

Catalogue no. 41-019-X

# Steel, Tubular Products and Steel Wire

October 2007



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Statistics Canada Manufacturing, Construction and Energy Division

# Steel, Tubular Products and Steel Wire

October 2007

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### **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

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### **Highlights**

#### October 2007

- Monthly production of primary steel and pig iron fell 2.4% in October 2007 to 1,332,831 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products rose 19.0% to 1,378,423 metric tonnes.
- Between September 2007 and October 2007, production of steel pipe and tubing grew 3.2% to 230,307 metric tonnes.
- Total shipments of steel wire and specified wire products increased 13.1% to 49,820 metric tonnes in October 2007.

### **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 shipments <sup>1</sup> of rolled steel products, by product, monthly 2007

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 to	onnes			
October								
Domestic shipments								
<ul> <li>11 Steel service centres and other wholesalers and warehouses</li> <li>21 Motor vehicles and parts</li> <li>22 Railway operating</li> <li>23 Railroad cars and locomotives</li> <li>24 Shipbuilding</li> <li>21 Steel fabrication</li> <li>32 Metal building systems</li> <li>33 Contractors' products</li> <li>34 Miscellaneous stamping and coating</li> <li>41 Natural resources and extractive industries</li> <li>51 Agricultural equipment</li> <li>52 Non electrical machinery</li> <li>53 Electrical machinery</li> <li>54 Industrial packaging material</li> <li>61 Pipes and tubes</li> <li>62 Wire and wire products</li> <li>63 Containers and closures</li> <li>64 Appliances and utensils industries</li> <li>70 Miscellaneous industries</li> </ul>	120 256 0 0	2,710 158 591 0 0 0 0	7,253 1,757 0 294 8 9 0	7,992 4,260 370 0 5 0	4,780	16,801 15,520 0 15,987 0 646 2,392 11,311 93 208 0 0 0 6,567 1,721	3,406 0 0	- - - - - - - - - - - - - - - - - - -
Total domestic shipments	1,162	3,551	9,321	12,627	42,595	71,246	32,526	0
Total domestic alloy shipments	0					25,540	0	
Exports <sup>2</sup> (for final sale)								
81 Exports to the United States 82 Exports to other countries (excluding United States)	x x	1,774 504	13,149 122	9,266	0 0	34,294 14,746	39,642 1,175	0
Total disposition	111,475	5,829	22,592	21,893	42,595	120,286	73,343	0
Total alloy shipments	0					37,176	0	
Producers interchange, for sale	х		0			768	0	
Exports for conversion and return <sup>2</sup>						0		
Imports by producers (including conversion)	145						0	

See footnotes at the end of the table.

#### Table 1-1 - continued

SDC No.	Cold finished bars	Plates <sup>3</sup>	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
			n	netric tonnes			
October							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses 21 Motor vehicles and parts 22 Railway operating 23 Railroad cars and locomotives	2,417 1,902	38,639 75 0 451	170,989 62,264 0	34,238 13,603	1,513 0	33,327 67,300	324,185 160,920 0 609
24 Shipbuilding 31 Steel fabrication 32 Metal building systems 33 Contractors'products	53 173	5,143 0	6,581 0 4,737	0 2,620		504 2,438 37,393	0 71,579 2,438 45,604
34 Miscellaneous stamping and coating 41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery	288 70 108 28	47 0 105 426	1,023 0 170 256	5,420 0 39 0	- - -	7,324 0 0	17,158 12,501 529 918
53 Electrical machinery 54 Industrial packaging material 61 Pipes and tubes 62 Wire and wire products	93 408	0	790 177,328 499	3,559 8,186 2,247 88	0	1,186 0 15,129 29	4,745 8,976 194,797 37,462
63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	0 184		871	169 6,457	8,649	3,231	9,689 9,688 1,997
Total domestic shipments	5,724	44,886	425,508	76,626	10,162	168,550	904,484
Total domestic alloy shipments	230	0		0	•		25,770
Exports <sup>2</sup> (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	6,795	16,836 2,652	107,180 12,611	x x	14,089 1,151	41,188 29,762	394,263 79,676
Total disposition	12,519	64,374	545,299	93,316	25,402	239,500	1,378,423
Total alloy shipments	0	0		0			37,176
Producers interchange, for sale	0		3,421	х			68,358
Exports for conversion and return <sup>2</sup>			0	0		0	0
Imports by producers (including conversion)		2,160	12,932	9,630		0	24,867

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

These data include exports reported by steel producers only and are not the same as published in the Exports by commodities, catalogue number 65-004-XPB.
 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 <sup>1</sup> of rolled steel products, by product, year-to-date 2007

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 to	nnes			
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses 21 Motor vehicles and parts 22 Railway operating 23 Railroad cars and locomotives 24 Shipbuilding	2,605 2,025  0	34,423 4,476	80,656	68,068	35,770	190,315 154,202 0	13,260 1,004 	
<ul> <li>31 Steel fabrication</li> <li>32 Metal building systems</li> <li>33 Contractors'products</li> <li>34 Miscellaneous stamping and coating</li> </ul>	63 0	9,734 39 295	16,164 0 4,857	39,293 3,794	338,045 0 1,316	153,268 0 3,205 16,578	0 1,112	· · ·
41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 53 Electrical machinery 54 Industrial packaging material		12 64	89 24 0	36 92 0	10,616 20	101,905 2,410 3,457 0 0	0 0	- - -
61 Pipes and tubes 62 Wire and wire products 63 Containers and closures 64 Appliances and utensils industries	3,562	- - - -	· · ·	· · ·	0	0 28,028	247,539	· · · ·
70 Miscellaneous industries Total domestic shipments	8,255	92 <b>49,135</b>	101.790	111.283	0 <b>385,767</b>	4,880	262,915	0
Total domestic shipments	63	43,133	101,750	111,200	505,707	210,175	202,313	
Exports <sup>2</sup> (for final sale)						,		
81 Exports to the United States 82 Exports to other countries (excluding United States)	x x	24,522 582	118,606 1,556	84,358	13,092 0	361,802 177,598	367,322 9,530	0
Total disposition	х	74,239	221,952	195,641	398,859	1,197,648	639,767	0
Total alloy shipments	63					343,195	0	
Producers interchange, for sale	х		0			11,948	215	
Exports for conversion and return <sup>2</sup>						0		
Imports by producers (including conversion)	30,996						0	

See footnotes at the end of the table.

#### Table 1-2 - continued

Steel primary forms and pig iron — Disposition of net shipments<sup>1</sup> of rolled steel products, by product, year-to-date 2007

SDC No.	Cold finished bars	Plates <sup>3</sup>	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
			I	metric tonnes			
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses 21 Motor vehicles and parts 22 Railway operating 23 Railroad cars and locomotives	26,677 20,513	325,074 75 0 8,424	1,529,423 677,760 -19	365,187 139,459	21,094 13	394,853 557,946	1,552,997 0 12,881
24 Shipbuilding 31 Steel fabrication 32 Metal building systems 33 Contractors'products	837 1,014	55,024 562	50,698 0 44,461	353 22,532	· · ·	8,378 29,386 332,003	0 671,857 29,386 406,244
34 Miscellaneous stamping and coating 41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery	2,485 513 1,049 321	4,138 12 2,971 2,334	56,536 28 4,479 2,806	49,657 0 729 0		173,522 1 1,410	311,862 113,200 11,786 10,392
53 Electrical machinery 54 Industrial packaging material 61 Pipes and tubes 62 Wire and wire products 63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	635 4,139 402 2,460	_,	13,719 1,625,114 9,394 8,762	33,837 95,090 26,427 1,031 1,998 59,897	262 95,086	14,176 0 35,316 263 28,421	48,013 109,071 1,687,492 293,956 106,248 88,318 7,432
Total domestic shipments	61,045	398,614	4,023,161	796,197	116,455	1,576,364	8,549,229
Total domestic alloy shipments	2,167	0		0			212,405
Exports <sup>2</sup> (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	70,388	196,233 18,965	878,229 105,279	x x	117,728 12,473	x x	3,229,348 601,183
Total disposition	131,433	613,812	5,006,669	x	246,656	2,056,360	12,379,760
Total alloy shipments	1,246	0		0			344,504
Producers interchange, for sale	83		43,105	x			770,534
Exports for conversion and return <sup>2</sup>			0	0		0	0
Imports by producers (including conversion)		36,171	91,985	49,128		0	208,280

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

These data include exports reported by steel producers only and are not the same as published in the Exports by commodities, catalogue number 65-004-XPB.
 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 1-3Steel primary forms and pig iron — Production of pig iron

	October		Year-to-date	
	2006	2007	2006	2007
_		metric tonne	6	
Production of pig iron	691,976	819,095	7,126,850	7,130,511

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

	October		Year-to-date	
	2006	2007	2006	2007
Pig iron including pre-reduced iron	715,253	7,557,308	7,504,648	
<b>Scrap</b> Own make Purchased	160,828 544,000	161,538 485,470	1,742,010 5,186,164	1,580,725 5,318,409
Total, pig iron and scrap products	1,420,081	1,476,138	14,485,482	14,403,782

#### Table 1-5

#### Steel primary forms and pig iron — Production and shipments of steel, primary forms, monthly

	Production		Shipments	
	2006	2007	2006	2007
		metric tonnes		
October				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace Basic oxygen furnace	551,674 746,134	495,785 837,046	x x	x x
Steel, primary forms - Total	1,297,808	1,332,831	67,476	209,560
Included in "Steel primary forms total" above Continuous cast steel	1,280,687	1,315,852	63,312	195,234

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

	Production		Shipments	
	2006	2007	2006	2007
		metric tonnes		
Steel, primary forms (carbon and alloy including continuous cast steel) Electric furnace Basic oxygen furnace	5,423,498 7,792,091	5,389,376 7,701,952	x x	x x
Steel, primary forms - Total	13,215,589	13,091,328	x	1,463,149
Included in "Steel primary forms total" above Continuous cast steel	13,053,090	12,938,184	x	1,395,838

#### Table 2-1

#### Steel pipe and tubing — Production and shipments, monthly 2007

	Production	Shipments for sale		
		Domestic shipments <sup>1</sup>	Exports <sup>2</sup>	Total shipments
_	metric tonnes			
October				
Total, pipe and tubing	230,307	130,234	95,266	225,500
Pipe welded and seamless				
Line pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter	3,561 6,197 43,939	5,037 6,563 18,588	172 0 20,788	5,209 6,563 39,376
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	20,532 51,607	11,183 16,701	11,520 33,523	22,703 50,224
<b>Standard pipe</b> up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	4,786 1,545	1,772 1,257	3,207 454	4,979 1,711
<b>Other pipe</b> up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter	1,624 796 1,916	848 585 x	481 0 x	1,329 585 641
<b>Mechanical tubing</b> Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	22,437 11,458	18,578 4,634	6,861 3,012	25,439 7,646
<b>Oil country tubular goods</b> Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	51,860 7,682	35,739 5,962	11,204 3,116	46,943 9,078
Other tubular products	367	x	x	3,074

Including for own use by the steel pipe and tubing industries.
 As reported by respondents to this survey. For total exports see Exports by commodity, catalogue number 65-004-XPB.

#### Table 2-2

#### Steel pipe and tubing - Production and shipments, year-to-date 2007

	Production	Shipments for sale		
		Domestic shipments <sup>1</sup>	Exports <sup>2</sup>	Total shipments
_		metric ton	nes	
Year-to-date				
Total, pipe and tubing	2,186,944	1,218,591	1,111,884	2,330,475
Pipe welded and seamless				
Line pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter	x 38,470 452,014	32,035 45,771 126,017	358 7,063 376,306	32,393 52,834 502,323
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	212,206 501,339	109,874 161,251	104,949 331,942	214,823 493,193
<b>Standard pipe</b> up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	41,714 13,946	20,424 17,156	28,439 8,010	48,863 25,166
<b>Other pipe</b> up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter	21,149 20,020 21,518	7,245 12,400 x	2,783 214 x	10,028 12,614 11,737
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	271,540 146,177	184,500 54,988	79,981 31,451	264,481 86,439
<b>Oil country tubular goods</b> Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	360,139 55,792	x x	x x	x x
Other tubular products	x	x	x	х

Including for own use by the steel pipe and tubing industries.
 As reported by respondents to this survey. For total exports see Exports by commodity, catalogue number 65-004-XPB.

### Table 3-1 Steel and specified wire products — Factory shipments <sup>1</sup>, monthly

	Shipments			Production	
	2006	2007			
		Total shipments	Domestic shipments	Exports <sup>2</sup>	
_			metric tonnes		
October					
Barbed wire	х	х	х	х	
Uncoated steel wire	17,595	19,771	11,298	8,473	
Galvanized steel wire	11,608	13,798	5,467	8,331	
Other coated steel wire	х	х	х	Х	
Farm fencing and wire chain link fabric	937	773	Х	Х	1,009
Wire mesh, bright or uncoated and galvanized	7,112	5,565	Х	Х	5,412
Wire rope	3,974	Х	2,115	х	х
Nails and staples	3,706	Х	Х	2,510	х
Wire roofing nails of a length of 25 mm or more, iron or steel	х	4,533	2,023	2,510	4,929
Staples of iron or steel	х	х	х	0	х
All other wire products	1,980	1,572	1,570	2	1,523
Grand total	47,383	49,820	28,592	21,228	

1. Totals may not add due to rounding.

2. As reported by respondents to this survey. For total exports see Exports by commodity, catalogue number 65-004-XPB.

### Table 3-2 Steel and specified wire products — Factory shipments 1, year-to-date

	Shipments			Production	
—	2006		2007		
		Total shipments	Domestic shipments	Exports <sup>2</sup>	
_			metric tonnes		
Barbed wire Uncoated steel wire Galvanized steel wire	x 185,335 134,052	x 176,061 130,325	x 99,657 54,171	x 76,404 76,154	
Other coated steel wire Farm fencing and wire chain link fabric Wire mesh, bright or uncoated and galvanized	x 10,093 46,454	x x 46,517	x x	x x	x 48,267
Wire rope Nails and staples	40,454 X X	40,517 X X	X X X	X X X	40,207 X X
Wire roofing nails of a length of 25 mm or more, iron or steel Staples of iron or steel All other wire products	x x x	44,411 x x	x x x	x x x	x x x
Grand total	486,736	463,977	267,967	196,010	

1. Totals may not add due to rounding.

2. As reported by respondents to this survey. For total exports see Exports by commodity, catalogue number 65-004-XPB.

### 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 Ingots and rolled steel products Steel pipe and tubing Steel wire	0 3 0 0	6 0 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.

More detailed information is available from the Annual Survey of Manufactures and Logging, CANSIM Table 301-0003. Specific enquiries should be directed to: The Marketing and Dissemination Section, Manufacturing, Construction and Energy Division, Statistics Canada, Ottawa, Ontario, K1A OT6 (Telephone: 1-866-873-8789 or (613) 951-9497; Fax: (613) 951-9499; Internet: *manufact@statcan.ca* ).