5)**

3.2.3.2.2.1.3 Sufficient lagging, as required by the inspector, shall be removed from the pipes referred to in paragraph 3.2.3.2.2.1.1; and **(LFVIR s. 14 and MMR s. 4, 5)**

3.2.3.2.2.1.4 All the lagging shall be removed from the pipes referred to in paragraph 3.2.3.2.2.1.2

3.2.3.2.2.1.5 Copper steam pipes required to be inspected under this section shall be annealed from time to time when considered necessary by the inspector. **(LFVIR s. 14 and MMR s. 4, 5)**

3.2.3.2.2.1.6 Steam pipes being tested pursuant to subsection 3.2.3.2.2.1shall be subjected to the hydraulic pressure required by that subsection for such time as the inspector considers necessary and any pipe that is leaking shall be repaired and re-tested. **(LFVIR s. 14 and MMR s. 4, 5)**

3.2.3.2.2.1.7 An inspector may at any time require any steam pipe to be removed for examination or testing, where, in his opinion, the bursting of such steam pipe might cause injury or loss of life. **(LFVIR s. 14** and **MMR s. 4, 5)**

3.2.3.2.3 **Inspection of Air Receivers**

3.2.3.2.3.1 Test Air receivers. by hydraulic pressure, as specified in schedule E of Appendix 4 of this standard, when new, at the end of eight years from the date of the Initial inspection and thereafter every four years from the date of the last inspection. **(LFVIR s. 13 and MMR s. 4, 5)**

3.2.3.2.3.2 Testing of air receivers notwithstanding subsection 3.2.3.2.3.1an inspector may waive the requirement of the hydraulic test on any air receiver, other than a new air receiver or an existing air receiver being inspected for the first time, if the air receiver has a manhole or other opening that allows for a thorough examination of the interior to be made and the inspector is satisfied by such examination that the receiver is in a safe condition. **(MMR s. 4, 5 and LFVIR s. 13)**

3.2.3.2.3.3 The inspector shall decide, after such inspection as considered necessary in the circumstances, the maximum pressure that may be carried on all air receivers and other pressure vessels and the safety valves shall be set, in the presence of the inspector, to blow off at a pressure not exceeding that maximum pressure **(MMR s. 4, 5 and LFVIR s. 13)**

3.2.3.2.4 **Inspection of Internal Combustion Propulsion Engines and Auxiliaries**

3.2.3.2.4.1 Inspect the propulsion machinery of every fishing vessel propelled by internal combustion engines at least once every four years. Inspection shall require the internal combustion engine to be opened up for inspection and verify maintenance as per manufacture recommendations and the engine running hours. **(LFVIR s. 13 and MMR s. 4, 5)**

3.2.3.2.4.2 Inspect the auxiliary machinery of every fishing vessel propelled by internal combustion engines shall have such of the following parts, namely, clutches, reverse and reduction gears, air compressors, intercoolers, fuel oil pumps and other essential pumps, thrusts, main shafting, fuel tanks, bilge pumping arrangements, pipes and valves opened up for inspection, or tested, once every four years as the inspector deems necessary. **(LFVIR s. 13 and MMR s. 4, 5)**

3.2.3.2.5 **Inspection of Electrical Equipment, Installations and Appliances**

3.2.3.2.5.1 Inspect the electrical equipment, installations and appliances on a fishing vessel in accordance Appendix 1 section 3.2.4.6 (Electrical Plans and Technical Documents for Large fishing Vessel) of this standard.

3.2.3.3 **(FP) Fire Safety Periodic**

3.2.3.3.1 The inspection of fire extinguishing equipment shall be carried out as follows;

3.2.3.3.1.1 All fire extinguishers shall be examined and charges shall be renewed where there is evidence of deterioration; **(LFVIR s. 25)**

3.2.3.3.1.2 Dry powder and foam fire extinguishers shall be recharged annually; **(LFVIR s. 25)**

3.2.3.3.1.3 Fire hoses and buckets shall be inspected and tested if the inspector considers it necessary; **(LFVIR s. 25)**

3.2.3.3.1.4 All equipment shall be re-stowed after inspection. **(LFVIR s. 25)**

3.2.3.3.2 Verify that the master of the fishing vessel has taken adequate steps to ensure that the crew understands the use of the fire extinguishing equipment and where it is located. **(LFVIR s. 25)**

3.2.3.4 **(LP) Life Saving Periodic**

3.2.3.4.1 The inspection of life saving equipment shall be carried out as follows; **(LFVIR s. 24)**

3.2.3.4.1.1 All Lifeboats, boats, dories and skiff shall be swung out and lowered into the water, except that in exceptional circumstances this requirement may be waived at the discretion of the inspector who shall be satisfied with the length and condition of all falls and lifelines; **(LFVIR s. 24)**

3.2.3.4.1.2 Lifeboats, boats, dories and skiffs shall be inspected with the movable equipment removed; **(LFVIR s. 24, Schedule VII)**

3.2.3.4.1.3 The equipment for lifeboats, boats, dories and skiffs shall be inspected and properly re-stowed; **(LFVIR s. 24)**

3.2.3.4.1.4 All lifeboat markings shall be verified;

3.2.3.4.1.5 All flotation material, or approved portable substitutes, shall be removed from the lifeboat for complete inspection and testing at intervals not exceeding four years, and where the approved substitute for flotation material forms an integral part of the lifeboat, the inspector shall use non-destructive testing as considered

necessary by the inspector to determine the condition of the substitute material; **(LFVIR s. 24)**

3.2.3.4.1.6 Inspect all lifejackets and lifebuoys with their lights and lines and the means provided for stowage. **(LFVIR s. 24)**

3.2.3.4.1.7 All equipment shall be inspected and re-stowed after inspection. **(LFVIRs. 24)**

3.2.3.4.2 Verify that the master of the fishing vessel has taken adequate steps to ensure that the crew understands the use of the lifesaving equipment and where it is located. **(LFVIR s. 24)**

3.2.3.5 **(NP) Navigation and Communication Equipment Periodic**

3.2.3.5.1 Navigation and communication equipment shall be meet the requirements of the *Navigation Safety Regulations, 2020 (NSR 2020)* and the requirements of the *Large Fishing Vessel inspection Regulations* (LFVIR;

3.2.3.5.1.1 Navigation instruments, distress signals and all equipment essential to the safe navigation of the ship shall be inspected; and **(LFVIR s. 27)**

3.2.3.5.1.2 All equipment shall be re-stowed after inspection. **(LFVIR s. 27)**

4. REQUIREMENTS FOR THE ISSUANCE OF A POLAR SHIP CERTIFICATE

4.1 Initial inspection

4.1.1 As per Annex 1 section 9.1of this standard

4.2 Annual inspection

4.2.1 As per Annex 1 section 9.2 of this standard

4.3 Intermediate inspection

4.3.1 As per Annex 1 section 9.3 of this standard

4.4 Periodical inspection

4.4.1 As per Annex 1 section 9.4 of this standard

4.5 Renewal inspection

4.5.1 As per Annex 1 section 9.5 of this standard

5. REQUIREMENTS FOR THE ISSUANCE OF A LETTER OF COMPLIANCE FOR BARGES CARRYING OIL AND DANGEROUS CHEMICAL IN BULK

5.1.1 In addition to the necessary certificates required by the *Vessel Safety Certificates Regulations, the Vessel Pollution and Dangerous Chemical Regulations* and other applicable Transport Canada regulations, Letter of Compliance form 85-0522 for a Non Self-Propelled Oil Barge or form 85-0523 for a Non Self-Propelled Dangerous Chemical Barge, shall be issued by the RO or TCMSS as appropriate, if the oil barge or a dangerous chemical barge has been duly inspected in accordance with the provisions of TP 11960 - the Standards for the Construction, Inspection and Operation of Barges that Carry Bulk Oil or Dangerous Chemicals (Reference TP 11960 for details).

Annex 3 - REQUIREMENTS UNDER THE *LOAD LINE REGULATIONS* AND THE 1966 LL CONVENTION AS MODIFIED BY THE 1988 PROTOCOL RELATING THERETO

1. REQUIREMENTS FOR INSPECTIONS FOR THE INTERNATIONAL LOAD LINE CERTIFICATE, LOCAL LOAD LINE CERTIFICATE AND INTERNATIONAL LOAD LINE EXEMPTION CERTIFICATE

1.1 INTERNATIONAL LOAD LINE CERTIFICATE

1.1.1 Initial Inspection

Inspection as per the Inspection requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.1.1.1 (LI) 1

1.1.1.2 (LI) 1.1 -1.1.4.1

1.1.2 Annual Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.1.2.1 (LA) 1.2

1.1.2.2 (LA) 1.2.1 – 1.2.3.2

1.1.3 Renewal Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.1.3.1 (LR) 1.3

1.1.3.2 (LR) 1.3.1 – 1.3.3.1

1.2 LOCAL LOAD LINE CERTIFICATE

1.2.1 Initial Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.2.1.1 (LI) 1

1.2.1.2 (LI) 1.1 -1.1.4.1

1.2.2 Annual Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.2.2.1 (LA) 1.2

1.2.2.2 (LA) 1.2.1 – 1.2.3.2

1.2.3 Renewal Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.2.3.1 (LR) 1.3

1.2.3.2 (LR) 1.3.1 – 1.3.3.1

1.3 INTERNATIONAL LOAD LINE EXEMPTION CERTIFICATE

1.3.1 Initial Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.3.1.1 (LI) 1

1.3.1.2 (LI) 1.1 -1.1.4.1

1.3.2 Annual Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.3.2.1 (LA) 1.2

1.3.2.2 (LA) 1.2.1 – 1.2.3.2

1.3.3 Renewal Inspection

Inspection as per the Inspection Requirements under the Harmonized System of Survey and Certification (HSSC) sections

1.3.3.1 (LR) 1.3

1.3.3.2 (LR) 1.3.1 – 1.3.3.1

1.4 GREAT LAKES AND INLAND WATERS OF CANADA LOAD LINE CERTIFICATE

1.4.1 Initial Inspection

1.4.1.1 As per the HSSC and as per the *Load Line Regulations* (SOR/2007-99)

1.4.2 Annual Inspection

1.4.2.1 As per the HSSC and as per the *Load Line Regulations* (SOR/2007-99)

1.4.3 Renewal Inspection

1.4.3.1 As per the HSSC and as per the *Load Line Regulations* (SOR/2007-99)

Annex 4 - INSPECTION REQUIREMENTS UNDER THE MARPOL CONVENTION

1. REQUIREMENTS FOR INSPECTIONS FOR THE INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE

1.1 Initial Inspection

1.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

1.1.1.1 (OI) 1

1.1.1.2 (OI) 1.1 – 1.1.7.1

1.1.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

1.2 Annual inspection

1.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

1.2.1.1 (OA) 1.2

1.2.1.2 (OA) 1.2.1 – 1.2.5.2

1.2.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals* Regulations

1.3 Intermediate inspection

1.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

1.3.1.1 (OIn) 1.3

1.3.1.2 (OIn) 1.3.1 – 1.3.5.2

1.3.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

1.4 Renewal Inspection

1.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

1.4.1.1 (OR) 1.4

1.4.1.2 (OR) 1.4 – 1.4.5.1

1.4.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

2. REQUIREMENTS FOR INSPECTIONS FOR THE INTERNATIONAL POLLUTION PREVENTION CERTIFICATE FOR THE CARRIAGE OF NOXIOUS LIQUID SUBSTANCES IN BULK

2.1 Initial Inspection

2.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

2.1.1.1 (NI) 2

2.1.1.2 (NI) 2.1 - 2.1.4.1

2.1.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

2.2 Annual Inspection

2.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

2.2.1.1 (NA) 2.2

2.2.1.2 (NA) 2.2.1 - 2.2.3.2

2.2.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

2.3 Intermediate inspection

2.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

2.3.1.1 (NIn) 2.3

2.3.1.2 (NIn) 2.3.1 - 2.3.3.2

2.3.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

2.4 Renewal Inspection

2.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

2.4.1.1 (NR) 2.4

2.4.1.2 (NR) 2.4.1- 2.4.3.1

2.4.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

3. REQUIREMENTS FOR INSPECTIONS FOR THE INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE

3.1 Initial Inspection

3.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

3.1.1.1 (SI) 3

3.1.1.2 (SI) 3.1 – 3.12.4

3.1.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

3.2 Renewal Inspection

3.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

3.2.1.1 (SR) 3.2

3.2.1.2 (SR) 3.2 – 3.2.3.1

3.2.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

4. REQUIREMENTS FOR INSPECTIONS FOR THE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE AND THE NOx TECHNICAL CODE

4.1 Initial Inspection

4.1.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

4.1.1.1 (AI) 4

4.1.1.2 (AI) 4.1 – 4.1.4.1

4.1.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

4.2 Annual Inspection

4.2.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

4.2.1.1 (AA) 4.2

4.2.1.2 (AA) 4.2.1 – 4.2.4.2

4.2.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

4.3 Intermediate inspection

4.3.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

4.3.1.1 (AIn) 4.3

4.3.1.2 (AIn) 4.3.1 – 4.3.3.2

4.3.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

4.4 Renewal Inspection

4.4.1 Inspection as per the Harmonized System of Survey and Certification (HSSC) sections

4.4.1.1 (AR) 4.4

4.4.1.2 (AR) 4.3.1 – 4.4.3.1

4.4.2 Canadian regulatory reference, *Vessel Pollution and Dangerous Chemicals Regulations*

APPENDIX 1 - Submission of Plans and Technical Documents for Approval for Passenger Vessels, Non-Passenger Vessels and Fishing Vessels

1. General

1.1.1 Appendix 1 specifies the requirements and details for plans[23] and technical documents that must be submitted to the Regional Technical Services Manager to review or approve and to be submitted to the RO if the vessel is delegated.

1.1.2 Plans that have been approved by a licensed engineer may be accepted as set out in Tier 1 Policy – Plan approval – Acceptance of Plans Stamped by a Canadian Licensed Engineer.

1.1.3 Plans and technical documents shall be submitted in electronic format as set out in Tier 1 Policy on E-plan approval, prior to initial construction or installation as detailed in Appendix 1 of this standard and upon submission shall meet the requirements of the various regulations and Transport Publications and if construction or installation is commenced before the approval is obtained, the AR may be required to make such alterations as are necessary to comply with the conditions of approval

1.1.4 Where reconstruction or modifications are being carried out on an existing installation, plans and technical documents covering all aspects of the modifications are to be submitted.

2. Submission of Plans and Technical Documents for Passenger and Non-Passenger Vessels

2.1 Hull Construction Plans and Technical Documents

2.1.1 Subject to this standard, a new vessel shall be constructed in accordance with plans and technical documents as set forth in section 2.1.3

2.1.2 Vessels shall be inspected at suitable intervals during construction to ensure that the construction is in accordance with the approved plans and technical documents that the material and workmanship are satisfactory and where defects in either material or workmanship are found, alterations or replacements shall be made to rectify the deficiency.

2.1.3 Submission[24] and Approval of Plans, Data and Technical Documents

2.1.3.1 In the case of vessels, 18.3 m in length and over that are to be certificated to carry more than 12 passengers, the following plans and technical documents shall be submitted:

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[23] Plans showing alterations and additions proposed, shall be submitted for approval prior to the work being commenced, but drawings will not be required for repairs in kind. (All repairs and alterations shall be subject to inspection by an inspector)

[24] If the vessel has been delegated, plans are to be submitted to the RO

Item	Required Information
1	General arrangement
2	Midship section
3	Longitudinal section and deck plans
4	Subdivision details and data
5	Watertight and Oil-tight bulkheads
6	Sea chests
7	Boat arrangement
8	Natural and mechanical ventilation
9	Sprinkler system, fixed pressure water-spraying fire-extinguishing system that meets the applicable requirements of the FSS Code[25]
10	Fire-resisting bulkheads
11	Lifeboats, life rafts and buoyant apparatus and provisions of section 2.5
12	Scuppers and discharges
13	Aluminum superstructures

2.1.3.1.1 the following plans and technical documents shall be submitted.

Item	Required Information
1	Rudder
2	Stem, sternpost or sternframe
3	Pillars and girders
4	Shell expansion
5	Engine and boiler seatings
6	Stern tube, shaft brackets and bossing,

[25] i.e. water mist or deluge system

Item	Required Information
7	Schemes of riveting and welding,
8	List of fastenings in the case of wooden vessels
9	Fuel exhaust fresh and salt water systems

2.1.3.2 in the case of a vessels, 30.5 m in length and over that are to be certificated to carry not more than 12 passengers, vessels 30.5 m in length and over that will not be certificated to carry passengers, the following plans, and technical documents shall be submitted.

Item	Required Information
1	General arrangement
2	Midship section
3	Longitudinal section and deck plans
4	Subdivision details and data (if required by owner)
5	Sprinkler system (if required by owner)
6	Fire-resisting bulkheads (if required by owner)
7	Lifeboats, life rafts and buoyant apparatus and the provisions of section 2.5
8	Aluminum superstructures

2.1.3.3 the following plans and technical documents shall be submitted.

Item	Required Information
1	Rudder
2	Stem, sternpost or stern frame
3	Pillars and girders
4	Shell expansion
5	Watertight and Oil-tight bulkheads
6	Engine and boiler seatings
7	Shaft brackets and bossing

Item	Required Information
8	Schemes of riveting and welding,
9	List of fastenings in the case of wooden vessels
10	Sea chests
11	Boat arrangement
12	Natural and mechanical ventilation
13	Fresh and salt water systems
14	Scuppers and discharges

2.1.3.4 In the case of vessels under 18.3 m in length that are to be certificated to carry more than 12 passengers, vessels under 30.5 m in length that are to be certificated to carry not more than 12 passengers, and vessels under 30.5 m in length that will not be certificated to carry passengers, the following plans and technical documents shall be submitted

Item	Required Information
1	General arrangement
2	Midship section
3	Longitudinal section and deck plan
4	Rudder
5	Such other plans and technical as the Technical Services considers necessary.

2.1.4 Stability, Subdivision, Load Line Plans and Technical Documents

2.1.4.1 The requirements for the Stability, Subdivision, Load Line Plans, and technical documents can be found in Transport Publication (TP) 7301.

2.2 Marine Machinery Plans and Technical Documents

2.2.1 Subject to subsection 2.2.3.5, plans of machinery referred in Appendix 3, Part II of Schedules I to XV of this standard to be inspected, shall be submitted prior to the commencement of any inspection.

2.2.2 Where machinery is constructed or installed after the publication of this standard, the plans shall be submitted prior to the commencement of construction or installation of the machinery, as the case may be.

2.2.3 The plans and Technical Documents shall;

2.2.3.1 Be submitted electronically and in fully dimensioned form;

2.2.3.2 Include the information set out in each item in Appendix 3, Part II of the applicable schedules from Schedules I to XV of this standard;

2.2.3.3 Indicate the approved classification society in accordance with the rules or codes of which the machinery will be or was constructed or installed; and

2.2.3.4 Reflect the standards and specifications referred in subsection 4(1) of the *Marine Machinery Regulations*.

2.2.3.5 The Regional Technical Services Manager may require that additional information referred in Appendix 3, Part II of the applicable schedules from Schedules I to XV of this standard be included in the plans and technical documents.

2.2.3.6 The plans and technical documents need not be submitted to the Regional Technical Services Manager if plans and technical documents that conform to this standard for identical machinery have previously been submitted to the Regional Technical Services Manager.

2.2.3.7 The submitted plans and technical documents shall be inspected by an inspector and where the plans meet the requirements set out in paragraphs (2.2.3.1) to (2.2.3.4) and subsection 2.2.3.5 shall be stamped to indicate that the plans comply with those requirements.

2.2.4 Plans, Drawings, Data and Technical Documents for Submission for Machinery

2.2.4.1 Refer to Appendix 3, Part II of the applicable schedules of Schedules I-XV of this standard.

2.3 Electrical Plans and Technical Documents

2.3.1 For new construction, the following drawings and data are to be submitted.

Item	Required Information
1	Load Analysis
2	Short-circuit Analysis
3	Co-ordination Study of Main and Emergency Distribution Systems
4	Elementary Single Line Diagram of Main and Emergency Distribution
5	Elementary Single Line Diagram of Propulsion System, Wiring Diagram of Propulsion Control Circuits
6	Switchboard (to include general arrangement, wiring diagram, nameplates and bill of material)
7	Starter Drawings as listed in section 2.3.2

Item	Required Information
8	Lighting Circuits Wiring Deck Plan or Book of Diagrams (including symbol list)
9	Power Circuits Wiring Deck Plan or Book of Diagrams (including symbol list) for passenger ships only
10	Cable Routing Arrangements or Wiring Deck Plans for vital and emergency circuits
11	Essential Interior Communication Systems-Block Diagrams
12	Essential Alarm Systems-Block Diagrams
13	Fire Detection System-Wiring Deck Plan and Block Diagram and Bill of Material
14	Automation or Remote-Control Systems and Boiler Controls (including description of operation)
15	Plan of Hazardous Zone(s) including type and classification of all electrical equipment located there-in
16	The emergency diesel generator automatic start wiring diagram and description of operation for the automatic start circuitry
17	Machinery Arrangement of Emergency Generator Room
18	Programmable Logic Controllers (PLC) – details of the hardware configuration and graphic representation of the program, e.g. flow charts, statement list, function or block diagram.

2.3.2 Starter Drawings and Technical Documents

2.3.2.1 As per Item 7 in section 2.3.1 the below items shall have starter drawings to be submitted;

Item	Require submission of Starter Drawing
1	Air compressors for main engines;
2	Scavenge blowers;
3	Bilge pumps;
4	Ballast pumps;
5	Fire and sprinkler pumps;

Item	Require submission of Starter Drawing
6	Circulating and cooling water pumps;
7	Condenser circulating pumps;
8	Condensate pumps;
9	Feed water pumps;
10	Fuel valve cooling pumps;
11	Lubricating oil pumps;
12	Oil fuel pumps;
13	Boiler fans for forced and induced draught;
14	Steering gear;
15	Windlasses;
16	Controllable Pitch Propeller (CPP) stand by servo oil pump motors;
17	Lighting;
18	Cargo oil pumps;
19	Machinery space ventilation;
20	Ventilation fans for hazardous areas;
21	Thruster motors (not to include bow thruster(s)); and
22	Communication equipment, in accordance with the applicable Regulations and or rules

2.4 Fire Safety Plans and Technical Documents

2.4.1 The following Plans and Data to submit for approval applies to Part 1 and Part 2 vessels as specified in the application of the VFSR;

Item	Required Information
1	Plans of the structural fire protection arrangements including; a. division of the vessel into main vertical and horizontal zones by thermal and structural boundaries, b. fire integrity of the divisions,

Item	Required Information
	c. protection of stairways and lifts, windows, side scuttles, and d. the details of materials used in construction including the use of combustible materials;
2	Plans and details of the ventilation systems indicating the materials of construction, position and type of ventilation fans and dampers and their control system;
3	Plans of the water firefighting systems including fire mains, hydrants, hoses, nozzles and details of fire pumps and their positions;
4	Plans of fixed fire detection and alarm systems including manual fire alarms;
5	Plans and details of fixed fire extinguishing systems;
6	Particulars and arrangement of the portable fire extinguishers and additional fire-extinguishing arrangements;
7	Plans of fire doors indicating their type, position, rating and control system;
8	Plans and particulars of the automatic sprinkler systems, including details and position of pumps;
9	Documentation for the alternative design and arrangements;
10	Plans of the helicopter facilities;
11	Plans of the special arrangements, when the vessel is a combination carrier;
12	Plans of the special arrangements for the carriage of dangerous goods;
13	Plans of the fire protection arrangements in vehicle, special category and ro-ro spaces.

2.4.1.1 Fire protection arrangements and appliances plans must indicate that all fire protection systems and appliances comply with Part 1 and 2 of the VFSR as appropriate.

2.4.1.2 The vessel owner or AR must revise any of the above listed plans to reflect alterations and modifications that are subject of the VFSR and submit them to Transport Canada Marine Safety and Security (TCMSS) for approval.

2.4.1.3 The vessel owner or AR must submit the fire control plan and the contents will be verified during the first inspection.

2.4.2 The following Plans and Data to be submitted for approval applies to Part 3 vessels as specified in the application of the VFSR.

Item	Required Information
1	Plans of the structural fire protection arrangements, including details of construction materials, insulation and finishes;
2	Plans of the ventilation systems including details of the materials of construction, position and type of dampers, sizes of inlet and exhaust ducts and capacity of any mechanical blower;
3	Plans of the water firefighting systems including fire mains, hydrants, hoses, nozzles and details of fire pumps and their positions;
4	Plans of the automatic fire detection and alarm systems, including details of their operation, maintenance and testing procedures, types and locations of smoke and heat detectors, and, if fitted, the public address system;
5	Plans and details of the fixed fire extinguishing system, including details of the type and quantity of extinguishing medium and the volume of the space to be protected;
6	Plans of the portable firefighting equipment arrangement, including details of the quantity, type and locations of fire extinguishers, and other firefighting appliances.

2.4.2.1 Fire protection arrangements and appliance plans must indicate that all fire protection systems and appliances comply.

2.4.2.2 The vessel owner or AR must revise any of the above listed plans to reflect alterations and modifications and submit for approval.

2.4.2.3 The vessel owner or AR must submit the fire control plan and the contents will be verified during the initial inspection.

2.5 Life Saving Equipment Plans and Technical Documents

2.5.1 Requirements for the life saving equipment plan submission for approval refer to the *Life Saving Equipment Regulations* (LSER)

2.6 Additional Plans and Technical Documents Required

2.6.1 The below details and list of plans and technical documents for submission are specifically required for the following **Small Passenger Vessels** in addition to the above listed plans and details but do not apply to ferry vessels or dynamically supported craft.

2.6.2 Application of section 2.6 applies as follows;

2.6.2.1 New small passenger vessels that are used in the transport of one or more passengers, are restricted to voyages not more exposed than Near coastal voyage, Class 2 or Inland Voyage, and are not more than 24.0 m in length that:

2.6.2.1.1 Exceed 15 GT but are not more than 150 GT, and carry not more than 100 unberthed passengers or 25 berthed passengers, or

2.6.2.1.2 Do not exceed 15 GT, and carry more than 12 passengers but not more than 100 unberthed passengers or 25 berthed passengers

2.6.3 Submission and Approval of Plans, Data and Technical Documents

2.6.3.1 Subject to subsection 2.6.3.2, the owner or AR, shall submit electronically the plans and data as set out in 2.6.3.4.

2.6.3.2 Plans of the following are not required to be submitted;

2.6.3.2.1 Heating boilers having a pressure not over 103 kPa;

2.6.3.2.2 Diesel engines not exceeding 112 kW brake power, continuous rating, unless of unusual design;

2.6.3.2.3 Gearing for main engines and electric propulsion motors not over 224 kW brake power, continuous rating; or

2.6.3.2.4 Parts that are found by an inspector to agree with plans already accepted.

2.6.3.3 Notwithstanding subsection 2.6.3.2 the Regional Technical Services Manager may require that plans and data of parts not listed in 2.6.3.4 be submitted.

2.6.3.4 S**ubmission of Plans, Data and Technical Documents, the following** shall be submitted

2.6.3.4.1 Hulls

Item	Required Information
1	General arrangement
2	Construction sections including watertight bulkheads
3	Profile and deck plan
4	Structural fire protection arrangements
5	Arrangement, type and size of anchors and cables
6	Subdivision calculations

2.6.3.4.2 Stability and Associated Seaworthiness

Item	Required Information
1	Draft mark locations
2	Lines plan (where required)
3	Hydrostatic curves

4	Cross curves of stability
5	Curves of righting levers for each of the applicable conditions specified in Part 6, Subsection 6.1.6 of TP 11717
6	A capacity plan indicating the capacities and centres of gravity of all tanks and other storage spaces.
7	Tank sounding tables (including free surface effects)

2.6.3.4.3 Machinery-Propulsion, Steering and Ship Service Engine

Item	Required Information
Engine Data	
1	Number of engines and whether propulsion or ship service
2	Type of fuel
3	Manufacturer's name, model, serial number and year of build, and Ship Safety registration or approval certificate number, if in excess of 112 kW
4	Maximum continuous brake power and corresponding revolutions per minute
5	Type of propulsion control
Gearing Data	
1	Number of gearing sets
2	Type of gearing (reverse-reduction) and whether integral with engine
3	Manufacturer's name, model, serial number and year of build, and Ship Safety registration or approval certificate number, if in excess of 225 kW
4	Maximum continuous input torque, the corresponding revolutions per minute and reduction ratio

Item	Required Information
Propulsion Shafts, Bearings and Glands Data	
1	Diameter and material of shafts
2	Details of screw shaft liners
3	Number and position of intermediate shaft bearings
4	Type of stern glands and bearings
5	Details of coupling devices
Propeller Data	
1	Number of propellers
2	Principal dimensions, material and number of blades
3	Type of shaft attachments (e.g. keyed taper)
Steering Systems Data	
1	Number of rudders and main steering gears
2	Diameter of rudder stocks
3	Type of steering gear
4	Manufacturer's name, model, serial number and year of build
5	Maximum designed torque, angle of rudder movement and timing
6	Type of steering control
7	Auxiliary steering system data
8	Emergency steering arrangements where required
Engine Room Data	
1	Machinery arrangement plan
2	Plans referred to in Appendix 3 of this standard for engines in excess of 112 kW, if not previously registered or approved

Item	Required Information
3	Plans referred to in appendix 3 of this standard for gearing in excess of 225 kW, if not previously registered or approved

2.6.3.4.4 Machinery - Ship Service

Item	Required Information
Steam and Hot Water Heating Systems	
1	Manufacturer's documentation certifying the boiler was constructed in accordance with the American Society of Mechanical Engineers Codes, except for steam boilers having a working pressure in excess of 103 kPa in which case boiler design drawings and data shall be submitted in accordance with the Appendix 3 of this standard.
2	Data and plans in accordance with Appendix 3 of this standard indicating materials, sizes and working pressures and temperatures of systems, including safety and reducing valves
Compressed Air Systems	
1	Manufacturer's documentation for each air receiver certifying that it was constructed in accordance with rules or codes or Canadian Standards Association or the American Society of Mechanical Engineers Codes.
2	Data and plans in accordance with Appendix 3 of this standard indicating principal dimensions including shell and head thickness of each air receiver, openings and strength compensation, the working pressure, the type and size of pressure relieving devices.
3	Data and plans in accordance with Appendix 3 of this standard indicating materials, sizes, and working pressures of systems, including safety and reducing valves.
Fresh and Sea Water Systems	
1	Data for non-structural tanks except where the pressure head will exceed 2 m from the top of the tank or where the capacity will exceed 800 litres, in which case design drawings and data shall be submitted.
2	Data and plans in accordance with Appendix 3 of this standard indicating piping and flexible hose materials, sizes and types of connections.
Liquid Fuel Systems	

Item	Required Information
1	Data for non-structural tanks except where the pressure head will exceed 2 m from the top of the tank or where the capacity will exceed 800 litres, in which case design drawings and data shall be submitted.
2	Data indicating type of fuel to be carried.
3	Data and plans in accordance with Appendix 3 of this standard indicating piping and flexible hose materials, sizes and types of connections.
4	Data indicating types and location of liquid level checking arrangements.
5	Data indicating number and storage location of small portable fuel containers.
Lubricating Oil and Hydraulic Power Oil Systems	
1	Data for non-structural tanks except where the pressure head will exceed 2 m from the top of the tank or where the capacity will exceed 800 litres, in which case design drawings and data shall be submitted.
2	Data for non-structural tanks exceeding 50 litres capacity, data indicating type of oil that will be carried.
3	Data and plans in accordance with Appendix 3 of this standard indicating piping and hose materials, sizes and types of connections.
4	Data indicating characteristics of hydraulic power oil fluid, including its flash point.
Ventilation Air Systems	
1	Data indicating location and sizes of inlet and exhaust ducts and capacity of any mechanical blower.
Exhaust Gas Systems	
1	Data indicating machines and appliances having exhaust gas piping.
2	Data indicating location and details of exhaust gas outlets.
Bilge Pumping Systems	
1	Data and plans in accordance with Appendix 3 of this standard detailing the: a. number and power source of pumps, (e.g. propulsion engine, electric motor or manual), b. location, capacity of power pumps and inlet and outlet diameters of pumps,

Item	Required Information
	c. materials, connection types and diameters of main suction and discharge pipes and components, and d. locations and diameters of branch bilge suctions and their number in all watertight compartments.

2.6.3.4.5 Electrical Systems

Item	Required Information
Electrical Systems Less than 55 Volts	
1	Single line diagram indicating: a. size and type of cable for each circuit, b. rating of each generator or alternator, c. capacity of batteries, and d. rating of each protective device.
2	Fire Detection System block diagram and bill of material
3	Essential Alarm System block diagram
4	Load Analysis
Electrical Systems of 55 Volts or Over	
1	Plans and data in accordance with Section 2.3 of Appendix 1 of this standard

2.6.3.4.6 Fire Protection Equipment

Item	Required Information
1	Fire protection arrangements and appliances plans shall indicate: a. that all fire protection systems and appliances comply with Part 20 and the Electrical Standard Section 2.3 of Appendix 1 of this standard, as applicable, b. details of fixed detection systems including their operation, maintenance and testing procedures, c. details of fixed fire extinguishing systems including the quantity and type of extinguishing medium and the volume of the space to be protected, d. number and capacities of fire pumps together with size and length of hose, and e. number, types, capacities and locations of portable fire extinguishers.

2.6.3.4.7 Life Saving Equipment

Item	Required Information
1	The life saving arrangement plan shall show: a. the stowage location, type and capacity of emergency boats, life rafts or platforms, if applicable, b. the location and type of launching devices, if applicable, c. other life saving appliances, and d. the location and size of passenger muster station and embarkation areas.

2.6.3.4.8 Navigation Lights

Item	Required Information
1	Arrangement of navigation lights

3. Submission of Plans and Technical Documents for Large and Small Fishing Vessels

3.1 Submission of Plans and Technical Documents for Small Fishing Vessel that are more than 15 GT but not more than 150 GT and not more than 24.4 Meters in Length

3.1.1 Subject to Section 3.1.4, before commencement of construction of a small fishing vessel, the AR shall submit plans and technical data in electronic format.

3.1.2 The plans and technical data shall include the scantlings, information and data in section 3.1.5 concerning the fishing vessel's propelling machinery, boilers and air receivers, bilge pumps and piping, fire pumps and piping, fuel systems including ventilating arrangements, steering gear, hull, life saving equipment, firefighting equipment, navigation and communication equipment and electrical system.

3.1.3 If a small fishing vessel is to undergo a major modification as defined in the *Fishing Vessel Safety Regulations* (FVSR) sub-section 3.48(3), the AR shall submit plans and technical data related to the planned modification to a TCC.

3.1.4 Plan and Technical Document Approval

3.1.4.1 Under Section 3.1 paragraph 3.1.2 & 3.1.3, any plans and technical data that are submitted to a TCC, an inspector shall approve them if:

3.1.4.1.1 The plans and technical data conform with the requirements of the FVSR sections 9 to 44.1, where those sections apply; and

3.1.4.1.2 If the vessel is constructed in accordance with those plans and technical data, the vessel will be suitable for the voyages for which it is intended.

3.1.4.1.3 When plans have been approved by a licensed engineer they may be as per Tier 1 Policy - Plan approval - Acceptance of Plans Stamped by a Canadian Licensed Engineer.

3.1.5 Plans, Drawings, Data and Technical Documents for Submission

3.1.5.1 General Particulars

Item	Required Information
1	Name of vessel and official number
2	Year built
3	Hull Material
4	Name and address of Authorized Representative
5	Name and address of owner
6	Type of vessel (open or closed construction)
7	Type of fishing for which vessel is designed
8	Intended voyage and area of operation
9	Length
10	Breadth (extreme over planking)
11	Depth (top of beam at side amidships to rabbet line on keel)

3.1.5.2 Propulsion Machinery

Item	Required Information
1	Number of engines
2	Manufacturer’s name and engine model number
3	Fuel - Diesel, gasoline or other
4	Rated brake output at continuous rating in kilowatts
5	Engine revolutions per minute at continuous rating
6	Reduction gear manufacturer
7	Reduction gear ratio

Item	Required Information
8	Diameter and material of intermediate shaft
9	Diameter and material of tail shaft
10	Particulars of tail shaft liner
11	Propeller diameter
12	Propeller pitch
13	Type of stern bearing
14	Details of exhaust piping from the engines and heating units, showing deck and other penetrations
15	Stern tube (if applicable)

3.1.5.3 Pressure Vessels

Item	Required Information
1	Data of pressure vessels such as air receivers or boilers including third party certification and installation plans (e.g. safety devices, piping, etc.)

3.1.5.4 Bilge Pumps and Piping

Item	Required Information
1	Number, capacity and driving method of bilge pumps driven by: a. Main engine b. Auxiliary engine c. Hand driven
2	Number of suctions in: a. Machinery spaces b. Hold spaces c. Crew and other spaces d. Internal diameter of bilge piping

3.1.5.5 Fire Pumps and Piping

Item	Required Information

1	Number and capacities of fire pumps
2	Internal diameter of hydrant piping
3	Number and location of outlets

3.1.5.6 Fuel Systems including emergency shut-offs and Ventilating Arrangements:

Item	Required Information
1	Number of fuel tanks including any portable reserve tanks, their capacity and type of fuel, material, construction details and location in the vessel
2	Ventilation details of every space, including bilges, in which gasoline vapor may collect

3.1.5.7 Steering Gear

Item	Required Information
1	Type - Hydraulic, electric or hand steering
2	Diameter of chain, wire or rod if hand steering
3	Diameter of rudder stock
4	Area of rudder
5	Average distance between trailing edge of rudder and center line of rudder stock
6	Emergency steering systems

3.1.5.8 General Layout and Outfitting:

Item	Required Information
1	Number and location of watertight bulkheads
2	Length and height of deck-houses
3	Location of engine room
4	Number and sizes of engine room entrance and emergency exits
5	Location of crew accommodation and total number of crew
6	Height of bulwarks

Item	Required Information
7	Number and area of freeing ports
8	Height of sills of doors giving access to main hull
9	Hatches, number and size
10	Hatch coamings, height and thickness
11	Hatch fore-and-after, vertical and horizontal dimensions
12	Hatch covers, type and thickness
13	Doors and windows type and construction
14	Anchoring arrangement

3.1.5.9 Scantling Details

Item	Required Information
1	Scantling details should be submitted using profile, deck, and midship section or other appropriate plans or data (including reference to the design standard used for construction and the construction materials)
2	Structural scantlings: a. Watertight bulkheads b. Keel c. Plating d. Frames, beams, floors, stringers, brackets, etc. e. Frame spacing f. Structural Tank Bulkheads g. Engine and machinery seatings (foundation) h. Fastening or welding NOTE: The above information and scantlings should preferably be submitted in the form of plans, however, it may also be submitted as a list, or as a combination of both methods.

3.1.5.10 Electrical System

Item	Required Information

1	The drawings, data and plans as required by 3.1.5

3.1.5.10.1 Electrical Plans and technical documents for Submission for Small Fishing Vessel that are more than 15 GT but not more than 150 GT and not more than 24.4 Metres in Length

3.1.5.10.2 For new construction, the following drawings and data are to be submitted.

Item	Required Information
1	Load Analysis
2	Short-circuit Analysis
3	Co-ordination Study of Main and Emergency Distribution Systems
4	Elementary Single Line Diagram of Main and Emergency Distribution
5	Elementary Single Line Diagram of Propulsion System, Wiring Diagram of Propulsion Control Circuits
6	Switchboard (to include general arrangement, wiring diagram, nameplates and bill of material)
7	Starter Drawings as listed in section 3.1.5.11
8	Lighting Circuits Wiring Deck Plan or Book of Diagrams (including symbol list)
9	Power Circuits Wiring Deck Plan or Book of Diagrams (including symbol list) for passenger ships only
10	Cable Routing Arrangements or Wiring Deck Plans for vital and emergency circuits
11	Essential Interior Communication Systems-Block Diagrams
12	Essential Alarm Systems-Block Diagrams
13	Fire Detection System-Wiring Deck Plan and Block Diagram and Bill of Material
14	Automation or Remote-Control Systems and Boiler Controls (including description of operation)
15	Plan of Hazardous Zone(s) including type and classification of all electrical equipment located there-in
16	The emergency diesel generator automatic start wiring diagram and description of operation for the automatic start circuitry

Item	Required Information
17	Machinery Arrangement of Emergency Generator Room
18	Programmable Logic Controllers (PLC) – details of the hardware configuration and graphic representation of the program, e.g. flow charts, statement list, function or block diagram.

3.1.5.11 Starter Drawings

3.1.5.11.1 As per Item 7 in section 3.1.5.10.2 the below items shall have starter drawings to be submitted.

Item	Require submission of Starter Drawing
1	Air compressors for main engines;
2	Scavenge blowers;
3	Bilge pumps;
4	Ballast pumps;
5	Fire and sprinkler pumps;
6	Circulating and cooling water pumps;
7	Condenser circulating pumps;
8	Condensate pumps;
9	Feed water pumps;
10	Fuel valve cooling pumps;
11	Lubricating oil pumps;
12	Oil fuel pumps;
13	Boiler fans for forced and induced draught;
14	Steering gear;
15	Windlasses;
16	Controllable Pitch Propeller (CPP) stand by servo oil pump motors;
17	Lighting;

Item	Require submission of Starter Drawing
18	Cargo oil pumps;
19	Machinery space ventilation;
20	Ventilation fans for hazardous areas;
21	Thruster motors (not to include bow thruster(s)); and
22	Communication equipment, in accordance with the applicable Regulations and/ or rules

3.2 Submission of Plans and Technical Documents for Large Fishing Vessel Greater than 150 GT or Greater than 24.4 Metres in Length

3.2.1 Subject to subsections 3.2.2and 3.2.3, before construction of any fishing vessel is commenced, the owner or the AR on behalf of the owner shall submit electronically for approval, as set out in 3.2.4.6 of this section, and if the construction of the vessel is commenced before approval is obtained, the owner shall make such alterations as are required in order to comply with the conditions of approval.

3.2.2 Plans and Technical Documents of the following are not required to be submitted:

3.2.2.1 Heating boilers having a pressure not over 103 kPa;

3.2.2.2 Diesel engines not exceeding 56 kW brake power, continuous rating, unless of unusual design;

3.2.2.3 Gearing for main engines and electric propulsion motors not over 224 kW brake power, continuous rating;

3.2.2.4 Gasoline engines unless of unusual design; or

3.2.2.5 Parts that are found by an inspector to agree with plans already approved.

3.2.3 Notwithstanding subsection 3.2.2, the Regional Technical Services manager may require that plans and data of parts not listed in 3.2.4 of this section shall be submitted.

3.2.4 The plans and data required to be submitted for approval in accordance with section 3.2 of this standard

3.2.4.1 Where a fishing vessel does not exceed 30.5 m in length,

3.2.4.1.1 The plans for the following equipment and parts of the vessel shall be submitted;

Item	Required Information
1	New air receivers
2	Boilers having a working pressure of 103 kPa or over
3	Diesel engines with brake power over 375 kW

Item	Required Information
4	Gearing for all engines with brake power over 375 kW
5	Lifeboats, life rafts and buoyant apparatus and provisions of section 2.5
6	Aluminum superstructures

3.2.4.1.2 The plans and technical documents for the following equipment, parts, and arrangements of the vessel shall be submitted.

Item	Required Information
1	New boiler mountings
2	Turbines with brake power over 375 kW
3	Reciprocating engines with brake power over 375 kW
4	General arrangement of vessel
5	Midship section
6	Longitudinal section and deck plans
7	Rudder
8	Electric circuits and protective devices,
9	Such other equipment and parts of the vessel as the Technical Services may consider necessary
10	Arrangements for the control of loaded fish nets as required by section 11 of LFVIR

3.2.4.2 Where a fishing vessel exceeds 30.5 m in length:

3.2.4.2.1 The plans and technical documents for the following equipment, parts and arrangements of the vessel shall be submitted.

Item	Required Information
1	New air receivers
2	Sprinkler and foam pressure tanks
3	Boilers, main, auxiliary and heating, super heaters and economizers
4	Boiler mountings

Item	Required Information
5	Turbines with brake power over 375 kW
6	Diesel engines with brake power over 375 kW
7	Reciprocating engines with brake power over 375 kW
8	Gearing for all engines with brake power over 375 kW
9	General arrangement of vessel
10	Midship section
11	Longitudinal section and deck plans
12	Subdivision details and data if required by owner
13	Arrangements for the control of loaded fish nets as required by section 11 of LFVIR
14	Sprinkler system (if required by owner)
15	Fire-resistant bulkheads (if required by owner)
16	Lifeboats, life rafts and buoyant apparatus and provisions of section 2.5
17	Aluminum superstructures

3.2.4.2.2 The plans and technical documents for the following equipment and parts of the vessel shall be submitted.

Item	Required Information
1	General arrangement of vessel and machinery,
2	Stern tube, stern bush or bearing
3	Shafting, including thrust, propeller, intermediate shafting and couplings
4	Diagram arrangement of feed water, oil fuel and cooling systems
5	Compressed air systems
6	Existing boiler mountings
7	Existing air receivers

Item	Required Information
8	Arrangement of steam pipes
9	Propane gas installations
10	Bilge and ballast pumping and piping
11	Fuel oil tanks separate from hull
12	Main and auxiliary steering arrangements with details of quadrant and tiller
13	Fixed fire extinguishing equipment as outlined in section 6 of the *Fire Detection and Extinguishing Equipment Regulations*, as they read immediately before being repealed. Note: Section 6 of the *Fire Detection and Extinguishing Equipment Regulations* specify the following; Special Requirements: 6 (1) Wooden steamships, steel steamships having a considerable amount of woodwork in their superstructure, and steamships that carry cargo of such a nature as to involve extra fire risk shall, in addition to any fire extinguishing equipment required by these Regulations, carry such equipment as the Board may prescribe. (2) In addition to the requirements of these Regulations, vessels making international voyages shall comply with the appropriate requirements of the International Convention for the Safety of Life at Sea, 1960.
14	Rudder
15	Stem, sternpost or sternframe
16	Pillars and girders
17	Shell expansion
18	Watertight and Oil-tight bulkheads
19	Engine and boiler seatings (foundation)
20	Shaft brackets and bossing
21	Schemes of riveting and welding
22	List of fastenings in the case of wooden vessels
23	Sea chests
24	Boat arrangement

Item	Required Information
25	Natural and mechanical ventilation
26	Usual cargo gear
27	Fuel exhaust, Fresh and salt water systems
28	Scuppers and dischargers
29	Profile & Deck construction
30	Midship
31	Frames & Bulkhead
32	Superstructure construction

3.2.4.3 In the case of reciprocating engines, the following data shall be supplied with the plans:

Item	Required Information
1	Designed indicated power in kilowatts
2	Revolutions per minute
3	Number of cylinders, diameter and stroke of pistons
4	Diameter and weight of flywheel (if fitted)
5	Diameter of propeller
6	Physical properties of principal forgings and castings

3.2.4.4 In the case of diesel engines, the following data shall be supplied with the plans:

Item	Required Information
1	Designed brake power in kilowatts
2	Revolutions per minute
3	Two or four cycle
4	Maximum and mean indicated pressure
5	Balance weights (weight and number) and radius of gyration

Item	Required Information
6	Number of cylinders, diameter and stroke of pistons
7	Diameter and weight of flywheel
8	Diameter of propeller
9	Physical properties of principal forgings and castings

3.2.4.5 In the case of gears with brake power in excess of 225 kW, the following data shall be supplied with the plans:

Item	Required Information
1	Designed shaft power in kilowatts
2	Revolutions of each pinion and gear
3	Number of teeth, pitch and pitch circle diameter in each gear and pinion
4	Length and thickness of teeth
5	Helix and pressure angles
6	Physical properties of principal forgings and castings.

3.2.4.6 Electrical Plans and technical documents for Large fishing Vessel Greater than 150 GT or Greater than 24.4 Metres in Length

3.2.4.6.1 Electrical Drawings, Data and Technical Documents for Submission

3.2.4.6.1.1 Before the construction, reconstruction or modification of a fishing vessel begins, the owner of the fishing vessel shall submit, the drawings, data and plans referred to in this section.

3.2.4.6.1.2 For new construction, the following drawings and data are to be

Item	Required Information
1	Load Analysis
2	Short-circuit Analysis
3	Co-ordination Study of Main and Emergency Distribution Systems
4	Elementary Single Line Diagram of Main and Emergency Distribution

Item	Required Information
5	Elementary Single Line Diagram of Propulsion System, Wiring Diagram of Propulsion Control Circuits
6	Switchboard (to include general arrangement, wiring diagram, nameplates and bill of material)
7	Starter Drawings as listed in section 3.2.4.7
8	Lighting Circuits Wiring Deck Plan or Book of Diagrams (including symbol list)
9	Power Circuits Wiring Deck Plan or Book of Diagrams (including symbol list) for passenger ships only
10	Cable Routing Arrangements or Wiring Deck Plans for vital and emergency circuits
11	Essential Interior Communication Systems-Block Diagrams
12	Essential Alarm Systems-Block Diagrams
13	Fire Detection System-Wiring Deck Plan and Block Diagram and Bill of Material
14	Automation or Remote-Control Systems and Boiler Controls (including description of operation)
15	Plan of Hazardous Zone(s) including type and classification of all electrical equipment located there-in
16	the emergency diesel generator automatic start wiring diagram and description of operation for the automatic start circuitry
17	Machinery Arrangement of Emergency Generator Room
18	Programmable Logic Controllers – details of the hardware configuration and graphic representation of the program, e.g. flow charts, statement list, function or block diagram.

3.2.4.7 Starter Drawings

3.2.4.7.1 As per Item 7 in section 3.2.4.6.1.2 the below items shall have starter drawings to be submitted.

Item	Require submission of Starter Drawing
1	Air compressors for main engines;

Item	Require submission of Starter Drawing
2	Scavenge blowers;
3	Bilge pumps;
4	Ballast pumps;
5	Fire and sprinkler pumps;
6	Circulating and cooling water pumps;
7	Condenser circulating pumps;
8	Condensate pumps;
9	Feed water pumps;
10	Fuel valve cooling pumps;
11	Lubricating oil pumps;
12	Oil fuel pumps;
13	Boiler fans for forced and induced draught;
14	Steering gear;
15	Windlasses;
16	Controllable Pitch Propeller (CPP) stand by servo oil pump motors;
17	Lighting;
18	Cargo oil pumps;
19	Machinery space ventilation;
20	Ventilation fans for hazardous areas;
21	Thruster motors (not to include bow thruster(s)); and
22	Communication equipment, in accordance with the applicable Regulations and/ or rules

APPENDIX 2 - Inspection of the Outside of the Vessel's Bottom

1. Intervals Tables - Inspection of the Outside of the Vessel's Bottom

1.1 Table (I) - Passenger Vessels (Excluding Fishing Vessels)

Class of Voyages*				GT	No. of PAX	Annual Period in Fresh Water Consecutive Months	Dry-Dock Cycle (Years)	UWILD[26] subject to TC Approval Apply/Not Apply
Unlimited	NC1 & NC2	Sheltered W. Inland Voyage	All Classes					
√				>15	>=1		2 in 5**	Apply
	√			>15	>=1	<3	2 in 5	Apply
	√			>15	>=1	>=3	5	Not apply
		√		>15	>=1	<3	5	Not apply
		√		>15	>=1	>=3	5	Not apply
			√	<=15	>12	<3	5	Not apply
			√	<=15	>12	>=3	5	Not apply

*** *Home-Trade, Inland and Minor Waters Voyages Regulations* apply as long as it remains in force.**

**** Two dry-dock cycles in any five-year period.**

[26] Underwater Inspection In Lieu of Dry-dock (UWILD)

1.2 Table (II) - Non-Passenger Vessels (Excluding Fishing Vessels)

Class of Voyage*				GT / (Length in Meters)	No. of PAX	Annual Period in Fresh Water	Dry-Dock Cycle (Years)	UWILD subject to TC Approval
Unlimited	NC1 & NC2	Sheltered W. Inland Voyage	All Classes			Consecutive Months		Apply/Not Apply
√				>150 (>24m)			2 in 5	Apply
	√			>150 (>24m)		<3	2 in 5	Apply
	√			>150 (>24m)		>=3	5	Not apply
		√		>150 (>24m)		<3	5	Not apply
		√		>150 (>24m)		>=3	5	Not apply
			√	>15<=150			4	Not apply

*** *Home-Trade, Inland and Minor Waters Voyages Regulations* apply as long as it remains in force.**

1.3 Table (III) -Non-self-propelled and Towed Dredger vessels carrying a crew or a passenger(s) and Making Voyages More Than 15 Nautical Miles from Land (Excluding Fishing Vessels)

Class of Voyages*				GT	No. of PAX	Annual Period in Fresh Water	Dry-Dock Cycle (Years)	UWILD subject to TC Approval
Unlimited	NC1 & NC2	Sheltered W. Inland Voyage	All Classes			Consecutive Months		Apply/Not Apply
√				>150			2 in 5	Apply
√	√			>15<=150			4	Not apply
	√			>150			2 in 5	Apply
	√			>150		>=3	5	Not apply
		√		>15**			5	Not apply
		√		>15<=150***			4	Not apply

*** *Home-Trade, Inland and Minor Waters Voyages Regulations* apply as long as it remains in force.**

**** Only for non-self-propelled Carrying a Crew and Making Voyages More Than 15 Nautical Miles from Land**

***** Only for Towed Dredgers Carrying a Crew and Making Voyages More Than 15 Nautical Miles from Land**

1.4 Requirements

1.4.1 Subject to subsections 1.4.3 to 1.4.9, the interval between the Inspection of the outside of the vessels bottom and appendages shall,

1.4.1.1 In the case of a passenger vessel set out in Table I

1.4.1.2 In the case of a vessel that is not carrying passengers set out in Table II

1.4.2 For the purpose of Tables I, II and III, the St. Lawrence River, west of the eastern end of the Ile d'Orleans, is deemed to be fresh water.

1.4.3 The interval between underwater inspections of a passenger vessel that operates in heavy ice conditions shall be;

1.4.3.1 Two years for such a vessel making a sheltered water voyage on inland waters; or

1.4.3.2 Once a year for such a vessel making voyages other than voyages described in paragraph 1.4.3.1, the Authorized Representative may elect for every alternate inspection being conducted afloat provided the general requirements/conditions outlined in section 1.6 of this appendix are fully met.

1.4.4 The interval between underwater inspections of the hull and appendages of an non-passenger vessel that is over 150 GT, constructed of steel and;

1.4.4.1 Certificated for inland voyages, where the safety inspection certificate is endorsed for extended voyages within the Gulf of St. Lawrence,[27] shall be 5 years where such vessel is in fresh water for a period of at least three consecutive months annually, or

1.4.4.2 Certificated for NC1 and NC2, that are voyages between Canadian and United States ports within the limits of inland waters and ports within the Gulf of St. Lawrence outside the limits of inland waters shall be 5 years where such vessel is in fresh water for a period of at least three consecutive months annually.

1.4.5 Every steel fishing vessel:

1.4.5.1 Over 150 GT[28], if operating in salt water, shall be inspected in dry dock every two years.

1.4.5.2 Over 150 GT, if operating in fresh water, shall be inspected in dry dock every four years.

1.4.5.3 Not over 150 GT shall be inspected in dry dock every four years.

1.4.6 In the case of wooden vessels the interval between underwater inspections are as follows;

1.4.6.1 Every wooden fishing vessel over 150 GT, if operating in salt water, shall be inspected in dry dock every two years.

1.4.6.2 Every wooden fishing vessel over 150 GT, if operating in fresh water, shall be inspected in dry dock every four years.

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[27] Flagstatenet 05/2020 Safety Certification of vessels trading between Canadian and United State ports on the Great Lakes and the St. Lawrence River.

[28] 24.4M

1.4.6.3 Every wooden fishing vessel not over 150 GT[29], shall be inspected in dry dock every four years.

1.4.6.4 The interval between underwater inspections of the hull and appendages of a passenger vessel constructed of wood that is over 150 GT shall be inspected in dry dock every 2 years.

1.4.6.5 The interval between underwater inspections of the hull and appendages of a vessel other than a passenger and fishing, constructed of wood that is less than 150 GT, shall be inspected in dry dock every 4 years.

1.4.6.6 The interval between underwater inspections of the hull and appendages of a vessel constructed of wood that is greater than 150 GT and over 20 years old shall be inspected in dry dock 2 years.

1.4.7 In the case of a Safety Convention vessel carrying more than 12 passengers, the interval between underwater inspections shall not be more than one year.

1.4.8 In the case of a non-self-propelled vessel carrying crew or a passenger(s), making voyages more than 15 nautical miles from land the interval between underwater inspections of the hull and appendages set out in Table III, except that where such a vessel operates in heavy ice conditions the interval between underwater inspections shall be as described on section 1.4.3.1 & 1.4.3.2 of this appendix.

1.4.9 In the case of non-self-propelled vessel operated on a cable carrying a passenger(s), the interval between underwater inspections of the hull and appendages shall be 5 years, except that where such a vessel operates in heavy ice conditions the interval between underwater inspections shall be as described on section 1.4.3.1 & 1.4.3.2 of this appendix.

1.5 Acceptance of In-Water Survey in Lieu of Inspection of the Outside of the Vessel Bottom

1.5.1 Applies to all Canadian vessels excludes the following:

1.5.1.1 Ro-Ro passenger vessels engaged in unlimited voyages

1.5.1.2 Bulk Carriers and Oil Tankers more than 15 years of age and engaged in unlimited voyages

1.5.2 The IWS in lieu of dry-docking must be conducted in accordance with:

1.5.2.1 The guidelines issued by the International Maritime Organization (IMO) as detailed in MSC.1/Circ.1348

1.5.2.2 The Unified Requirements (UR) issued by the International Association of Classification Societies (IACS) as detailed in UR Z3 as amended from time to time

1.5.2.3 If the IWS reveals damage, deterioration or other conditions that require early attention or which can only be assessed reliably out of water, the attending MSI or Class

[29] 24.4M

Surveyor may require that the vessel be dry-docked in order that a fuller survey can be undertaken and the necessary work carried out.

1.6 General Requirements for In-Water Survey in lieu of Dry-Docking

1.6.1 The AR will take into consideration the following general criteria when considering undergo In-Water Survey (IWS) in lieu of Dry-Docking:

1.6.1.1 Hull material - should be steel or aluminum hulled vessel

1.6.1.2 Hull corrosion protection system (satisfactory condition of the hull coating or cathodic protection system)

1.6.1.3 The satisfactory hull condition based on the last underwater inspection conducted in dry-dock, considering any outstanding findings affecting the underwater hull.

1.6.2 The AR should confirm that the below measures been considered and supporting documents and information to be available to TCMSS upon request:

1.6.2.1 Procedures for carrying out the underwater survey including the name of the diving company approved by the RO where applicable.

1.6.2.2 Date and place of the IWS.

1.6.2.3 A description of the vessel’s hull corrosion protection system.

1.6.2.4 A written confirmation by the master of the vessel or the AR that, to the best of their knowledge, the vessel has not sustained any grounding or contact damage since the previous hull bottom inspection and that nothing unusual has been observed to suspect that any part of the vessel's bottom or protuberances has been otherwise damaged.

1.6.2.5 The vessel’s latest hull examination report in dry-dock. The report should indicate the following:

1.6.2.5.1 Confirming that the underwater hull condition is satisfactory

1.6.2.5.2 Confirming that the sea connections, sea chests, sea valves and box coolers are in satisfactory condition

1.6.2.5.3 Confirming that the anchoring equipment and anchor chain are in satisfactory condition

1.6.2.5.4 Confirming that the condition of internal examination of double bottom, ballast tanks, void spaces and all other spaces adjacent to the shell are satisfactory

1.6.2.5.5 The condition of the protective coating and;

1.6.2.5.6 For vessels more than 15 years of age other than oil tankers, bulk carriers, and passenger vessels:

1.6.2.5.6.1 The vessel’s latest hull examination report in dry-dock must include a complete set of thickness measurements that was taken during that dry-dock, indicating that the vessel was free from appreciable hull deterioration and all readings are satisfactory and within the maximum permissible diminution according to Classification Rules.

1.6.2.5.7 For Non-convention, oil tankers, bulk carriers, and passenger vessels more than 15 years of age:

1.6.2.5.7.1 The vessel's latest hull examination report in dry-dock must include a complete set of thickness measurements1 that was taken during that dry-dock, indicating that the vessel was free from appreciable hull deterioration and the wastage of the steel structure doesn't exceed 2/3rd of the maximum permissible diminution according to Classification Rules.

1.6.3 Failure to comply with the conditions specified above in 1.6.1 and 1.6.2. The Minister may take an enforcement action against the AR should documentation not be readily available upon request by an RO or TCMSS.

APPENDIX 3 - Machinery Schedules I to XV

1.1 General

1.1.1 Inspection and Periodicity

1.1.1.1 In lieu of the requirements stated in this schedule, on a vessel that is delegated to a Canadian RO and that held a valid Classification Certificate the machinery may be inspected in accordance with the requirements of the RO (aka Class Rules).

SCHEDULE I - Steam Boilers Having a Design Working Pressure Exceeding 350 kPa

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement of the installation of the steam boiler in the vessel showing means of support.
2	Design working pressure, temperature and evaporation rate.
3	Heating surface area of the steam boiler, and where fitted, of the superheater and economizer.
4	Materials, sizes and arrangement of parts under pressure, including superheaters, economizers and valves.
5	Details of welded seams, openings, connections, attachments and supports, including details of welding materials, methods and procedures.
6	Details of the heat treatment process and testing procedures.
7	Pressure setting, relieving capacity and venting arrangements of safety valves.
8	Arrangements and details of steam boiler feed-water controls, monitors and alarms, including emergency controls.
9	Materials, components, sizes and arrangements of fuel combustion systems, including fuel supply, combustion air supply, air preheaters, exhaust uptakes and combustion controls, monitors and alarms, including emergency controls.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, and of physical properties and mechanical test results obtained from material testing carried out in accordance with this standard.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds including non-destructive test examination and verification of the heat treatment process in accordance with rules or codes.
4	Verification of plate preparation and alignment prior to assembly and, on completion of all construction operations, confirmation of circularity of shells.
5	Identification from the component inspection certificates of components related to the safety of the boiler.
6	Inspection of components and their installation, including tubes and tube plates.
7	Inspection of the constructed steam boiler.
8	Witnessing of hydrostatic pressure tests in accordance with rules or codes.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition of the connection of the steam boiler to steam, feed-water, blowdown and surface blow systems.
3	Verification of correct adjustment and operational condition of fuel, combustion air supply and exhaust gas systems, including burners, air fans and air preheaters.
4	Verification of correct adjustment and operational condition of safety, control and monitoring devices.
5	Inspection of safety valve relieving capacity in respect of the maximum evaporation capacity of the steam boiler.
6	Witnessing of hydrostatic pressure tests at the assigned working pressure.

Item	Requirements
7	Verification of reliability and sufficiency under trials up to full power under normal working conditions for a suitable endurance period of not less than 2 hours, taking into consideration the size and complexity of the steam boiler.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Correct adjustment and operational condition of safety valves.
2	Correct adjustment and operational condition of water gauges and steam boiler valves.
3	Locations where fluid leakage, metal overheating or metal wastage may occur.
4	Correct adjustment and operational condition of emergency fuel shut-off valves.
5	Correct adjustment of controls and monitoring systems of feed-water and fuel and its combustion.
6	Operational condition of alarm systems, particularly where the boiler is designed for non-continuous local supervision.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
1	Internal steam and liquid spaces, as far as practicable, of the boiler, superheater and economizer, with all spaces cleaned and removable components removed and where, due to construction features, an adequate internal inspection cannot be carried out, a hydrostatic pressure test of 1.25 times the assigned working pressure of the boiler.
2	Access and inspection openings.
3	Boiler mountings, including safety valves and water-level gauges, following opening up and cleaning.
4	Float chambers and float mechanisms on feed-water regulators, following opening up and cleaning.

Item	Requirements
5	Pipes, actuators and other components, incorporated in self-regulating and monitoring systems, as far as practicable, without dismantling if the general condition of the component shows that it is suitable for further service.
6	Emergency fuel shut-off devices.
7	Combustion spaces following cleaning, excluding uptakes and air preheaters unless there is apparent damage, improper operation or deteriorated condition of the uptakes or air preheaters.
8	Seams, mountings, seatings, rolling stays, collision chocks and welded attachments, following the removal of insulation and sheathing to the extent considered necessary by the inspector on the basis of the general condition of the boiler.
9	Plate thickness testing or hydrostatic pressure testing or other non-destructive testing, if there is apparent damage, improper operation or deteriorated condition of the boiler.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	Combustion air fans and driving components, at intervals not exceeding 5 years and all other components, at intervals not exceeding 24 months.

SCHEDULE II - Low-Pressure Steam Boilers Having a Design Working Pressure Not Exceeding 350 kPa and Hot-Water Boilers Having a Design Working Pressure Not Exceeding 1100 kPa or a Design Temperature Not Exceeding 120°C

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement of the installation of the boiler in the vessel, showing means of support.
2	Design working pressure, temperature and evaporation rate for steam or flow rate for water.
3	Heating surface area of the boiler.

Item	Required Information
4	Materials, sizes and arrangements of parts under pressure, including valves.
5	Details of welded seams, openings, connections, attachments and supports, including details of welding materials, methods and procedures.
6	Pressure setting, relieving capacity and venting arrangement of safety valves.
7	Arrangements and details of boiler feed-water controls, monitors and alarms, including emergency controls.
8	Diagrammatic arrangements of fuel supply, combustion air supply, combustion controls, monitors and alarms, including emergency controls and a written description of the combustion controls.
9	Where a manufacturer of a boiler certifies that the boiler was constructed in accordance with rules or codes, information set out in items 2 to 7 within in this table is not required to be submitted where the boiler is a steam boiler if the design working pressure of the boiler does not exceed 103 kPa; and where the boiler is a hot-water boiler if the design working pressure of the boiler does not exceed 210 kPa and the temperature of the hot water in the boiler will not exceed 98°C.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, and of physical properties and mechanical test results obtained from material testing carried out in accordance with this standard.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds, including non-destructive test examination and verification of the heat treatment process in accordance with rules or codes.

Item	Requirements
4	Verification of plate preparation and alignment prior to assembly and, on completion of all construction operations, confirmation of circularity of shells of the low-pressure steam boiler or of the hot-water boiler.
5	Identification from the component inspection certificates of components related to the safety of the low-pressure boiler.
6	Inspection of components and their installation, including tubes and tube plates.
7	Inspection of the constructed low-pressure boiler.
8	Witnessing of a hydrostatic pressure test in accordance with rules or codes.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition of the connection of the boiler to associated systems.
3	Verification of correct adjustment and operational condition of safety, control and monitoring devices.
4	Witnessing of hydrostatic pressure tests at the assigned working pressure.
5	Verification of reliability and sufficiency under trials up to full power under normal working conditions for a suitable endurance period of not less than 2 hours, taking into consideration the size and complexity of the boiler.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Correct adjustment and operational condition of safety valves.
2	Operational condition of water gauges and boiler valves.
3	Locations where fluid leakage, metal overheating or metal wastage may occur.
4	Correct adjustment and operational condition of emergency fuel shut-off valves.

Item	Requirements
5	Correct adjustment of controls and monitoring systems of feed-water and fuel and its combustion.
6	Operational condition of alarm systems, particularly where the boiler is designed for non-continuous local supervision.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
1	Internal steam and liquid spaces, as far as practicable, with all spaces cleaned and removable components removed and where, due to construction features, an adequate internal inspection cannot be carried out, a hydrostatic pressure test of 1.25 times the assigned working pressure of the boiler.
2	Access and inspection openings.
3	Boiler mountings, including safety valves and water-level gauges, following opening up and cleaning.
4	Float chambers and float mechanisms on feed-water regulators, following opening up and cleaning.
5	Pipes, actuators and other components, incorporated in self-regulating and monitoring systems, as far as practicable, without dismantling, where the general condition of the pipes, actuators and other components is adequate for further use.
6	Emergency fuel shut-off devices.
7	Combustion spaces following cleaning, excluding uptakes unless there is apparent damage, improper operation or deteriorated condition of the uptakes.
8	Seams, mountings, seatings and welded attachments, following the removal of insulation and sheathing to the extent considered necessary by the inspector on the basis of the general condition of the boiler.
9	Plate thickness testing or hydrostatic pressure testing or other non-destructive testing, if there is apparent damage, improper operation or deteriorated condition of the boiler.
10	Except where, on the basis of the periodic general inspection, there is apparent damage, improper operation or deteriorated condition of components, items 1 to 9 do not apply to

Item	Requirements
	(a) a steam boiler, the design working pressure of which does not exceed 103 kPa; and (b) a hot-water boiler, the design working pressure of which does not exceed 210 kPa pressure and temperature of the hot water does not exceed 98°C.

1.4.2.2 Subdivision II Intervals

Item	**Requirements**
1	At intervals not exceeding 24 months

Schedule III – Unfired Pressure Vessels

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement of the installation of the unfired pressure vessel in the vessel, showing means of support.
2	Design working pressure, temperature, volume and nature of fluid under pressure.
3	Materials, sizes and arrangement of parts under pressure, including valves.
4	Details of welded seams, openings, connections, attachments and supports, including details of welding materials, methods and procedures.
5	Details of the heat treatment process and testing procedures.
6	Diagrammatic arrangement and a written description of the pressure source and heat exchange, as applicable, including cut-offs and alarms.
7	Pressure setting, relieving capacity and venting arrangements of safety or liquid relief valves.
8	Details of fusible plugs or similar devices required to protect vessels from over-pressure caused by fire or other heat hazards.
9	Where a manufacturer of an unfired pressure vessel or a hydro-pneumatic tank certifies that the unfired pressure vessel or hydro-pneumatic tank was

Item	Required Information
	constructed in accordance with rules or codes, information set out in items 2 to 8 is not required to be submitted for a. the unfired pressure vessel if it contains only non-flammable liquid with a design working pressure not exceeding 700 kPa and a temperature not exceeding 98°C; b. the hydro-pneumatic tank if the tank has a design working pressure not exceeding 700 kPa and a temperature not exceeding 98°C, except sprinkler and foam tanks for use in fire-fighting; c. the unfired pressure vessel has a design working pressure not exceeding 103 kPa; d. the unfired pressure vessel has a volume under pressure not exceeding 150 L and a design working pressure not exceeding 700 kPa; e. the unfired pressure vessel has an internal volume not exceeding 45 L that has no limit on pressure; f. the unfired pressure vessel has an internal diameter not exceeding 150 mm that has no limit on pressure; or g. the unfired pressure vessel is a component in a refrigerating gas system in which the compressor does not absorb power in excess of 10 kW.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, and of physical properties and mechanical test results obtained from material testing carried out in accordance with this standard.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds including non-destructive test examination and verification of the heat treatment process in accordance with rules or codes.
4	Verification of plate preparation and alignment prior to assembly and, on completion of all construction operations, confirmation of circularity of shells.

Item	Requirements
5	Identification from component inspection certificates of components related to the safety of the unfired pressure vessel.
6	Inspection of components and their installation, including tubes and tube plates.
7	Inspection of the constructed unfired pressure vessel.
8	Witnessing of hydrostatic pressure tests in accordance with rules or codes.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition of the connection of the unfired pressure vessel to associated systems.
3	Verification of correct adjustment and operational condition of safety, control and monitoring devices.
4	Verification of reliability and sufficiency under trials up to the assigned working pressure under normal working conditions for a suitable endurance period, taking into consideration the size and complexity of the unfired pressure vessel and its pressure source.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Correct adjustment and operational condition of safety devices.
2	Operational condition of liquid gauges and attached valves.
3	Locations where fluid leakage, metal wastage or metal deformation may occur.
4	Correct adjustment of controls and monitoring systems.
5	Operational condition of alarm systems, particularly where the unfired pressure vessel is designed for non-continuous local supervision.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
1	Internal fluid spaces as far as practicable with all spaces clean and removable components removed and where, due to construction features, an adequate internal inspection cannot be carried out, a hydrostatic pressure test of 1.25 times the assigned working pressure of the spaces.
2	Access and inspection openings and fusible plugs where fitted.
3	Pressure-vessel mountings, including safety valves and liquid-level gauges, without opening up and cleaning unless there is apparent damage, improper operation or deteriorated condition of those components.
4	Float chambers and float mechanisms on liquid-level regulators, following opening up and cleaning.
5	Pipes, actuators and other components, incorporated in self-regulating and monitoring systems, as far as is practicable, without dismantling where their general condition shows that they are suitable for further service.
6	Seams, mountings, seatings and welded attachments, following the removal of insulation and sheathing, to the extent considered necessary by the inspector, on the basis of the general condition of the unfired pressure vessel.
7	Except where, on the basis of the periodic general inspection, there is apparent damage, improper operation or deteriorated condition of components, items 1 to 6 in this table do not apply where a. the assigned working pressure does not exceed 103 kPa; b. the internal diameter does not exceed 150 mm; c. the volume or part thereof above the normal working level of a liquid does not exceed i. 45 L, or ii. 150 L when the assigned working pressure does not exceed 700 kPa; or d. the unfired pressure vessel is a component in a refrigerating gas system in which the gas compressor does not absorb power in excess of 10 kW.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	Steam-heated steam generators, at intervals not exceeding 2 years.

Item	Requirements
2	Water evaporators and steam condensers, at intervals not exceeding 5 years.
3	Unfired pressure vessels containing air or air and water under pressure, at intervals not exceeding 5 years.
4	Unfired pressure vessels containing non-corrosive liquid or non-corrosive liquid and gas under pressure, at intervals not exceeding 20 years.
5	Liquid tubular heat exchangers with one fluid side opened up, at intervals not exceeding 5 years, and without further dismantling unless dismantling is considered necessary by the inspector on the basis of the general condition of the heat exchangers.

SCHEDULE IV - Reciprocating Engines

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

1.2.1 Division I Internal Combustion Oil Engines

Item	Required Information
1	General arrangement of the installation of the engine in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the engine, including crankcase doors and means of engine support.
3	Specifications indicating maximum continuous brake power and corresponding revolutions per minute, number of strokes per cycle, number and firing order of cylinders, bore and stroke dimensions, maximum and mean indicated pressures, full details of balance weights, full details of flywheel and physical properties of the principal parts.
4	Details of pressure charging, scavenging and exhaust arrangements including mechanisms, piping and pipe connections, type and amount of insulation and method of securing to allow for thermal expansion and vibration.
5	Details of all cylinders, cylinder covers, pistons, piston rods, connecting rods and bearings and of the crankshaft and bedplate.
6	Details of the fuel injection system.

Item	Required Information
7	Details of lubricating-oil, cooling-water and other attached pumping systems.
8	Details of starting arrangements.
9	Details of controls including reversing arrangements.
10	Details of speed-regulating governors and other safety devices.
11	Details of temperature-monitoring devices.
12	Details of crankcase venting, crankcase explosion relief valves and other protection devices.
13	Details of engine turning gear.
14	Torsional vibration analysis of shafting system.
15	Information set out in items 2 to 14 is not required to be submitted for the following internal combustion oil engines, namely, an engine a. with a continuous brake power not in excess of 112 kW; b. with a continuous brake power in excess of 112 kW but not in excess of 375 kW, where the manufacturer submits the following documented information, namely, i. model and serial number and type of engine, ii. number of cylinders, bore and stroke dimensions, iii. maximum continuous brake power and the corresponding revolutions per minute, iv. volume of the engine crankcase and full details of crankcase explosion relief valves, where the cylinder bore is in excess of 200 mm, v. name of the manufacturer and model of the speed-regulating governor, vi. relieving pressure and capacity of cylinder-head relief valves, and vii. test data up to full power taken from a representative engine of the same model; c. that is a portable equipment prime mover, unless of unusual design; or d. that is a lifeboat engine that meets the requirements of the *Life Saving Equipment Regulations*.

1.2.2 Division II Reciprocating Engines

Item	Required Information
1	General arrangement of the installation of the engine in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the engine and means of support.
3	Specifications showing the indicated power and corresponding revolutions per minute, number of cylinders, bore and stroke dimensions, maximum pressure per cylinder, full details of flywheel and physical properties of principal parts.
4	Details of all cylinders, cylinder covers, pistons, piston rods, connecting rods and bearings and of the crankshaft and bedplate.
5	Details of lubricating oil systems and other attached pumping systems.
6	Details of controls, including reversing arrangements.
7	Details of speed-regulating governors and other safety devices.
8	Details of crankcase venting.
9	Details of engine turning gear.
10	Where a manufacturer of a steam reciprocating engine certifies that the engine was constructed in accordance with rules or codes, information set out in items 2 to 9 is not required to be submitted for the steam reciprocating engine if it is not in excess of 375 kW continuous brake power.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	Identification from material test certificates, approvals and documentation from manufacturer for engine as a unit, before construction is commenced, of materials to be used, including welding metal, for the following parts: a. crankshafts, bearings and bolts; b. pistons, piston rods, connecting rods, guides, crossheads, bearings and bolts; c. cylinders, cylinder liners, cylinder covers, valves, valve mechanisms, pillars and bolts; d. bedplates and frames; and e. pressure charging and scavenging mechanisms for internal combustion oil engines.

Item	Requirements
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds including non-destructive test examination and verification of any heat treatment required in accordance with rules or codes.
4	Identification of components from component inspection certificates and inspection of components and their installation, including engine-driven pumps.
5	Witnessing of hydrostatic pressure tests of components in accordance with rules or codes.
6	Inspection of the constructed engine and witnessing of the engine under test.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition of the connection of the engine to associated systems.
3	Verification of correct adjustment and operational condition of safety, control and monitoring devices.
4	Verification of reliability and sufficiency under trials up to full power under normal working conditions for a suitable endurance period of not less than 2 hours, taking into consideration the size and the complexity of the reciprocating engine or the internal combustion oil engine.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Operational condition of the engine.
2	Correct adjustment and operational condition of safety devices.
3	Locations where fluid leakage, metal wastage, overheating, heavy vibration or excessive bearing clearances may occur.

Item	Requirements
4	Correct adjustment of controls and monitoring systems.
5	Operational condition of alarm systems.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
1	Crankcase, crankshaft, bearings and bolts.
2	Pistons, piston rods, connecting rods, guides, cross-heads, bearings and bolts except that removal of thrust bearing components that are an integral part of an engine is not required if tolerances meet the manufacturer's specifications and there is no apparent damage or deterioration.
3	Cylinders, covers, valves, and valve mechanisms.
4	Crankcase doors, explosion relief devices and other safety devices.
5	Crankcase venting arrangement.
6	Pressure charging, scavenging and exhaust systems for internal combustion oil engines.
7	Attached pumps.
8	Starting mechanisms and clutch gears for internal combustion oil engines.
9	Reversing and speed-regulating mechanisms.
10	Bedplate, engine structure and fastenings, without dismantling if a general examination indicates that the condition of the components is adequate for further service.
11	No periodic special inspection is required for speed-regulating governors and other complex mechanisms, where written information is provided to the inspector by firms specializing in the reconditioning of these parts indicating that the parts are in good order and adjustment.
12	For an internal combustion engine not in excess of 450 kW continuous brake power, the removal of pistons and dismantling of bearings is not required if examination of the cylinder cover and crankcase indicates that the condition of the engine is adequate for further service.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	For steam reciprocating engines, at intervals not exceeding 5 years.
2	For internal combustion engines at intervals; a. after completion of the manufacturer's recommended running hours **OR** at intervals of not less than 5 years. b. notwithstanding item 2 (a), if the manufactured recommended maintenance running hours are not exceeded after 5 years, the interval may be extended if the Authorized Representative demonstrate that the maintenance schedule of the engine has been respected as per the manufacturer's instructions.

SCHEDULE V - Turbine Engines

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

1.2.1 Division I Turbine Engines

Item	Required Information
1	General arrangement of the installation of the engine in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the engine and means of support.
3	Specifications for ahead and astern turbines indicating maximum continuous brake power and corresponding revolutions per minute, steam pressures and temperatures at turbine inlet and exhaust, full details of cylinders, rotors, nozzles, blades, couplings and clutches, full details of physical properties of principal parts, details of forgings, castings and weldments, details of the heat treatment process and testing procedures.
4	Details of bearings and lubricating oil systems.
5	Details of controls including reversing arrangements.
6	Details of speed-regulating governors, lubricating oil failure-protection arrangements and other safety devices.
7	Details of engine turning gear.

Item	Required Information
8	Details of critical speeds of rotating assemblies including vibration analyses.

1.2.2 Division II Gas Turbine Engines

Item	Required Information
1	General arrangement of the installation of the engine in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the engine and means of support.
3	Specifications of the turbine and compressor indicating maximum continuous brake power and corresponding revolutions per minute, gas pressures and temperatures, full details of casings, combustion chambers, rotors, nozzles, blades, heat exchangers, couplings and clutches, full details of physical properties of principal parts, details of forgings, castings and weldments, details of the heat treatment process and testing procedures.
4	Details of fuel system including fuel oil viscosities required for starting and running.
5	Details of air inlet and exhaust arrangements.
6	Details of controls including means of starting and of fuel ignition.
7	Details of bearings and of lubricating oil systems.
8	Details of speed-regulating governors, lubricating oil failure protection arrangements and other safety devices.
9	Details of engine turning gear.
10	Details of critical speeds of rotating assemblies including vibration analyses.
11	Information set out in items 1 to 10 is not required to be submitted for a. gas turbine engines not in excess of 375 kW continuous brake power; b. portable gas turbine engines; or c. gas turbine engines driven by exhaust gases from a reciprocating-type internal combustion oil engine, except that information respecting a gas turbine for a reciprocating-type internal combustion oil engine shall be submitted in accordance with Schedule IV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, for the following parts: a. turbine cylinder assembly, including covers, discs, nozzles, blades and bolts; b. turbine rotor assembly including discs, blades and bolts; c. valves, pipes, couplings, clutches, bearings and bolts; d. compressor cylinder and rotor assembly for a gas turbine; and e. combustion chamber and heat exchanger for a gas turbine.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds, including non-destructive test examination and verification of any required heat treatment process in accordance with rules or codes.
4	Verification of rotor balance and thermal stability testing in accordance with rules or codes.
5	Identification of components from component inspection certificates and inspection of components and their installation.
6	Witnessing of hydrostatic pressure tests of components in accordance with rules or codes.
7	Inspection of the constructed engine and witnessing of the engine operation under test.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition of the connection of the engine to associated systems.
3	Verification of correct adjustment and operational condition of safety, control and monitoring devices.

Item	Requirements
4	Verification of reliability and sufficiency under trials up to full power under normal working conditions for a suitable endurance period of not less than 2 hours, taking into consideration the size and the complexity of the gas turbine engine or turbine engine.

1.4 Part IV Periodic General Inspections and Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Operational condition of the engine.
2	Correct adjustment and operational condition of safety devices.
3	Locations where fluid leakage, metal wastage, overheating, heavy vibration or excessive bearing clearance may occur.
4	Correct adjustment of controls and monitoring systems.
5	Operational condition of alarm systems, particularly where the engine is designed for non-continuous local supervision.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
1	Casings, glands, nozzles, blades, valves and valve mechanisms.
2	Rotors, blades, couplings, thrusts, bearings and bolts.
3	Speed-regulating governors and other safety devices.
4	Attached pumps.
5	Compressors, combustion chambers, heat exchangers, air inlet, fuel and exhaust, and starting system for a gas turbine engine.
6	Engine structure and fastenings without dismantling if a general examination shows that the condition of the components is adequate for further service.
7	No inspection is required for speed-regulating governors and other complex mechanisms where written information is provided to the inspector by firms

Item	Requirements
	specializing in the reconditioning of those mechanisms, indicating that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	For gas turbine engines and turbine engines, at intervals not exceeding 5 years.
2	Notwithstanding item 1, the first lifting of the casing and rotor of a turbine engine that has more than one propulsion ahead turbine with an emergency crossover arrangement is deferred until the engine is 10 years old if the inspector is satisfied that the turbine is in good operating condition based on the records of the vibration indicator, the rotor position indicator and the turbine operation.

SCHEDULE VI - Reversing and Reduction Gearing, Shafting Systems and Propellers

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

1.2.1 Division I Reversing and Reduction Gearing

Item	Required Information
1	General arrangement of the installation of the gearing in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the gearing unit, including means of gearcase support.
3	Specifications indicating maximum input torque and corresponding revolutions per minute for each pinion, details of pinions and wheels, number of teeth, pitch, form and helix angles, details of wheel-rim attachment, gear-cutting and post-cutting processes, physical properties of principal parts, details of forgings, castings and weldments, details of the heat treatment process and testing procedures.
4	Details of gearcase, including access openings and venting arrangements.
5	Details of shafting systems, including stern tube (if applicable), stern tube installations (if applicable), couplings, clutches, reversing gear where fitted, and balancing and vibration analyses.

Item	Required Information
6	Details of bearings, lubricating oil systems and temperature monitoring devices.
7	Information set out in items 2 to 6 is not required to be submitted for a gearing system (a) not in excess of 225 kW continuous brake power; or (b) over 225 kW and not in excess of 375 kW continuous brake power, where the manufacturer submits the following documented information: (i) model and serial number and type of gearing, (ii) maximum continuous input torque and corresponding revolutions per minute, (iii) gearing reduction, and (iv) test data up to full power taken from a representative gearing system of the same model.

1.2.2 Division II Shafting Systems for Propulsion, Electrical Generators and Motors

Item	Required Information
1	General arrangement of the propulsion shafting, the electrical generator shafting and motor shafting in the vessel, showing all connected systems.
2	General arrangement and sectional elevation of the shafting systems, including Stern tube (if applicable) detailing attachments to driving and driven members and means of support.
3	Specifications indicating maximum input power and corresponding revolutions per minute, alignment of shafting system and bearing type and loading, physical properties of materials and testing procedures.
4	For vessel propulsion shafting systems, details of a. intermediate, thrust and screw shafts including liners, in particular protective coating for carbon steel screw shafts with non-continuous liners; b. intermediate, thrust, stern and "A" bracket bearings; c. stern bushes and stern glands including their attachments to the vessel; d. shaft lubrication arrangements; and e. (e) critical speed of rotating assembly including vibration analysis.
5	Information set out in items 2 to 4 is not required to be submitted for shafting systems

Item	Required Information
	a. not in excess of 225 kW continuous brake power on vessel propulsion systems; or b. not in excess of 375 kW continuous brake power in vessel service electrical generators and motors.

1.2.3 Division III Fixed Pitch, Controllable Pitch and Directional Propellers

Item	Required Information
1	General arrangement of the propeller, including details of fastening arrangement to the shafting systems.
2	Specifications indicating maximum input power and corresponding revolutions per minute, physical properties of materials, stress calculations and testing procedures.
3	Details of hub, hub mechanisms, seals, blade connections, control devices and locations.
4	Details of blade form and degree of controllability of pitch.
5	Information set out in items 2 to 4 is not required to be submitted for propellers not in excess of 225 kW continuous brake power.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
Reversing and Reduction Gearing	
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, for the following parts: a. shafting, pinions, wheels, couplings, clutches, and bolts; and b. gearcase, bearings, piping, valves, and bolts.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds, including non-destructive test examination and verification of any required heat treatment process in accordance with rules or codes.
4	Verification of correct wheel-rim cutting, gear-cutting and post-cutting processes.

Item	Requirements
5	Verification of correct balance of rotating components.
6	Identification of components from component inspection certificates and inspection of components and their installation.
7	Inspection of the completed gearcase and witnessing of the gearing operation under test conditions.
Shafting Systems for Propulsion, Electrical Generators and Motors	
8	Identification from material test or component inspection certificates, before construction is commenced, of materials to be used for the following parts: a. electrical generator and motor shafts, vessel propulsion intermediate, thrust and screw shafts, including liners and bolts; and b. intermediate, thrust, stern and "A" bracket bearings and stern bushes.
9	Inspection of the constructed components and confirmation of correct liner installation.
Fixed Pitch, Controllable Pitch and Directional Propellers	
10	Identification from material test or component inspection certificates, before construction is commenced, of materials to be used for propellers, nuts, glands, keys, cones and, as applicable, hubs, blades, nuts, pitch and directional control mechanisms.
11	Inspection of assembled components, including non-destructive test examination as required by the inspector.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Verification of correct alignment of securing arrangements.
2	Verification of correct adjustment and operational condition the gearing, shafting systems, propellers and their connections to associated systems.
3	Verification of correct adjustment and operational condition of safety, control and monitoring devices.
4	Verification of reliability and sufficiency under trials up to full power capacity under normal working conditions for a suitable endurance period of not less than

Item	Requirements
	2 hours, taking into consideration the size and complexity of the reversing and reduction gearing, shafting systems and propellers.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
Reversing and Reduction Gearing	
1	Operational condition of the gearing system.
2	Operational condition of the reversing system in reversing and reduction gearing.
3	Operational condition of the lubricating oil system.
4	Correct adjustment and operational condition of safety devices.
5	Locations where fluid leakage, overheating, heavy vibration or excessive gland or bearing clearances may occur.
6	Correct adjustment of controls and monitoring systems.
7	Operational condition of alarm systems, particularly where the reversing and reduction gearing is designed for non-continuous local supervision.
Shafting Systems for Propulsion, Electrical Generators and Motors	
8	Operational condition of the lubricating fluid system.
9	Locations where overheating, vibration, fractures, excessive gland or bearing clearances may occur.
10	Screw shaft inspection, as far as practicable, without withdrawal, at the time of each dry-docking with the stern bearing wear-down being determined and recorded.
Fixed Pitch, Controllable Pitch and Directional Propellers	
11	Operational condition of the propellers.
12	Correct adjustment of all controls and monitoring systems of controllable pitch and directional propellers.

Item	Requirements
13	Controllable pitch and directional propellers for any evidence of control fluid leakage.
14	Operational condition of all alarm systems for controllable pitch and directional propellers.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be inspected

Item	Requirements
Reversing and Reduction Gearing	
1	Subject to item 2, casing, pinions, wheels, shafts, couplings, clutches, glands, thrust bearing and selected other bearings, following removal of casing main cover.
2	Removal of casing main cover is not required if vibration or oil analysis, inspection through inspection doors and condition monitoring shows that the condition of the components is adequate for further service.
3	Gear-case ventilating system and safety devices.
4	Oil-flow indicating, filtering and temperature monitoring devices.
Shafting Systems for Propulsion, Electrical Generators and Motors	
5	For intermediate shafts, thrust shafts, electrical generators and motor shafts a. bearings, thrust pads and shaft surfaces following lifting of the upper half of the bearing and removal of thrust pads, and the lower half of the bearing shall be exposed if alignment and wear are unacceptable in accordance with rules or codes and the manufacturer's recommendations; b. bearing securing arrangements; and c. lubricating oil system and temperature monitoring devices.
6	For screw shafts, a. shaft surfaces, liners, glands, key and keyway, nuts, locking devices and, as far as practicable, the stern bearing and tube, following shaft withdrawal; and

Item	Requirements
	b. uncoated surfaces of water lubricated carbon steel shafts adjacent to the ends of the non-continuous liners and at the forward end of the sharp edged keyway by means of a magnetic-particle, dye-penetrant or other crack detection method.
Fixed Pitch, Controllable Pitch and Directional Propellers	
7	For fixed pitch propellers, a. the propeller, the nut, locking devices and cone, following removal from the shaft; and b. installation of the propeller to the shaft in respect of correct propeller reassembly on the shaft.
8	For controllable pitch or directional propellers, a. operating-fluid systems and blade-position control devices; b. blades, hub and internal gearing; c. installation in respect of correct reassembly and operation; and d. all items, where applicable, set out in Division I, following completion of special periodic inspection.

1.4.2.2 Subdivision II Intervals

Item	Requirements
Reversing and Reduction Gearing	
1	*Reversing and Reduction Gearing at interval,* a. after completion of the manufacturer's recommended running hours **OR** at intervals of not less than 5 years. b. Notwithstanding item 1(a), if the manufactured recommended maintenance running hours are not exceeded, the 5 years interval may be extended if the Authorized Representative demonstrate that the maintenance schedule of the engine has been respected as per the manufacturer's instructions.
Shafting Systems for Propulsion, Electrical Generators and Motors	
2	Intermediate shafts, thrust shafts, electrical generators and motor shafts at interval, a. after completion of the manufacturer's recommended running hours **OR** at intervals of not less than 5 years.

Item	Requirements
	b. Notwithstanding item 2 (a), if the manufactured recommended maintenance running hours are not exceeded, the 5 years interval may be extended if the Authorized Representative demonstrate that the maintenance schedule of the engine has been respected as per the manufacturer's instructions.
3	Subject to items 4 to 7, screw shafts at intervals not exceeding 5 years.
4	Screw shafts in vessels in excess of 15 GT but not in excess of 150 GT that are not passenger vessels shall be inspected, at intervals not exceeding 4 years.
5	Screw shafts that meet the requirements of Schedule VI item 1(d) of Division II of Part I of the *Marine Machinery Regulations*, at intervals not exceeding 2 years except for screw shafts in vessels operating on voyages in fresh water only or between inland waters of Canada and not beyond (Near coastal voyage, Class 1) limits where the vessel operates in fresh water at least 3 months of the year, at intervals not exceeding 5 years.
6	For an oil-lubricated screw shaft having a keyless taper or flange for propeller attachment, a partial inspection without shaft withdrawal, at alternate periodic special inspections, if a. the lubricating oil analysis shows that the oil is suitable for further service; b. the stern bearing wear-down is within safe limits; and c. the external oil gland is disassembled and the area at the top of the taper or flange fillet is subjected to a magnetic-particle, dye-penetrant or other crack detection method.
7	For a water-lubricated, corrosion-resistant metal screw shaft having a keyless taper or flange for propeller attachment, a partial inspection with limited shaft withdrawal, at alternate periodic special inspections, if a. the stern bearing wear-down is within safe limits; and b. the shaft is withdrawn to a sufficient distance to expose the stern bearing contact area and the area at the top of the taper or flange fillet is subjected to a magnetic-particle, dye-penetrant or other crack detection method.
Fixed Pitch, Controllable Pitch and Directional Propellers	
8	Fixed pitch propellers, at the time of periodic special inspection of screw shafts.
9	Controllable pitch propellers a. with hubs removed from screw shafts, at intervals not exceeding 10 years except that hubs are not required to be removed from the shafts if the securing

Item	Requirements
	studs or cap screws can be extracted and inspected, especially the threaded portions of hubs and securing studs or cap screws; and b. blade systems, at the time of screw shaft periodic special inspection or partial inspection with only one blade system different from the blade system examined at a previous inspection dismantled so that in the course of successive inspections all the blade systems are inspected, if mechanisms, bearing tolerances, bolting, sealing arrangements and operating fluid analyses show that the blade systems are suitable for further service.
10	Directional propellers, at intervals not exceeding 8 years if at the time of each dry docking the operation of the blades, bearing tolerances, bolting, sealing arrangements and operating or lubricating fluid analyses indicate that the directional propellers are suitable for further service.

SCHEDULE VII - Steering Systems, Shipside Components and Windlasses

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

1.2.1 Division I Steering Systems

Item	Required Information
1	General arrangement of the main, and duplicate or auxiliary, and emergency steering systems in the vessel.
2	General arrangement and sectional elevation of the steering gears, including holding-down arrangements.
3	Specifications indicating maximum designed torque at rudder stock, timing and angle of rudder movements for main and auxiliary steering gears, materials and physical properties of the principal components.
4	Details of pumps, piping and valves subjected to pressure, and securing arrangements.
5	Details of safety and shock-prevention devices.
6	Details of control and monitoring mechanisms including connections to all steering locations.
7	For non-duplicated rudder actuators in tankers, chemical tankers and gas carriers of 10,000 GT or more but less than 100,000 tonnes deadweight,

Item	Required Information
	a. welding details and processes; b. detailed design calculations; c. stress analysis of the pressure-retaining components; d. depending on design complexity, unusual manufacturing processes and foreseen dynamic load, additional information may be requires such as i. a fatigue analysis, and ii. a fracture mechanics analysis; and e. require experimental stress analysis in support of, or in lieu of, the theoretical analyses referred to in (d).
8	Information for valves and similar minor components referred to in item 4 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
9	Information for pumps referred to in item 4 is not required to be submitted where an approved classification society certifies that the pumps have been designed and constructed in accordance with rules or codes, except that the driving motor or engines of the pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.2.2 Divison II Shipside Components

Item	Required Information
Shafting and Valves	
1	Details of Shipside penetrating shafting and glands, including fin stabilizing components, their locking mechanisms and other connections.
2	Details of sea inlet and discharge valves and strainers and their connections, including those for side thrusters and deck wash systems.
3	For vessels required to operate in ice-covered waters, details of arrangements to prevent slush ice choking sea-water inlets.
4	Specifications indicating the maximum stresses of the shafting, valve pressures and flow rates, materials and physical properties of the principal components.

Item	Required Information
Door-operating Mechanisms	
5	General arrangement of door-operating mechanisms showing all connected machinery and their locations in the vessel.
6	Details of all components, including pumps, piping and valves subjected to pressure and securing arrangements.
7	Specifications indicating maximum stresses, materials and physical properties of principal components, particularly those that may be subjected to low ambient temperatures.
8	Information for valves and similar minor components referred to in items 2 and 6 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
9	Information for pumps referred to in item 6 is not required to be submitted where an approved classification society certifies that the pumps have been designed and constructed in accordance with rules or codes, except that the driving motor or engines of the pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.2.3 Division III Windlasses

Item	Required Information
1	General arrangement, including type of power and loads, of the windlass systems showing all connected machinery and their location in the vessel.
2	Details of all windlass components, including pumps, piping, valves and brakes, and securing arrangements.
3	Specifications indicating maximum stresses, materials and physical properties of principal components, particularly those which may be subjected to low ambient temperatures.
4	Information for windlasses referred to in items 2 and 3 is not required to be submitted where an approved classification society certifies that the windlasses have been designed and constructed in accordance with rules or codes except that the driving motor or engines of the pumps shall meet the requirements of Appendix 3,Part II of the applicable schedule of Schedules I to XV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
Steering Systems	
1	Identification from material test certificates, before construction is commenced, of materials to be used, including welding metal, for the following parts: a. rams, frames, pintles and other components under stress when transmitting torque to the rudder stock; and b. cylinders and other components retaining pressure.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds, including non-destructive test examination and verification of the heat treatment process, in accordance with rules or codes.
4	Identification of components from component inspection certificates and inspection of components and their installation.
5	Witnessing of hydrostatic pressure testing of components in accordance with rules or codes, except that for non-duplicated rudder actuator pressure components in tankers, chemical tankers and gas carriers of 10,000 GT or more but less than 100,000 tonnes deadweight, the hydrostatic pressure test is to be at 1.5 times the design working pressure.
6	Inspection of the constructed steering gear and the witnessing of the gearing operation under test.
7	Witness test of emergency steering
Shipside Components and Windlasses	
8	None.

1.3.2 Division II Installation Inspection

Item	Requirements
Steering Systems	
1	Identification from component inspection certificates, before installation is commenced, of steering systems.

Item	Requirements
2	Verification of correct adjustment and operational condition at all steering locations of securing arrangements, connection of steering systems to associated systems, safety, control and monitoring devices and, for hydraulic power operated systems, a hydrostatic pressure test at the design working pressure.
3	Inspection of change-over from main to duplicate or auxiliary steering systems in accordance with the design specifications set out in Part I of the *Marine Machinery Regulations.*
4	Verification of reliability and sufficiency of both main, and duplicate or auxiliary steering systems under trials for a sufficient endurance period up to the vessel's maximum propulsion power for main and duplicate systems and up to navigable speed for the auxiliary system in accordance with design specifications set out in Division I of Part I of the *Marine Machinery Regulations*, except that the steering gear need not necessarily be demonstrated at maximum rudder angle operation while running astern at maximum speed.
5	Witness test of emergency steering
Shipside Components and Windlasses	
6	Identification from component inspection certificates, before installation is commenced, of shipside components, including door-operating mechanisms, and windlasses.
7	Verification of correct adjustment and operational condition of securing arrangements, connection of the components and windlasses to associated systems, safety, control and monitoring devices.
8	Inspection of shafts, glands, strainers and valves.
9	Inspection to ensure that no overboard discharges are in the way of lifeboat or liferaft lowering locations.
10	Witnessing of operational tests of the components and windlasses in accordance with rules or codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
Steering Systems	

Item	Requirements
1	Operational condition and controllability of steering systems from all steering locations.
2	Capability of duplicate or auxiliary steering systems to be brought rapidly into operation.
3	Correct adjustment and operational condition of alarm and monitoring devices.
4	Correct adjustment and operational condition of safety devices.
5	Locations where fluid leakage, overheating, excessive vibration, fractures or excessive gland or bearing clearances may occur, particularly where the steering gear includes only a single rudder actuator.
Shipside Components and Windlasses	
6	Operational conditional and controllability of components including door-operating mechanisms and windlass braking systems.
7	Locations where excessive fluid leakage, metal wastage, vibration or fractures may occur.
8	Overboard discharges to confirm that no overboard discharges above the vessel waterline are in the way of lifeboat or liferaft lowering positions.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
Steering Systems	
1	Subject to item 4, driving engines or pumps, actuators, piping, pintles and bearings.
2	Subject to item 4, control and monitoring mechanisms leading to the bridge and other steering locations.
3	Steering gear structure and fastenings without dismantling, if their condition is adequate on the basis of general examination.
4	Periodic special inspection is not required for hydraulic systems if the general periodic inspection referred to in Division I and operational observation, vibration analysis or written information provided to the inspector by firms specializing in

Item	Requirements
	the reconditioning of these parts shows that the condition of the parts is satisfactory for further service.
5	No periodic special inspection is required for complex mechanisms where written information is provided to the inspector by firms specializing in the reconditioning of these parts, indicating that the parts are in good order and adjustment.
Shipside Components and Windlasses	
6	Internal and external parts of shipside valves, keel cooler valves, strainers and glands.
7	Periodic special inspection is not required for hydraulic pumps, cylinders, rams, piping and windlasses if the periodic general inspection referred to in Division I and operational observation, vibration analysis or written information provided to the inspector by firms specializing in the reconditioning of these parts shows that the condition of the parts is satisfactory for further service.
8	No periodic special inspection is required for complex mechanisms where written information is provided to the inspector by firms specializing in the reconditioning of these parts, indicating that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
Steering Systems	
1	At intervals not exceeding 5 years.
Shipside Components	
2	Shipside valves, keel cooler valves, strainers, shafts and glands, at intervals not exceeding 4 years except where the vessel is dry docked at intervals of 5 years in accordance with this standard, at that time.
3	All other components including door-operating mechanisms, at intervals not exceeding 5 years.

SCHEDULE VIII - Remote Control and Monitoring Systems in Periodically Unattended Machinery Spaces

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement of remote control and monitoring systems showing all connected machinery.
2	General arrangement of control and monitoring systems, including scanning points and control locations for periodically unattended machinery spaces.
3	General arrangement of remote control console identifying control and monitoring instruments, gauges and alarms.
4	Details of electric, pneumatic or hydraulic operational control and monitoring systems, and details of emergency operation arrangements for all machinery required for, or which may affect, the operational safety of the vessel and safety of personnel on board.
5	Details of remotely controlled fire detection, alarm and extinguishing systems.
6	List of monitor and audio and visual alarm locations and identification of the equipment used and the manufacturer of the equipment.
7	General arrangement of intercommunication systems linking the bridge, accommodation spaces, service spaces, the central control room and machinery spaces, including the emergency situation alarm for engineers.
8	List of symbols and abbreviations used in plans in accordance with a recognized and identified code or fully explained in the data supplied.
9	Operational, maintenance and testing procedure manuals for control, monitoring, alarm and safety devices including duplicate and emergency arrangements.
10	Data indicating proposed duration of times in a 24-hour period when machinery spaces of Category A will normally be unoccupied and when other machinery spaces, such as steering gear compartments, will not normally be visited.
11	Data indicating surveillance arrangements on Groups 1 and 2 vessels [30] when operating in confined waters.
12	Data indicating security arrangements to prevent unauthorized actions in periodically unattended machinery spaces.

[30] The details for Group 1 and Group 2 vessels are located in Schedule VII Part I of the *Marine Machinery Regulations*.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates before installation is commenced of materials and components.
2	Witnessing of pressure testing of components as required in accordance with rules or codes.
3	Verification of correct adjustment and operational condition of securing arrangements and connection of the remote control and monitoring systems to associated systems.
4	Witnessing of operational tests of the systems including emergency and simulated fault test arrangements in accordance with rules and codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Inspection of all securing arrangements and points where leakages and excessive vibration may occur at all control locations and at the machinery itself.
2	Inspection of connecting systems between control locations and the machinery without complete removal of all protective panels if a. the condition of exposed systems parts is adequate taking into account normal wear; and b. there is no apparent damage to, or deterioration of unexposed parts of the systems.
3	Witnessing of tests including emergency and simulated fault tests to confirm that all control, monitoring, alarm and safety devices are in operational condition and correct adjustment.
4	Witnessing of tests to confirm that systems are operable from all control locations and that the machinery is operable locally.
5	Witnessing of tests to confirm that duplicate and emergency systems can be rapidly brought into operation on failure of the main system.

1.4.2 Division II Periodic Special Inspection

Item	Requirements
1	Subject to paragraph 4.5.3.1.1.2 of this standard, no periodic special inspection is required.

SCHEDULE IX - Non-Structural Tanks, Short Flexible Hoses and Fibre-Reinforced Plastic Piping and Components

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
Non-Structural Tanks of 4 500 L or Less Capacity	
1	General arrangement of the tank installation and the system to which it is connected.
2	Details of a. nature of the fluid to be contained in the tank; b. tank volume and level of tank fluid; c. tank materials, sizes, plate seams and supports; and d. tank openings, vents and other connections.
3	Detailed strength calculations where a. level of tank fluid exceeds 5 m; or b. tank material is other than steel.
Short Flexible Hoses	
4	Material specifications including details of construction and end connection arrangements.
5	Details of the various tests applied to the hoses and identification of the standards association hose testing standards were applied.
6	Details of the design working pressures, temperatures, fluid flow velocities and nature of the fluids to be carried.
Rigid Plastic and Fibre-Reinforced Plastic Piping and Components	

Item	Required Information
7	Material specifications, physical properties, details of the various tests carried out and identification of the standards association hose testing standards were applied.
8	Characteristics of flammability, decomposition resistance to environmental conditions and abrasion resistance to sand, ice particles or other fluid entrained substances.
9	Details of connections, scantlings, design working pressures, temperatures and fluid flow velocities.
10	Details of piping systems, locations, supports and thermal expansion allowances taking into account differences in the thermal expansion properties of plastic materials and metal.

1.3 Part III Construction and Installation Inspections

Item	Requirements
1	Construction and installation inspections shall consist of completion of each item set out in Appendix 3, Part III of Schedules X to XV for the relevant fluid system.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Completion of each item set out in Appendix 3, Division I of Part IV of Schedules X to XV for the relevant fluid system.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	No periodic special inspection is required if a general examination shows that the condition of the tanks is suitable for further service.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	None.

SCHEDULE X - Steam, Boiler Water and Cooling Water Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
Steam and Exhaust Systems	
1	General arrangement of the steam systems having an assigned working pressure in excess of 103 kPa including steam power, steam heating, steam cleaning and steam fire-extinguishing systems showing all connected pressure vessels, pumps, shut-off valves, piping, steam traps, reducing valves, safety valves, pressure gauges and drainage arrangements, particularly where the systems are susceptible to frost or water-hammer damage.
2	General arrangement of exhaust steam piping from machinery or other components powered or heated by steam systems referred to in item 1 showing arrangements for further use, condensing or atmospheric discharge.
3	Installation details of items 1 and 2 stating assigned working pressures, temperatures and flow rates.
4	Materials, sizes, capacities, design working pressures, temperatures, testing arrangements and procedures of pumps, piping, valves and other components.
5	Details of a. pipe connections to flanges and other joining arrangements; b. securing arrangements for pumps and piping, allowances for vibration and thermal expansion and stress calculations where required; c. protection against piping damage particularly where led through working spaces; d. materials, means of attachment and thickness of thermal insulation; and e. protection against overpressure to or from steam systems when used for heating purposes in integral jackets of machinery.
6	Information for valves and similar minor fittings referred to in item 4 is not required to be submitted where a manufacturer or an approved classification

Item	Required Information
	society certifies that the types of valves or similar minor fittings have been designed and constructed in accordance with rules or codes.
7	Information for pumps referred to in item 4 is not required to be submitted where an approved classification society certifies that the pumps have been designed and constructed in accordance with rules or codes except that the driving motor or engine of the pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.
Condensate and Boiler Feed Water Systems	
8	General arrangement of condensate and reserve boiler feed water systems including reserve feed tank and observation tank connections, pumps, piping, valves, and all connected components and means for a. carrying out water purity tests; b. dealing with contaminated water; and c. draining systems that are susceptible to frost damage.
9	General arrangement of boiler feed, blow down and surface blow piping indicating all connected pumps, valves, components and shipside connections.
10	Structural details of tanks that do not form part of the hull structure.
11	Installation details of items 8 and 9 stating assigned working pressures, temperatures and flow rates.
12	Materials, sizes, design working pressures, testing arrangements and procedures of pumps, piping, valves and other components.
13	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements for pumps, non-structural tanks, and piping and damage protection where necessary; and c. materials, means of attachment and thickness of thermal insulation.
14	Information for valves and similar minor components referred to in item 12 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
15	Information for pumps referred to in item 12 is not required to be submitted where an approved classification society certifies that the pumps have been designed and

Item	Required Information
	constructed in accordance with rules or codes except that the driving motor or engine of the pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.
Cooling Water Systems	
16	General arrangement of fresh and seawater cooling systems pumps, piping, valves and components including, as applicable, sea suction strainers, air vent piping, sea boxes, internal sea bays, keel coolers, vessel structure tank coolers, make-up water tanks and means for draining systems that are susceptible to frost damage.
17	Details of sea inlet and discharge arrangements including arrangements to ensure that no above waterline discharges are in the way of lifeboat and liferaft lowering locations and, where applicable, piping arrangements for internal sea bays, keel coolers and vessel structure tank coolers.
18	Structural details of tanks not forming part of the hull structure.
19	Installation details of all water systems referred to in item 16 stating assigned working pressures, temperatures and flow rates.
20	Materials, sizes, design working pressures, testing arrangements and procedures of pumps, piping, valves and other components.
21	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements for pumps, non-structural tanks and piping; and c. protection against overpressure to or from water systems when used for cooling purposes in integral jackets of machinery.
22	Information for valves and similar minor components referred to in item 20 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
23	Information for pumps referred to in item 20 is not required to be submitted where an approved classification society certifies that the pumps have been designed and constructed in accordance with rules or codes except that the driving motor or engine of the pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of pumps, piping, flexible hoses, components and materials to be used, including welding metal.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds and verification of the heat treatment process in accordance with rules or codes.
4	Witnessing of hydrostatic pressure tests in accordance with rules or codes.
5	Inspection of securing arrangements, connections with associated systems and verification of correct adjustment and operational condition of safety, control and monitoring devices.
6	Witnessing of operational tests of the system in accordance with rules or codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	For steam and exhaust systems, where applicable and, in the opinion of the inspector, practicable, a. inspection of securing arrangements and of locations where fluid leakage and excessive vibration may occur; and b. verification of correct adjustment and operational condition of reducing valves, safety valves and associated pressure gauges.
2	For boiler water and cooling water systems, where applicable and, in the opinion of the inspector, practicable, a. inspection of securing arrangements, of locations where fluid leakage may occur and of sea inlet and discharge connections; and

Item	Requirements
	b. verification of correct adjustment and operational condition of valves and components within the systems.
3	For pumps, where applicable and, in the opinion of the inspector, practicable, a. verification that the pumps are operational and in correct adjustment; and b. verification that all control, monitoring, alarm and safety devices are operational and in correct adjustment.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	Except as prescribed in Appendix 3, Schedules I to III, safety valves, pressure gauges and other components in steam, boiler water and cooling water systems and reducing valves in steam systems are to be inspected without opening up unless considered necessary by the inspector on the basis of the general condition of the steam, boiler water and cooling water systems.
2	Subject to items 3 to 6, steam piping systems that have an external diameter in excess of 75 mm shall have selected pipes removed for a. external inspection of flange connections; b. internal inspection as far as practicable; and c. hydrostatic pressure testing to 1.5 times the assigned working pressure.
3	Pipes selected for inspection shall be different from the pipes selected during the previous inspection so that in the course of successive inspections all pipes of the system are inspected and tested.
4	Steam piping that has an external diameter in excess of 75 mm and that has welded joints between lengths of pipe or between pipes and valves shall have a. the insulation that is in the way of welds removed; b. the piping hydrostatically pressure tested to 1.5 times the assigned working pressure; and c. the joints inspected and where necessary examined by means of a magnetic-particle, dye-penetrant or other crack detection method.
5	All copper steam pipes that have an external diameter in excess of 75 mm, shall be subjected to a hydrostatic pressure test of twice the assigned working pressure of

Item	Requirements
	the system and all seams, including longitudinal seams where fitted, exposed for inspection.
6	Copper steam pipes that have an external diameter in excess of 75 mm and that are subject to flexing action through expansion or vibration and copper steam piping immediately adjacent to machinery shall be removed for annealing prior to being hydrostatically pressure tested in accordance with item 2(c).
7	For pumps and driving components, where applicable, a. all internal and external parts including valves, bearings and safety devices; and b. all securing arrangements without dismantling if a general examination shows that the condition of the components is suitable for further service.
8	For shipside sea inlet valves, strainers, overboard discharge valves and valves connected to internal sea bays, keel coolers, reserve feed water tanks and observation tanks, a. internal and external parts; and b. all securing arrangements without dismantling if a general examination indicates that the condition of the components is suitable for further service.
9	No inspection is required for speed regulating governors and other complex mechanisms where written information is provided to the inspector from firms specializing in the reconditioning of these parts indicating that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	Components listed in item 1 of Subdivision I, at intervals not exceeding five years.
2	Subject to item 3, superheated steam pipes, at intervals not exceeding four years.
3	Saturated steam pipes and superheated steam pipes that have an external diameter of less than 75 mm and not subject to temperatures exceeding 450°C, eight years after installation and thereafter at intervals not exceeding four years.
4	Pumps and driving components, at intervals not exceeding five years.

SCHEDULE XI - Compressed Air and Refrigerating Gas Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
Compressed Air Systems	
1	General arrangement of unfired pressure vessels, compressors, air-driven machinery, valves, piping, moisture traps, reducing valves, safety valves, pressure gauges and drainage arrangements, particularly where susceptible to frost damage.
2	Installation details indicating assigned working pressures, temperatures and flow rates.
3	Materials, sizes, capacities, design working pressures, temperatures, testing arrangements and procedures of compressors, air driven machinery, piping, valves and other components.
4	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements of compressors, air driven machinery, piping and allowances for vibration; and c. protection against piping damage and over-pressure to or from cooling fluid in integral jackets.
5	Information set out in items 1 to 4 is not required to be submitted for a. vessels not in excess of 18 m and certificated to carry not more than 12 passengers; or b. systems with an assigned working pressure not in excess of 103 kPa.
6	Information for valves and similar minor components referred to in item 3 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
7	Information for compressors or air driven machinery referred to in item 3 is not required to be submitted where an approved classification society certifies that the compressors or air driven machinery have been designed and constructed in accordance with rules or codes except that the driving or driven components shall

Item	Required Information
	meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.
Refrigerating Gas Systems	
8	General arrangement and location of compressors, valves, driers, strainers, oil separators, safety devices, sight glasses, piping, temperature and pressure gauges, alarms, condensers, liquid receivers, evaporation arrangements, refrigerated and air conditioned spaces.
9	Installation details indicating assigned working pressures, temperatures and capacities.
10	Materials, sizes, capacities, design working pressures, temperatures, testing arrangements and procedures of compressors, piping, valves and other components.
11	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements of compressors and piping, allowances for vibration, thermal expansion and contraction and insulation; c. protection against piping damage and against over-pressure to crankcases and to or from cooling fluid in integral jackets of machinery; and d. ventilating refrigeration machinery spaces and, for ammonia systems, the gas containing and clearing methods.
12	Information set out in items 8 to 11 is not required to be submitted for a. vessels not in excess of 18 m certificated to carry not more than 12 passengers; or b. systems where the power absorbed by the gas compressor is not in excess of 10 kW except where the gas is ammonia.
13	Information for valves and similar minor components referred to in item 10 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
14	Information for compressors referred to in item 10 is not required to be submitted where an approved classification society certifies that the compressors have been designed and constructed in accordance with rules or codes except that the driving motors or engines of the compressors shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

Item	Required Information

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of compressors, piping, flexible hoses, components and materials to be used, including welding or brazing metal.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds.
4	Witnessing of hydrostatic pressure tests and for a refrigerating gas system, verification that gas leak testing has been satisfactorily carried out in accordance with rules or codes.
5	Inspection of securing arrangements of compressors and heat exchangers, connection of piping to associated systems and verification of correct adjustment and operational condition of safety, control and monitoring devices.
6	Witnessing of operational tests of the system in accordance with rules or codes.
7	Items 1 to 6 do not apply to a. non-essential vessel systems containing compressed air and having an assigned working pressure not exceeding 103 kPa; and b. refrigerating gas systems where the power absorbed by the gas compressor is not in excess of 10 kW, except where the gas is ammonia.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	For air and refrigerating gas compressors and air-driven machinery, where applicable and, in the opinion of the inspector, practicable, verification that the compressors, air-driven machinery, cooling systems, control, monitoring alarm and safety devices are in correct adjustment and operational condition.
2	For compressed air and refrigerating gas piping systems, where applicable and, in the opinion of the inspector, practicable, a. inspection of securing and insulating arrangements of piping systems and of locations where fluid leakage and excessive vibration may occur; and b. verification that valves and fittings within the system are in correct adjustment and operational condition.
3	Items 1 and 2 do not apply to a. non-essential vessel systems containing compressed air and having an assigned working pressure not in excess of 103 kPa; and b. refrigerating gas systems where the power absorbed by the gas compressor is not in excess of 10 kW, except where the gas is ammonia.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	For compressed air systems a. all compressor and air driven machinery external parts and internal parts of crankcases or rotary machinery casings without further dismantling if the general condition of the machinery shows that it is suitable for further service; b. compressor machinery shut-off valves, safety devices and other components without dismantling if the general condition of the machinery shows that it is suitable for further service; and c. all securing arrangements without dismantling if a general examination shows that the condition of the components is suitable for further service.
2	Item 1 does not apply to non-essential vessel systems containing compressed air and having an assigned working pressure of not less than 103 kPa.
3	No periodic special inspection is required for complex mechanisms where written information is provided to the inspector from firms specializing in the reconditioning of these parts indicating that the parts are in good order and adjustment.

1.4.2.2 **Subdivision II Intervals**

Item	Requirements
1	At intervals not exceeding five years.

SCHEDULE XII - Fuel Oil Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement and location of permanently installed fuel oil systems including connections to boilers, engines, heat exchangers, incinerators, cooking ranges, cabin hot-air heaters, pumps, purifiers, filters, valves, pressure gauges, piping, filling stations, tanks, tank sounding devices, flame-screened venting and overflow arrangements, drip trays and sludge facilities and oil pollution prevention components.
2	Structural details of fuel oil tanks not forming part of the hull structure and of not more than 4 500 L capacity.
3	Installation details indicating assigned working pressures, temperatures, flow rates and the oil flash-point (closed cup test).
4	Materials, sizes, capacities, design working pressures, temperatures, testing arrangements and procedures of incinerators, pumps, purifiers, filters, valves, tank sounding and venting devices, piping and other components.
5	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements for pumps, non-structural tanks, appliances, piping, flexible hose installations and other components; c. piping insulation and hazard protection particularly against heated oil; d. cross connection with other systems; and e. remote control of valves in systems.
6	Information set out in items 3 to 5 need not be submitted for vessels not in excess of 18 m in length.

Item	Required Information
7	Information for valves and similar minor components referred to in item 4 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
8	Information for pumps or purifiers referred to in item 4 is not required to be submitted where an approved classification society certifies that the pumps or purifiers have been designed and constructed in accordance with rules or codes except that the driving motor or engine of pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of pumps, appliances, piping, tank sounding and venting devices, flexible hoses, materials, including weld metal, oil pollution prevention equipment and other components to be used.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds and bonding of tanks
4	Witnessing of hydrostatic pressure tests in accordance with rules or codes and verification of system flushing.
5	Inspection of securing arrangements of pumps, heat exchangers and appliances, connection of piping to associated systems and verification of correct adjustment and operational condition of safety, control and monitoring devices.
6	Witnessing of operational tests of the system in accordance with rules or codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Where applicable and, in the opinion of the inspector, practicable, a. inspection of securing arrangements and of locations where fluid leakage or excessive vibration may occur, particularly from any heated oil piping and flexible hoses; b. verification that pumps, heat exchangers, appliances, control, monitoring and alarm systems, tank sounding and venting devices and all oil pollution control devices are in correct adjustment and operational condition; c. verification that documentation is held aboard the vessel indicating the closed cup test flash point of the vessel's fuel oil; and d. verification that a 0.25 L minimum sample of the fuel oil that is carried and used on board the vessel is held aboard vessels of 500 GT and over until the fuel oil is completely used. e. verify the remote fuel shut offs are labelled outside of machinery spaces. f. verify fuel shut offs have been tested. g. verify location of remote fuel shut-offs away from open fuel burning appliances and outside of machinery space.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	External and internal parts of pumps and driving components including valves, bearings, control and safety devices, except gear or rotary pumps where dismantling is not required if a general examination shows that the condition of components is suitable for further service.
2	Systems shut-off valves, safety devices and other components without dismantling if a general examination shows that the condition of the components is suitable for further service. Test remote fuel shut-offs
3	Securing arrangements of components without dismantling if a general examination shows that the condition of the securing arrangements is suitable for further service.
4	No special periodic inspection is required for complex mechanisms where written information is provided to the inspector from firms specializing in the reconditioning of these parts that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	At intervals not exceeding five years.

SCHEDULE XIII - Liquefied Petroleum Gas Fuel Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement and location of the complete system including gas fuel cylinders, components, piping, appliances, venting and safety arrangements.
2	Installation details stating assigned working pressures, materials and sizes of cylinders, components, piping and appliances.
3	Details of a. cylinder, component, piping and appliance connections; b. securing arrangements for cylinders, components, pipes and appliances; and c. hazard protection for cylinders, components, pipes and appliances.
4	Data indicating the authority referred to in *Marine Machinery Regulations* items 7 and 24 of Division II of Part I for cylinders, components and appliances.
5	Information set out in items 1 to 4 is not required to be submitted for vessels not exceeding 24 m in length.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of gas fuel storage cylinders, components, piping, flexible hoses, appliances and vent fans.

Item	Requirements
2	Inspection of securing arrangements, protective housings, component and piping connections, venting arrangements, all safety devices and arrangements.
3	Witnessing of gas fuel pressure and leakage tests as follows: a. note the pressure on the gauge when the appliance burner valves are shut and the packless shut-off valve and one cylinder valve are open; b. note if the pressure on the gauge remains constant for at least 10 minutes when the cylinder valve is closed; c. if the pressure on the gauge drops before the expiration of 10 minutes, locate the leakage by applying liquid detergent or soap water solution to all connections of the gas system but do not use flame to test for leaks; and d. repeat items (a), (b) and (c) for each cylinder in a multi-cylinder gas fuel system.
4	Witnessing of operational tests of the system and verification that safety and operating instructions are posted in accordance with items 44 and 45 of Division II of Part I of the *Marine Machinery Regulations*.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Inspection of securing arrangements and for evidence of gas fuel leakage.
2	Verification that all components and venting systems are in correct adjustment and operational condition.
3	Verification that safety and operating instructions are correctly posted.
4	Test of gas leakage monitoring system

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	Entire gas fuel systems a. for evidence of deterioration or leakage without dismantling if a general examination shows that the condition of the liquefied petroleum gas fuel systems is suitable for further service; and

Item	Requirements
	b. by witnessing of a gas leakage test in accordance with item 3 of Division II of Part III.
2	Securing arrangements of gas fuel systems without dismantling if a general examination shows that the condition of components is suitable for further service.
3	Gas cylinders to verify that they have been tested in accordance with the requirements of the Transport of Dangerous Goods Directorate of the Department of Transport.
4	A gas fuel storage cylinder shall be rejected for further service regardless of the date of its previous test if it a. leaks; b. is weakened appreciably by corrosion, denting or bulging or shows other evidence of rough usage; c. has lost five per cent of its tare weight; or d. has been in a fire.
5	Fans and ducting of venting systems to verify that they are suitable for the required use.
6	Gas Leakage monitoring system

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	At intervals not exceeding five years.

SCHEDULE XIV - Lubricating Oil and Hydraulic Power Oil Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Required Information
1	General arrangement and location of permanently installed oil systems, including connections to all applicable machinery, heat exchangers, pumps, purifiers, filters, valves, piping, filling stations, tanks, tank sounding devices, flame screened

Item	Required Information
	venting and overflow arrangements, drip-trays and sludge facilities and oil pollution prevention components.
2	Structural details of tanks not forming part of the hull structure.
3	Installation details indicating assigned working pressures, temperatures, flow rates, oil flash-point (closed cup test) and oil viscosity at highest and lowest operating temperatures.
4	Materials, sizes, capacities, design working pressures, temperatures, testing arrangements and procedures of pumps, purifiers, piping, valves and other components.
5	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements for pumps, non-structural tanks, piping, flexible hose installations and other components; c. piping hazard protection, particularly against heated oil; and d. remote control of valves in systems.
6	Information set out in items 1 and 3 to 5 is not required to be submitted for a. vessels not in excess of 18 m in length and certificated to carry not more than 12 passengers; b. a lubricating oil system in which the oil storage tank capacity is not in excess of 250 L; and c. a hydraulic power oil system for i. non-essential services, or ii. units where the total output power is not in excess of 2 kW.
7	Information for valves and similar minor fittings referred to in item 4 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
8	Information for pumps and purifiers referred to in item 4 is not required to be submitted where an approved classification society certifies that the pumps or purifiers have been designed and constructed in accordance with rules or codes except that the driving motor or engine of pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction Inspection

Item	Requirements
1	None.

1.3.2 Division II Installation Inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of pumps, applicable essential machinery, piping, flexible hoses, materials, including welding metal, and other components to be used.
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds.
4	Witnessing of hydrostatic pressure tests in accordance with rules or codes and verification of system flushing.
5	Inspection of securing arrangements of the lubricating oil and hydraulic power oil system and verification of correct adjustment and operational condition of safety, control and monitoring devices.
6	Witnessing of operational tests of the system in accordance with rules or codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	For essential lubricating oil and hydraulic power oil systems and, in locations where oil leakage is hazardous, non-essential systems, a. inspection of securing arrangements and of locations where fluid leakage or excessive vibration may occur, particularly any heated piping or flexible hoses; b. verification that the lubricating oil and hydraulic power oil system, control, monitoring and alarm systems are in correct adjustment and operational condition.

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	For essential lubricating oil and hydraulic power oil systems, a. external and internal parts of pumps and driving components including valves, bearings, controls, and safety devices, except gear or rotary pumps where dismantling is not required if a general examination shows that the condition of the components is suitable for further service; b. systems shut-off valves, safety devices and other components without dismantling if a general examination shows that the condition of the components is suitable for further service; and c. securing arrangements without dismantling if a general examination shows that the condition of the components is suitable for further service.
2	No periodic special inspection is required for complex mechanisms where written information is provided to the inspector from firms specializing in the reconditioning of these parts that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	At intervals not exceeding five years.

SCHEDULE XV - Bilge and Ballast Pumping Systems, Heeling, Trimming and Passive Roll Stabilizing Tank Filling and Emptying Systems

1.1 Part I Design specifications

The design specifications requirements remain as specified in the *Marine Machinery Regulations* (MMR) where applicable.

1.2 Part II Plans

Item	Information Required
1	General arrangement and location of bilge, ballast, heeling, trimming and passive roll stabilizing systems, including venting, overflow and sounding arrangements, showing all connected piping, valves, pumps and equipment, emergency systems and cross-connections to other fluid systems.
2	Installation details stating assigned working pressures and flow rates of fluid and, where applicable, the Criterion of Service Numeral of the vessel, as determined pursuant to the *Hull Construction Regulations*.
3	Materials, sizes, capacities, design working pressures, testing arrangements and procedures of pumps, valves, piping, any tank sounding and venting devices.

Item	Information Required
4	Details of a. pipe connections to flanges or other joining arrangements; b. securing arrangements for pumps, piping and other components and allowances for vibration; c. cross connection with other systems; d. remote control of valves in systems; and e. components preventing the discharge overboard of harmful substances.
5	Information set out in items 2 to 4 is not required to be submitted for vessels not in excess of 18 m in length.
6	Information for valves and similar minor components referred to in item 3 is not required to be submitted where a manufacturer or an approved classification society certifies that the types of valves or similar minor components have been designed and constructed in accordance with rules or codes.
7	Information for pumps referred to in item 3 is not required to be submitted where an approved classification society certifies that the pumps have been designed and constructed in accordance with rules or codes except that the driving motor or engine of pumps shall meet the requirements of Appendix 3, Part II of the applicable schedule of Schedules I to XV.

1.3 Part III Construction and Installation Inspections

1.3.1 Division I Construction inspection

Item	Requirements
1	None.

1.3.2 Division II Installation inspection

Item	Requirements
1	Identification from component inspection certificates, before installation is commenced, of pumps, any tank sounding and venting devices, flexible hoses, materials, welding metal, other components and harmful substances discharge prevention equipment to be used.

Item	Requirements
2	Verification that welding was carried out by welders certified by a Provincial Government of Canada, or another authority having similar standards where the welding was carried out outside Canada, for the class of work to be done.
3	Inspection of welds.
4	Witnessing of hydrostatic pressure tests in accordance with rules or codes, including hydrostatic pressure test of bilge suction pipes through double bottom tanks to the same pressure as the tanks through which they pass.
5	Inspection of securing arrangements, connection of bilge and ballast pumping systems and heeling, trimming and passive role tank filling and emptying systems to associated systems and verification of correct adjustment and operational condition of safety, control and monitoring devices.
6	Witnessing of operational tests of the system in accordance with rules or codes.

1.4 Part IV Periodic General Inspections and Periodic Special Inspections

1.4.1 Division I Periodic General Inspection

Item	Requirements
1	Where applicable and, in the opinion of the inspector, practicable, a. inspection of securing arrangements and of locations where fluid leakage and excessive vibration may occur; b. verification that all components are in correct adjustment and operational condition; and c. verification that all control, monitoring and alarm systems (high bilge alarm), including any tank sounding and venting devices, are in correct adjustment and operational condition. d. Verify Bilge alarms are labelled and tested

1.4.2 Division II Periodic Special Inspection

1.4.2.1 Subdivision I Parts to be Inspected

Item	Requirements
1	External and internal parts of pump and driving components including valves, controls and safety devices.
2	External and internal parts of bilge valves including emergency bilge suction valves, mud boxes and strainers.

Item	Requirements
3	Securing arrangements, without dismantling if a general examination shows that the condition of the components is suitable for further service.
4	No inspection is required for complex mechanisms where written information is provided to the inspector from firms specializing in the reconditioning of these parts indicating that the parts are in good order and adjustment.

1.4.2.2 Subdivision II Intervals

Item	Requirements
1	At intervals not exceeding five years.

APPENDIX 4 - Schedules for Large Fishing Vessel Greater Than 150 GT or Greater Than 24.4 Meters in Length

SCHEDULE E - Hydraulic Pressure Tests

1.1 General

1.1.1 Boiler

1.1.1.1 The test by hydraulic pressure on boilers shall be as follows:

Items	Test to be applied
New boilers that are allowed a working pressure not over 690 kPa	Twice the working pressure
New boilers that are allowed a working pressure over 690 kPa	One and a half times the working pressure plus 345 kPa
Boilers that are not new and that are being inspected for the first time	One and one-half times the working pressure
Boilers that have been lifted, before being reset, and boilers that have undergone important repairs	One and one-half times the working pressure

1.1.1.2 The hydraulic test applied at annual inspection and at such other times as are considered necessary by the inspector, except as provided in subsection 1.1.1.1 shall not exceed one and one-half times the working pressure.

1.1.2 Boiler mountings

1.1.2.1 The tests by hydraulic pressure on boiler mountings shall be as follows:

Items	Test to be applied
All mountings except feed check valves	Twice the working pressure
Feed check valves	Two and one-half times the working pressure

1.1.2.2 but in any case the hydraulic test pressure need not be more than 7 000 kPa above the boiler working pressure.

1.1.3 Steam Pipes

1.1.3.1 The tests by hydraulic pressure on steam pipes shall be as follows:

Items	Test to be applied
All steam pipes, new or old	Twice the working pressure

1.1.4 Air Receivers

1.1.4.1 The test by hydraulic pressure on air receivers shall be as follows:

Items	Test to be applied
New air receivers that are allowed a working pressure not over 690 kPa	Twice the working pressure
New air receivers that are allowed a working pressure over 690 kPa	One and a half times the working pressure plus 345 kPa
Air receivers that are not new, and that are being inspected for the first time	One and one-half times the working pressure
Air receivers that have undergone important repairs	One and one-half times the working pressure

1.1.4.2 The test applied at annual inspection, or at such other times as are considered necessary by the inspector, except as provided in subsection 1.1.4.1, shall not exceed one and one-half times the working pressure.

SCHEDULE F - Steering Chains and Anchor Chains

1.1 Chain Diameter

1.1.1 Dimensions for renewal

1.1.1.1 Table showing original mean diameter, and reduce mean diameter requiring renewal.

Original Diameter (mm)	Mean Diameter Requiring Renewal (mm)
10	9
11	10
13	11.5
14	12.5
16	14.5
17	15.5
19	16.5
21	18.5
22	19.5
24	21.5
25	23
27	24
29	25.5
30	27
32	29
33	30
35	31
37	33
38	34

Original Diameter (mm)	Mean Diameter Requiring Renewal (mm)
40	36
41	37

1.1.1.2 The original required mean diameter shall be calculated from the data given on the rudder plan after the plan has been submitted for approval and this size will be noted on the plan at that time.

APPENDIX 5 - General Schedules

SCHEDULE A - Chain Cables, Stream Chains and Steering Chains Wrought Iron Short Link Chain Cables

Minimum size (mm)	Proof test (kN)	Breaking test (kN)	Minimum weight per metre (kg)
11	22.5	45	3.7
13	30	60	4.6
14	37	74	5.6
16	46	92	6.5
17	56	112	7.4
19	67	135	8.8
21	79	157	10.2
22	91	182	11.8
24	105	209	13.4
25	120	239	15.3
27	135	269	17.1
29	151	301	19.2
30	168	337	21.5
32	187	374	23.8
33	206	411	26.2
35	226	450	28.7
37	247	493	31.5
38	269	538	34.0
40	292	583	36.8

Minimum size (mm)	Proof test (kN)	Breaking test (kN)	Minimum weight per metre (kg)
41	315	630	39.8
43	340	680	42.8
44	366	732	46.3
46	393	785	49.8
48	420	840	53.5
49	448	897	57.2
51	478	957	61.1

SCHEDULE B - Chain Cables, Stream Chains and Steering Chains Stud Link Chain Cables

Minimum size	Cables of wrought iron		Cables of special steel		Minimum weight per metre
	Proof test	Breaking test	Proof test	Breaking test	
millimetres	kilonewtons	kilonewtons	kilonewtons	kilonewtons	kilograms
11	34	51	48	71	3.2
13	45	67	63	95	3.9
14	56	84	79	118	4.9
16	70	105	98	147	6.0
17	85	127	119	178	6.7
19	101	151	142	211	8.1
21	119	177	165	248	9.5
22	137	206	192	288	10.9
24	157	236	220	331	12.5
25	179	269	251	377	14.1
27	202	303	283	425	16.0
29	227	340	318	476	18.0
30	253	379	358	530	20.1
32	281	420	393	588	22.2
33	309	463	432	649	24.5
35	339	508	474	711	26.9
37	370	555	518	776	29.4
38	404	585	565	819	32.0

Minimum size	Cables of wrought iron		Cables of special steel		Minimum weight per metre
	Proof test	Breaking test	Proof test	Breaking test	
millimetres	kilonewtons	kilonewtons	kilonewtons	kilonewtons	kilograms
40	437	612	612	857	34.7
41	473	663	663	928	37.0
43	511	715	715	1001	39.8
44	550	769	769	1076	42.8
46	589	825	825	1155	46.1
48	630	882	882	1235	49.3
49	673	942	942	1318	52.6
51	717	1004	1004	1406	55.6
52	762	1067	1067	1494	59.0
54	810	1133	1133	1587	62.5
56	858	1201	1201	1681	66.4
57	908	1270	1270	1779	70.1
59	959	1343	1343	1881	74.1
60	1011	1416	1416	1982	78.3
62	1065	1491	1491	2088	82.4
64	1121	1569	1569	2197	87.0
65	1163	1628	1628	2279	91.7
67	1205	1686	1686	2362	96.3
68	1247	1745	1745	2443	100.9
70	1288	1804	1804	2525	105.8

Minimum size	Cables of wrought iron		Cables of special steel		Minimum weight per metre
	Proof test	Breaking test	Proof test	Breaking test	
millimetres	kilonewtons	kilonewtons	kilonewtons	kilonewtons	kilograms
71	1329	1861	1861	2606	110.9
73	1371	1920	1920	2687	116.0
75	1412	1977	1977	2767	121.3
76	1453	2034	2034	2847	126.6
78	1493	2090	2090	2925	132.0
79	1532	2145	2145	3003	137.5
81	1571	2200	2200	3080	143.3
83	1610	2254	2254	3156	148.9
84	1648	2307	2307	3229	154.9
86	1685	2359	2359	3303	160.9
87	1721	2409	2409	3373	166.9
89	1758	2460	2460	3445	173.2
90	1793	2509	2509	3512	179.2
92	1826	2556	2556	3577	185.2
94	1858	2602	2602	3642	191.5
95	1891	2647	2647	3707	197.5
97	1922	2690	2690	3766	203.5
98	1952	2733	2733	3826	209.7

SCHEDULE C - Renewal of Steering Chains and Chain Cables when Worn

When any length of a chain is so worn that the mean diameter at its most worn part is reduced to the size given in the following Table it is to be renewed

Original Diameter millimetres	Mean Diameter requiring renewal millimetres
10	9
11	10
13	11.5
14	12.5
16	14.5
17	15.5
19	16.5
21	18.5
22	19.5
24	21.5
25	23
27	24
29	25.5
30	27
32	29
33	30
35	31
37	33
38	34

Original Diameter millimetres	**Mean Diameter requiring renewal millimetres**
40	36
41	37
43	38
44	39
46	41
48	43
49	44
51	45
52	47
54	48
56	50
57	51
59	53
60	54
62	56
64	57
65	58
67	60
68	61
70	63
71	64
73	65

Original Diameter millimetres	**Mean Diameter requiring renewal millimetres**
75	67
76	68
78	70
79	71
81	73
83	75
84	75
86	77
87	78
89	80
90	81
92	83
94	84
95	85
97	87
98	88

SCHEDULE D - Proof Tests for Anchors

Weight kilograms	Test kilonewtons
50	33.5
100	44
150	54
200	63
250	72.5
300	81
350	91
400	99.5
450	109.5
500	118
550	126.5
600	136.5
650	144.5
700	153.5
750	162
800	170.5
850	179
900	186.5
950	195
1000	203.5
1050	212.5

Weight **kilograms**	**Test** **kilonewtons**
1100	220
1150	227
1200	234.5
1250	243
1300	251.5
1350	259
1400	266.5
1450	273.5
1500	281
1550	288.5
1600	296
1650	303
1700	310.5
1750	318
1800	325
1850	331
1900	338.5
1950	344.5
2000	350.5
2050	358
2100	364.5
2150	371.5

Weight **kilograms**	**Test** **kilonewtons**
2200	379
2250	385
2300	391.5
2350	397
2400	403.5
2450	409.5
2500	416
2550	421
2600	428
2650	434
2700	439
2750	445
2800	451
2850	457.5
2900	463.5
2950	468.5
3000	474.5
3050	479.5
3100	485.5
3150	490.5
3200	495.5
3250	500

Weight **kilograms**	**Test** **kilonewtons**
3300	505
3350	511.5
3400	516.5
3450	522
3500	527
3550	532
3600	537
3650	542
3700	546.5
3750	551.5
3800	556.5
3850	561.5
3900	565.5
3950	570.5
4000	573.5
4050	578.5
4100	583.5
4150	588.5
4200	593.5
4250	598
4300	603
4350	607

Weight **kilograms**	**Test** **kilonewtons**
4400	610.5
4450	615.5
4500	620.5
4550	624
4600	627.5
4650	632.5
4700	637.5
4750	641.5
4800	645
4850	648.5
4900	652
4950	656
5000	659.5
5050	663.5
5100	667
5150	671
5200	674
5250	678
5300	681.5
5350	685.5
5400	689
5450	693

Weight **kilograms**	**Test** **kilonewtons**
5500	696.5
5550	700
5600	703.5
5650	707.5
5700	711
5750	715
5800	718.5
5850	722.5
5900	725.5
5950	729.5
6000	733
6050	736.5
6100	739.5
6150	742.5
6200	745.5
6250	749
6300	751.5
6350	754.5
6400	757.5
6450	761
6500	764
7000	794.5

Weight **kilograms**	**Test** **kilonewtons**
7500	825.5
8000	851
8500	875.5
9000	890
9500	924.5
10000	949

The weight given in the above table is either for stockless anchors or for stocked anchors without the stock.

For intermediate weights the test may be obtained by interpolation

APPENDIX 6 – Level of Approval Required for Request for Extension, Postponement, Deviation or Exemption

Level of Authorization Required Required for Request for Extension, Postponement, Deviation or Exemption						
Item	Subject	Vessel Type	Action	Duration	Approval	Direction
1	**Extension**	**Fishing** and **Non- passenger** greater than 15 GT	Extension for Safety Inspection Certificate	Not exceeding **1 month** beyond due date of periodic inspection	Transport Canada Marine Safety Inspector	Issue a short term certificate for 1 month and document decision
2	**Extension**	**Passenger** greater than 15 GT	Extension for Safety Inspection Certificate	Not exceeding **1 month** beyond the due date of the inspection	Transport Canada Marine Safety Inspector	Issue a short term certificate for 1 month and document decision
3	**Extension**	**Fishing** and **Non- passenger** greater than 15 GT	Extension for Safety Inspection Certificate	Not exceeding **5 months** beyond due date of periodic inspection	Regional Director (RD) / Associate Director (AD)	Issue a short term certificate for 5 months and document decision
4	**Extension**	**Passenger** greater than 15 GT	Extension for Safety Inspection Certificate	Not exceeding **5 months** beyond the due date of the inspection	Regional Director (RD) / Associate Director (AD)	Issue a short term certificate for 5 month and document decision
5	**Postponement**	**Fishing** greater than 150 GT	**Postponement** of the annual or four year	Not exceeding **5 months**	Regional Director (RD) /	Issue a short term certificate for

Level of Authorization Required Required for Request for Extension, Postponement, Deviation or Exemption						
Item	Subject	Vessel Type	Action	Duration	Approval	Direction
			inspection of the hulls of all fishing vessels to be postponed from the due date, either wholly or in part.	from the due date	Associate Director (AD)	5 months and document decision
6	**Postponement**	All Vessels	Postponement of the machinery and hull wholly or in part	Not exceeding **12 months** beyond due date of periodic inspection	National Functional Director	Regional Director (RD) / Associate Director (AD) **Recommends** to National Functional Director and document decision
7	**Postponement**	All Vessels	Postponement of the machinery and hull wholly or in part	More than **12 months**	National Policy Decision	Submission to HQ (MTRB secretariat) for a National Policy Decision
8	**Deviation**	All Vessels **excluding:** Ro-Ro passenger vessels engaged on unlimited voyages and bulk carriers and oil tankers more than 15 years of age and engaged on unlimited voyages	UWILD	**One Cycle**	Regional Director (RD) / Associate Director (AD)	Issue a Letter of Acceptance (LOA) In accordance with the requirements of Appendix 2 of this standard

APPENDIX 7 - List of Referenced Regulations, Transport Publication (TP) and International Maritime Organization (IMO) Documents

Acts and Regulations:

- *Canada Shipping Act 2001 and Associated Regualtions*
- *Arctic Waters Pollution Prevention Act* and Associated Regualtions

Transport Canada Technical Publications (TP):

- TP7301: Stability, Subdivision and Load Line Standard
- TP127: Ships Electrical Standards
- TP 11960: Standards for the Construction, Inspection, and Operation of Barges Carrying Oil or Dangerous Chemicals in Bulk
- TP 15211: Canadian Supplement to the Solas Convention
- TP 14475: Canadian Life Saving Appliance Standard
- TP 14612: Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products

International Maritime Organization (IMO):

- International Conventions and Codes
- HSSC - Harmonized System of Survey and Certification