

Catalogue no. 41-019-X

Steel, Tubular Products and Steel Wire

December 2009



Statistics
Canada

Statistique
Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website at www.statcan.gc.ca, e-mail us at infostats@statcan.gc.ca, or telephone us, Monday to Friday from 8:30 a.m. to 4:30 p.m., at the following numbers:

Statistics Canada's National Contact Centre

Toll-free telephone (Canada and the United States):

Inquiries line	1-800-263-1136
National telecommunications device for the hearing impaired	1-800-363-7629
Fax line	1-877-287-4369

Local or international calls:

Inquiries line	1-613-951-8116
Fax line	1-613-951-0581

Depository Services Program

Inquiries line	1-800-635-7943
Fax line	1-800-565-7757

To access this product

This product, Catalogue no. 41-019-X, is available free in electronic format. To obtain a single issue, visit our website at www.statcan.gc.ca and select "Publications."

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed *standards of service* that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "About us" > "Providing services to Canadians."

Steel, Tubular Products and Steel Wire

December 2009

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2010

All rights reserved. The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

February 2010

Catalogue no. 41-019-X, vol. 5, no. 12

ISSN 1712-980X

Frequency: Monthly

Ottawa

Cette publication est également disponible en français.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

User information

Symbols

The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published

Table of contents

Highlights	4
Related products	5
Statistical tables	
1 Steel primary forms and pig iron	7
1-1 Disposition of net shipments of rolled steel products, by product, monthly 2009	7
1-2 Disposition of net shipments of rolled steel products, by product, year-to-date 2009	9
1-3 Production of pig iron	10
1-4 Pig iron and scrap charged to steel furnaces	11
1-5 Production and shipments of steel, primary forms, monthly	11
1-6 Production and shipments of steel, primary forms, year-to-date	11
2 Steel pipe and tubing	12
2-1 Production and shipments, monthly 2009	12
2-2 Production and shipments, year-to-date 2009	13
3 Steel and specified wire products	13
3-1 Factory shipments, monthly	13
3-2 Factory shipments, year-to-date	14
Data quality, concepts and methodology	
Concepts, methodology and data quality	15
Definitions	17

Highlights

December 2009

- Monthly production of primary steel and pig iron decreased 7.2 % in December 2009 to 943,010 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products increased 8.8 % to 874,913 metric tonnes.
- Between November 2009 and December 2009, production of steel pipe and tubing decreased 13.5 % to 125,483 metric tonnes.
- Total shipments of steel wire and specified wire products decreased 23.7 % to 23,374 metric tonnes in December 2009.

Related products

Selected CANSIM tables from Statistics Canada

303-0046	Production and shipments of steel pipe and tubing
303-0047	Production and shipments of steel wire and specified wire products
303-0048	Production and shipments of pig iron
303-0049	Pig iron and scrap products charged to furnace, by the primary metal industry
303-0050	Production and shipments of steel casting and primary forms steel products
303-0051	Destination of net shipments of rolled steel products to consuming industries

Selected surveys from Statistics Canada

2105	Steel Pipe and Tubing
2106	Steel Wire and Specified Wire Products
2116	Steel Primary Forms, Steel Castings and Pig Iron
2184	Disposition of Shipments of Ingots and Rolled Steel Products

Statistical tables

Table 1-1

Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, monthly 2009

SDC No.	Steel primary forms	Rails and heavy structural sections	Intermediate structural sections	Light structural sections	Concrete reinforcing bars	Other hot rolled bars	Wire rods	Railway track material
metric tonnes								
December								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	0	698	5,146	4,337	1,879	x	0	.
21 Motor vehicles and parts	0	0	89	3	.	2,801	0	.
22 Railway operating	0	.	.	.	0	0	0	.
23 Railroad cars and locomotives	.	70	.	.	.	.	.	.
24 Shipbuilding	0	.	.	.	.	.	.	.
31 Steel fabrication	0	503	693	1,856	33,354	x	0	.
32 Metal building systems	.	0	0	.	31	0	.	.
33 Contractors' products	.	0	0	.	189	65	220	.
34 Miscellaneous stamping and coating	0	0	46	69	.	181	.	.
41 Natural resources and extractive industries	.	38	0	0	304	17,966	0	.
51 Agricultural equipment	.	0	0	0	0	336	.	0
52 Non electrical machinery	.	0	1,379	0	.	5,059	0	.
53 Electrical machinery	.	.	.	.	.	0	.	.
54 Industrial packaging material	.	.	.	.	.	0	.	.
61 Pipes and tubes	.	.	.	.	.	0	.	.
62 Wire and wire products	0	.	.	.	0	380	x	.
63 Containers and closures	.	.	.	.	.	.	.	.
64 Appliances and utensils industries	.	.	.	.	.	.	.	.
70 Miscellaneous industries	0	0	.	.	0	0	.	.
Total domestic shipments	0	1,309	7,353	6,265	35,757	32,267	x	0
Total domestic alloy shipments	0	.	.	.	.	3,405	x	.
81 Exports to the United States	x	491	2,415	3,184	33	15,482	x	.
82 Exports to other countries (excluding United States)	20,749	0	21	0	0	17,482	x	0
Total disposition	x	1,800	9,789	9,449	35,790	65,231	x	0
Total alloy shipments	0	.	.	.	.	5,872	0	.
Producers interchange, for sale	x	.	0	.	.	585	0	.
Exports for conversion and return	.	.	.	.	.	0	.	.
Imports by producers (including conversion)	0	.	.	.	.	.	0	.

See notes at the end of the table.

Table 1-1 – continued

Steel primary forms and pig iron — Disposition of net shipments ¹ of rolled steel products, by product, monthly 2009

SDC No.	Cold finished bars	Plates ²	Hot rolled sheets and coils	Cold reduced sheets and strip and other cold rolled and coated	Tin plate and tin free steel (T.F.S.)	Galvanized sheets including galvalume	Total, rolled steel products
metric tonnes							
December							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses	x	15,801	151,987	15,814	2,630	24,175	229,239
21 Motor vehicles and parts	851	0	18,963	5,236	0	26,256	54,199
22 Railway operating	.	0	0	.	.	0	0
23 Railroad cars and locomotives	.	87	0	.	.	.	157
24 Shipbuilding	.	.	.	.	.	.	0
31 Steel fabrication	x	2,547	5,752	0	.	4,704	49,839
32 Metal building systems	.	.	0	.	.	2,087	2,118
33 Contractors' products	x	0	5,162	x	.	19,830	27,889
34 Miscellaneous stamping and coating	19	0	3,133	x	.	10,257	x
41 Natural resources and extractive industries	28	0	3	0	.	0	18,339
51 Agricultural equipment	64	805	0	0	.	.	1,205
52 Non electrical machinery	0	0	0	0	.	0	6,438
53 Electrical machinery	.	.	0	1,302	.	894	2,196
54 Industrial packaging material	.	.	0	3,214	0	0	3,214
61 Pipes and tubes	0	0	75,971	866	.	694	77,531
62 Wire and wire products	x	.	108	40	.	84	x
63 Containers and closures	0	.	0	619	2,162	.	2,781
64 Appliances and utensils industries	.	.	573	2,409	.	1,620	4,602
70 Miscellaneous industries	55	0	0	.	.	.	55
Total domestic shipments	x	19,240	261,652	35,720	4,792	90,601	516,026
Total domestic alloy shipments	183	0	.	0	.	.	x
81 Exports to the United States	1,329	6,085	x	18,763	15,103	32,137	291,692
82 Exports to other countries (excluding United States)	0	229	x	860	505	7,363	67,195
Total disposition	x	25,554	352,904	55,343	20,400	130,101	874,913
Total alloy shipments	183	0	.	0	.	.	6,055
Producers interchange, for sale	0	.	0	0	.	0	x
Exports for conversion and return	.	.	0	0	.	0	0
Imports by producers (including conversion)	.	180	2,151	8,009	.	0	10,340

1. Compiled by principal consuming industries, according to distribution of shipments reported by iron and steel mills.

2. Effective January 2000, producers have changed the way they report hot rolled products. The result is a change in definitions. Plates including plates for pipes and tubes becomes plates. Hot rolled sheet and strip becomes hot rolled sheets and coils and now includes all hot rolled flat products in coils, regardless of thickness.

Table 1-2

Steel primary forms and pig iron — Disposition of net shipments ¹ of rolled steel products, by product, year-to-date 2009

SDC No.	Steel primary forms	Rails and heavy structural sections	Intermediate structural sections	Light structural sections	Concrete reinforcing bars	Other hot rolled bars	Wire rods	Railway track material
metric tonnes								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	16	16,823	51,173	46,267	45,848	x	720	.
21 Motor vehicles and parts	991	17	833	99	.	49,416	194	.
22 Railway operating	..	.	.	.	.	60	..	.
23 Railroad cars and locomotives	.	1,071	.	.	.	.	.	.
24 Shipbuilding	..	.	.	.	.	.	.	.
31 Steel fabrication	..	4,342	13,225	29,032	479,986	x	..	.
32 Metal building systems	.	4	21	.	497	210	.	.
33 Contractors' products	.	..	..	.	4,562	x	x	.
34 Miscellaneous stamping and coating	..	..	1,707	1,269	.	x	.	.
41 Natural resources and extractive industries	.	992	90	..	8,426	x	..	.
51 Agricultural equipment	.	..	..	41	..	2,869	.	65
52 Non electrical machinery	.	..	20,996	30	.	65,652	..	.
53 Electrical machinery	.	.	.	.	.	..	.	.
54 Industrial packaging material	.	.	.	.	.	..	.	.
61 Pipes and tubes	.	.	.	.	.	..	.	.
62 Wire and wire products	12,701	.	.	.	339	x	x	.
63 Containers and closures	.	.	.	.	.	.	.	.
64 Appliances and utensils industries	.	.	.	.	.	.	.	.
70 Miscellaneous industries	2,451	..	.	.	..	862	.	.
Total domestic shipments	16,159	23,249	88,045	76,738	539,658	368,587	x	65
Total domestic alloy shipments	..	.	.	.	.	45,728	x	.
81 Exports to the United States	x	8,422	26,353	34,679	1,228	x	x	.
82 Exports to other countries (excluding United States)	x	..	555	21	..	x	x	..
Total disposition	x	31,671	114,953	111,438	540,886	666,099	x	65
Total alloy shipments	..	.	.	.	.	70,602	..	.
Producers interchange, for sale	x	.	..	.	.	x	x	.
Exports for conversion and return	.	.	.	.	.	..	.	.
Imports by producers (including conversion)	x	.	.	.	.	.	..	.

See notes at the end of the table.

Table 1-2 – continued

Steel primary forms and pig iron — Disposition of net shipments ¹ of rolled steel products, by product, year-to-date 2009

SDC No.	Cold finished bars	Plates ²	Hot rolled sheets and coils	Cold reduced sheets and strip and other cold rolled and coated	Tin plate and tin free steel (T.F.S.)	Galvanized sheets including galvalume	Total, rolled steel products
metric tonnes							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses	x	163,085	1,275,029	226,064	17,668	313,017	2,264,087
21 Motor vehicles and parts	11,035	..	222,117	54,870	..	276,663	616,235
22 Railway operating	.	..	4	.	.	671	735
23 Railroad cars and locomotives	.	884	..	.	.	.	1,955
24 Shipbuilding	.	..	.	.	.	.	..
31 Steel fabrication	x	42,367	47,859	86	.	34,146	658,026
32 Metal building systems	.	.	584	.	.	23,475	24,791
33 Contractors' products	x	244	55,160	x	.	238,524	324,513
34 Miscellaneous stamping and coating	x	..	x	x	.	x	x
41 Natural resources and extractive industries	375	26	26	..	.	5	x
51 Agricultural equipment	611	2,441	..	..	.	.	6,027
52 Non electrical machinery	..	899	1,648	..	.	..	89,225
53 Electrical machinery	.	.	291	11,142	.	14,257	25,690
54 Industrial packaging material	.	.	3,381	36,947	..	..	40,328
61 Pipes and tubes	59	..	799,955	11,380	.	16,672	828,066
62 Wire and wire products	x	.	x	x	.	x	x
63 Containers and closures	..	.	49	2,286	54,545	.	56,880
64 Appliances and utensils industries	.	.	573	44,266	.	24,504	69,343
70 Miscellaneous industries	748	34	..	.	.	.	4,095
Total domestic shipments	x	209,980	2,430,982	450,148	72,213	1,123,358	5,615,858
Total domestic alloy shipments	2,504	..	.	..	.	.	x
Exports ² (for final sale)							
81 Exports to the United States	x	64,869	x	155,691	155,647	309,087	2,190,489
82 Exports to other countries (excluding United States)	..	7,039	x	19,725	x	86,929	806,382
Total disposition	x	281,888	x	625,564	x	1,519,374	8,612,729
Total alloy shipments	2,600	..	.	..	.	.	73,202
Producers interchange, for sale	..	.	x	..	.	..	x
Exports for conversion and return ²	.	.	..	..	.	..	..
Imports by producers (including conversion)	.	646	4,884	25,214	.	..	x

1. Compiled by principal consuming industries, according to distribution of shipments reported by iron and steel mills.

2. Effective January 2000, producers have changed the way they report hot rolled products. The result is a change in definitions. Plates including plates for pipes and tubes becomes plates. Hot rolled sheet and strip becomes hot rolled sheets and coils and now includes all hot rolled flat products in coils, regardless of thickness.

Table 1-3

Steel primary forms and pig iron — Production of pig iron

	December		Year-to-date	
	2008	2009	2008	2009
metric tonnes				
Production of pig iron	411,320	564,488	8,770,234	x

Table 1-4
Steel primary forms and pig iron — Pig iron and scrap charged to steel furnaces

	December		Year-to-date	
	2008	2009	2008	2009
	metric tonnes			
Pig iron including pre-reduced iron	374,875	546,626	8,499,421	x
Scrap				
Own make	84,633	99,740	1,488,263	1,223,210
Purchased	219,855	398,592	6,247,978	3,910,802
Total, pig iron and scrap products	679,363	1,044,958	16,235,662	10,403,400

Table 1-5
Steel primary forms and pig iron — Production and shipments of steel, primary forms, monthly

	Production		Shipments	
	2008	2009	2008	2009
	metric tonnes			
December				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace	193,586	431,918	x	x
Basic oxygen furnace	418,289	511,092	x	x
Steel, primary forms - Total	611,875	943,010	59,637	256,135
Included in "Steel primary forms total" above				
Continuous cast steel	604,323	930,239	x	243,805

Table 1-6
Steel primary forms and pig iron — Production and shipments of steel, primary forms, year-to-date

	Production		Shipments	
	2008	2009	2008	2009
	metric tonnes			
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace	5,882,311	x	x	x
Basic oxygen furnace	8,962,806	x	x	x
Steel, primary forms - Total	14,845,117	9,245,310	2,505,035	x
Included in "Steel primary forms total" above				
Continuous cast steel	14,702,300	8,996,008	x	x

Table 2-1
Steel pipe and tubing — Production and shipments, monthly 2009

	Production	Shipments for sale		
		Domestic shipments ¹	Exports	Total shipments
	metric tonnes			
December				
Total, pipe and tubing	125,483	71,365	47,338	118,703
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	x	1,587	0	1,587
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	4,696	x	x	6,823
over 16" (40.64 cm) outside diameter	22,866	246	2,419	2,665
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	10,483	10,214	6,355	16,569
over 16" (40.64 cm) periphery	32,106	9,894	20,358	30,252
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	2,165	447	1,077	1,524
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	483	158	351	509
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	634	75	348	423
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	831	123	17	140
over 16" (40.64 cm) outside diameter	842	75	64	139
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	7,232	x	x	9,923
Mechanical tubing, welded, produced from cold rolled	7,273	x	x	4,565
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	32,180	26,257	9,714	35,971
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	2,966	4,598	2,085	6,683
Other tubular products	x	711	219	930

1. Including for own use by the steel pipe and tubing industries.

Table 2-2
Steel pipe and tubing — Production and shipments, year-to-date 2009

	Production	Shipments for sale		
		Domestic shipments ¹	Exports	Total shipments
		metric tonnes		
Year-to-date				
Total, pipe and tubing	1,595,482	880,054	642,914	1,522,968
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	x	x	..	x
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	101,430	x	x	x
over 16" (40.64 cm) outside diameter	343,647	x	x	x
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	136,971	148,019	76,007	224,026
over 16" (40.64 cm) periphery	376,859	116,276	221,583	338,859
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	30,332	13,613	18,517	32,130
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	15,021	12,859	3,128	15,987
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	x	x	x	x
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	x	x	x	3,398
over 16" (40.64 cm) outside diameter	16,354	x	x	1,442
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	112,817	x	x	135,959
Mechanical tubing, welded, produced from cold rolled	87,577	x	x	68,657
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	288,551	221,508	65,530	287,038
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	32,759	28,673	..	36,609
Other tubular products	x	11,482	8,522	20,004

1. Including for own use by the steel pipe and tubing industries.

Table 3-1
Steel and specified wire products — Factory shipments¹, monthly

	Shipments				Production
	2008	2009			
		Total shipments	Domestic shipments	Exports	
metric tonnes					
December					
Barbed wire	x	x	x	x	.
Uncoated steel wire	7,888	11,393	5,603	5,790	.
Galvanized steel wire	7,718	4,731	1,956	2,775	.
Other coated steel wire	x	x	x	0	.
Farm fencing and wire chain link fabric	x	x	x	x	394
Wire mesh, bright or uncoated and galvanized	2,930	2,186	x	x	2,080
Wire rope	4,209	x	x	x	x
Nails and staples	x	x	x	523	x
Wire roofing nails of a length of 25 mm or more, iron or steel	355	658	x	x	746
Staples of iron or steel	x	x	x	x	x
All other wire products	x	1,038	1,037	1	1,002
Grand total	28,497	23,374	12,613	10,761	.

1. Totals may not add due to rounding.

Table 3-2
Steel and specified wire products — Factory shipments¹, year-to-date

	Shipments				Production
	2008	2009			
		Total shipments	Domestic shipments	Exports	
	metric tonnes				
Barbed wire	x	x	x	x	.
Uncoated steel wire	191,547	163,086	89,583	73,503	.
Galvanized steel wire	149,066	92,437	x	x	.
Other coated steel wire	x	x	x	x	.
Farm fencing and wire chain link fabric	x	x	x	x	x
Wire mesh, bright or uncoated and galvanized	59,511	40,318	x	x	39,911
Wire rope	x	x	x	x	x
Nails and staples	x	x	x	x	x
Wire roofing nails of a length of 25 mm or more, iron or steel	18,302	x	x	x	x
Staples of iron or steel	x	x	x	x	x
All other wire products	x	x	x	..	x
Grand total	564,518	418,870	249,370	169,500	.

1. Totals may not add due to rounding.

Concepts, methodology and data quality

This publication presents the results of four monthly surveys: Steel Primary Forms, Steel Castings and Pig Iron; Ingots and Rolled Steel Products; Steel Pipe and Tubing; and Steel Wire and Specified Wire Products. These surveys measure, on a monthly basis, the quantities of selected steel products that are produced and shipped by Canadian manufacturers. The target population for these surveys includes manufacturers in Canada of primary steel, steel products, pig iron, steel pipe and tubing as well as, steel wire as defined in the Standard Classification of Goods (SCG) that report these products to the Annual Survey of Manufactures and Logging or ASML (Survey ID 2103). This means that estimates from the monthly surveys do not cover the entire universe of steel producers in Canada because the ASML does not survey all businesses. Instead, the ASML uses administrative data to cover the small and medium-sized establishments. These manufacturers are not part of the four monthly surveys.

General methodology

Data are collected each month, directly from survey respondents using a mail-out / mail-back process. Data capture and preliminary editing are performed simultaneously to ensure validity of the data. Businesses from whom no response has been received or whose data may contain errors are followed-up by telephone or fax.

Missing data for the current month are imputed automatically by applying to the previous month's value, the month-to-month change observed for the same period in the previous year, for the unit in question. However, an option exists for analysts to manually override this imputation with a better estimate based on pertinent knowledge about the industry or the business.

Various confidentiality rules are applied to all data before they are released to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent the direct or residual disclosure of identifiable data.

Direct disclosure could occur when the value in a tabulation cell is composed of a few respondents or when the cell is dominated by a few companies. Residual disclosure could occur when confidential information can be derived indirectly by piecing together information from different sources or data series.

Under normal circumstances, data are collected, captured, edited, tabulated and published within 6-8 weeks after the reference month.

Revisions

Data may be revised to include amended information or reports from respondents that are received after the end of a collection cycle. Revisions are disseminated in subsequent periods and reflected in the CANSIM series and in the tables of this publication.

Data accuracy

The methodology of these surveys has been designed to promote data accuracy. Since data are collected from all Canadian producers of primary steel, steel products, pig iron, steel pipe and tubing and steel wire within the target population, the resulting estimates are not subject to sampling error. However, the results are still subject to the non-sampling errors associated with coverage, non-response, inaccurate reporting, and processing. Errors relating to coverage and non-response can be measured and are summarized in text table 1. All attempts are made to control inaccurate reporting and processing errors.

Moreover, survey results are analyzed to ensure comparability with patterns observed in historical data series and the economic condition of the industry. Information available from other sources such as the Steel Primary Forms Weekly Survey (Survey ID 2131) and the Monthly Survey of Manufacturing or MSM (Survey ID 2101) are also used in the validation process.

Coverage error

There is a degree of under coverage (referred to as coverage error) in the survey results as there is generally a lag between the time a new business comes into existence and when it is included in the universe of these sub-annual surveys. This occurs because the list of businesses surveyed is derived from the latest available survey results for the ASML which are not available until 15 months after the reference period.

This error is kept at a minimum by also using advance information from the ASML frame, feedback from the MSM and other sources such as the Canadian Steel Producer's Association, trade journals and newspaper articles, to identify new survey units.

Non-response error

Some respondents may be unable to provide data for numerous reasons (i.e. fire, theft, strike, economic hardship, etc.), while others may be late in responding. To minimize non-response, delinquent respondents are followed up rigorously by phone or fax. Data for non-responding units are imputed using industry trend and other related information. Data are revised at a later date, if completed questionnaires are received after the end of a collection cycle.

Inaccurate response

Inaccuracy may result from poor questionnaire design or an inability on the part of respondents to provide the requested information or from misinterpretation of the survey questions. To reduce such errors the format and wording in the questionnaire are reviewed from time to time and modified based on feedback from survey respondents and data users. Respondents are also reminded of the importance of their contribution and of the need for accurate data reporting.

Processing errors

These errors may occur at various stages in the processing of survey data such as data entry, verification, editing and tabulation. Data are examined for such errors using automated edits along with an analytical review by subject matter experts. Several checks are performed on the collected data to verify internal consistency and comparability over time.

Text table 1
Coverage and non-response errors

	Coverage error based on ASML 2004	Non-response error- annual average 2005
	percent	
Steel primary forms steel castings and pig iron	0	6
Ingots and rolled steel products	3	0
Steel pipe and tubing	0	0
Steel wire	0	0

Definitions

Shipments:

Shipments refer to the quantity of manufactured goods that are shipped, during the reference period from the plant to customers in domestic or export markets.

Production:

Production refers to the quantity of goods manufactured in Canada during a reference period including intermediate products. The final goods may be shipped or retained in inventory.

Exports:

Shipments of goods destined for customers outside of Canada.

Disposition of shipments:

Disposition of shipments refers to the distribution of shipped quantities of manufactured goods by end use (market).

Coverage ratio:

The share of total ASM shipment values for products included in a given sub-annual survey from businesses surveyed by the same sub-annual survey.

Non-response rate:

Number of non-responses in the year, divided by the number of total expected responses in the year.

Number of non-responses in the year, divided by the number of total expected responses in the year. More detailed information is available from the Annual Survey of Manufactures and Logging, CANSIM Table 301-0006. Specific enquiries should be directed to: The Dissemination and Frame Services section, Manufacturing and Energy Division, Statistics Canada, Ottawa, Ontario, K1A 0T6 (Telephone: 1-866-873-8789 or 613-951-9497; Fax line: 613-951-3877; Internet: manufact@statcan.gc.ca).