# Steel, Tubular Products and Steel Wire



April 2011



Statistics Canada Statistique 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 browse by "Key resource" > "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" > "The agency" > "Providing services to Canadians."

# Steel, Tubular Products and Steel Wire

**April 2011** 

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2011

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, Information Management Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

June 2011

Catalogue no. 41-019-X, vol. 7, no. 4

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
- \* significantly different from reference category (p < 0.05)

# **Table of contents**

Highlights					
Related	I products	5			
Statisti	cal tables				
1 Ste	eel primary forms and pig iron	7			
1-1	Disposition of net shipments of rolled steel products, by product, monthly 2011	7			
1-2	Disposition of net shipments of rolled steel products, by product, year-to-date 2011	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 Ste	eel pipe and tubing	12			
2-1	Production and shipments, monthly 2011	12			
2-2	Production and shipments, year-to-date 2011	13			
3 Ste	eel and specified wire products	13			
3-1	Factory shipments, monthly	13			
3-2	Factory shipments, year-to-date	14			
Data qu	uality, concepts and methodology				
Concep	ts, methodology and data quality	15			
Definition	ons	17			

# **Highlights**

#### April 2011

- Monthly production of primary steel and pig iron decreased 2.7% in April 2011 to 1,167,603 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products decreased 8.1% to 989,402 metric tonnes.
- Between March 2011 and April 2011, production of steel pipe and tubing decreased 17.5% to 170,946 metric tonnes.
- Total shipments of steel wire and specified wire products decreased 22.8% to 50,789 metric tonnes in April 2011.

# **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 2011

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			
April								
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 31 Steel fabrication 32 Metal building systems 33 Contractors products 34 Miscellaneous stamping and coating 41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 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	0 177 0	2,324 0  60 0 0 151 0 	5,328 159	5,164 4	5,082 . 0 	x 4,733 0 x 0 368 1,871 8,941 310 7,288 0 0 0 89	0 0 0 0 0	
Total domestic shipments	177	2,535	6,418	7,211	38,368	30,880	x	0
Total domestic alloy shipments	0		•			5,161	x	
81 Exports to the United States 82 Exports to other countries (excluding United States)	X X	1,554 0	5,724 72	3,811 11	0	22,942 27,151	x x	. 0
Total disposition	108,183	4,089	12,214	11,033	38,368	80,973	x	0
Total alloy shipments	0					9,876	0	
Producers interchange, for sale	x		0			616	29	
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 <sup>1</sup> of rolled steel products, by product, monthly 2011

SDC No.	Cold finished bars	Plates <sup>2</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			
April							
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 31 Steel fabrication 32 Metal building systems 33 Contractors'products 34 Miscellaneous stamping and coating 41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 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	x 710  x  0 0 54 28 0  0 x	16,736 0 0 553 3,646 0 0 812 223 0	184,705 34,407 0 0 2,331 0 4,724 5,445 1 0 478 93 0 83,520 129 0 0	17,379 7,048 0 1,781 3,373 0 0 594 4,622 845 83 542 1,478	1,304 0	23,907 35,526 0 1,495 2,064 22,347 14,221 0 0 0,0 1,501 0 1,442 81	270,665 82,764 0 553 0 x 2,150 30,219 25,415 10,556 1,150 8,097 2,188 4,622 85,807 x 839 2,404 171
Total domestic shipments	x	21,970	315,833	37,745	1,601	103,510	588,604
Total domestic alloy shipments	260	0	-	0			X
81 Exports to the United States 82 Exports to other countries (excluding United States) Total disposition	1,048 0 <b>x</b>	12,981 3,234 <b>38,185</b>	x x 418,884	12,006 968 <b>50,719</b>	15,926 613 <b>18,140</b>	33,360 9,302 <b>146,172</b>	341,113 59,685 <b>989,402</b>
Total alloy shipments	500	0		0			10,376
Producers interchange, for sale	0		18	0		0	x
Exports for conversion and return	•	•	0	0	•	19	19
Imports by producers (including conversion)		24	6,149	2,275		0	8,448

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

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 2011

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	6 650 0	6,068 0	23,481 682	21,169 81	17,675 0	19,626 113	0 0 0	
31 Steel fabrication 32 Metal building systems 33 Contractors products 34 Miscellaneous stamping and coating 41 Natural resources and extractive industries	0 0	201 0 0 0 650	3,820 0 0 795 38	7,787 0 964 14	116,496 169 5,492	x 0 668 3,387	199	
51 Agricultural equipment 52 Non electrical machinery 53 Electrical machinery 54 Industrial packaging material	· · ·	0 0	5,559	5 31	5,436 0	48,904 808 35,406 0	0 0	59
61 Pipes and tubes 62 Wire and wire products 63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	106 0	0	· · ·	· · ·	0	0 2,432 0	X	
Total domestic shipments	762	6,919	34,375	30,051	145,270	148,332	х	59
Total domestic alloy shipments	0					24,351	x	
81 Exports to the United States 82 Exports to other countries (excluding United States)	X X	4,691 0	17,482 176	18,551 11	0	93,521 85,650	x x	. 0
Total disposition	301,780	11,610	52,033	48,613	145,270	327,503	x	59
Total alloy shipments	0				•	41,273	0	
Producers interchange, for sale	х	÷	0	•	ė	2,310	182	•
Exports for conversion and return			•	•	•	0		
Imports by producers (including conversion)	0						0	

See notes 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 2011

SDC No.	Cold finished bars	Plates <sup>2</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
				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 24 Shipbuilding 31 Steel fabrication 32 Metal building systems 33 Contractors'products 34 Miscellaneous stamping and coating 41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 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	x 2,779	65,210 0 0 1,537 12,337 277 0 0 2,361 280 	895,490 119,380 0 0 10,037 0 20,012 21,821 1 0 3,738 83 363,995 600 169	81,077 30,141  0  0  8,948 16,485 0 0 0 7,177 21,969 2,451 201 2,330 7,333	5,677 0     0  880	117,197 156,432 0 6,742 8,685 78,691 56,893 2 0 0,6,229 0 6,733 154 6,385	329,771 113 1,537 0 x 8,854 114,287 100,450 55,283 3,432 45,014 14,345 22,052 373,179 x 3,379 13,718
70 Miscellaneous industries  Total domestic shipments	518 <b>x</b>	0 <b>82,002</b>	0 <b>1,436,265</b>	178,112	6,557		518 <b>2,600,264</b>
Total domestic alloy shipments	1,226	02,002		0			z,000,204 X
Exports <sup>2</sup> (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	4,922 0	48,444 13,522	x x	,	60,257 2,637	137,075 34,394	1,194,352 218,826
Total disposition	x	143,968	1,810,968	246,490	69,451	615,612	4,013,442
Total alloy shipments	2,306	0		0			43,579
Producers interchange, for sale	0		244	0		0	x
Exports for conversion and return <sup>2</sup>			0	0		45	45
Imports by producers (including conversion)	•	24	16,150	4,208		0	20,382

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

Table 1-3
Steel primary forms and pig iron — Production of pig iron

	April		Year-to-date				
	2010	2011	2010	2011			
	metric tonnes						
Production of pig iron	613,604	641,523	2,518,031	2,361,856			

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

	April		Year-to-date				
	2010	2011	2010	2011			
	metric tonnes						
Pig iron including pre-reduced iron	611,169	680,661	2,483,466	2,501,064			
Scrap Own make Purchased	116,340 499,328	125,385 507,874	464,841 1,833,464	450,378 1,889,796			
Total, pig iron and scrap products	1,226,837	1,313,920	4,781,771	4,841,238			

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

	Production		Shipments	
	2010	2011	2010	2011
		metric tonnes		
April				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace Basic oxygen furnace	470,284 616,530	490,828 676,775	x x	X X
Steel, primary forms - Total	1,086,814	1,167,603	291,076	166,773
Included in "Steel primary forms total" above Continuous cast steel	1,072,339	1,152,432	278,530	156,328

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

	Production		Shipments	
	2010	2011	2010	2011
		metric tonnes		
Steel, primary forms (carbon and alloy including continuous cast steel) Electric furnace Basic oxygen furnace	1,796,373 2,472,689	1,905,760 2,419,317	x x	x x
Steel, primary forms - Total	4,269,062	4,325,077	1,120,398	713,362
Included in "Steel primary forms total" above Continuous cast steel	4,248,554	4,265,894	1,079,933	670,616

Table 2-1 Steel pipe and tubing — Production and shipments, monthly 2011

	Production	Shipments for sale		
		Domestic shipments <sup>1</sup>	Exports	Total shipments
<u> </u>	metric tonnes			
April				
Total, pipe and tubing	170,946	113,348	91,314	204,662
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 9,515 20,499	2,811 x 3,579	0 x x	2,811 13,534 x
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	X X	5,844 x	4,887 x	10,731 x
Standard 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	2,960 825	x 531	347 16	x 547
Other 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 1,360 1,248	879 2,034 476	18 103 0	897 2,137 476
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	13,312 7,506	15,540 3,973	6,883 1,532	22,423 5,505
Oil country tubular goods Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	47,666 12,275	29,446 5,985	X X	x x
Other tubular products	x	1,595	757	2,352

<sup>1.</sup> Including for own use by the steel pipe and tubing industries.

Table 2-2 Steel pipe and tubing — Production and shipments, year-to-date 2011

	Production	Shipments for sale		
		Domestic shipments <sup>1</sup>	Exports	Total shipments
_	metric tonnes			
Year-to-date				
Total, pipe and tubing	767,285	553,368	322,542	875,910
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	45,160 x	x x 31,895	x x x	11,965 67,205 x
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	x x	x x	x x	45,884 x
Standard 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	14,192 x	x x	X X	x x
Other 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 6,466 4,341	2,835 x x	150 x x	2,985 x x
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	59,309 36,757	60,330 18,843	23,827 6,855	84,157 25,698
Oil country tubular goods Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	X X	156,743 38,118	X X	x x
Other tubular products	x	6,219	2,835	9,054

<sup>1.</sup> Including for own use by the steel pipe and tubing industries.

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

	Shipments			Production	
	2010	2010 2011			
		Total shipments	Domestic shipments	Exports	
			metric tonnes		
April					
Barbed wire	1,059	314	х	х	
Uncoated steel wire	18,979	18,162	7,708	10,454	
Galvanized steel wire	6,944	12,341	6,119	6,222	-
Other coated steel wire	X	Х	Х	0	
Farm fencing and wire chain link fabric	372	X	Х	Х	3,010
Wire mesh, bright or uncoated and galvanized	3,772	4,702	Х	Х	5,046
Wire rope	Х	Х	X	Х	Х
Nails and staples	X	X	1,145	Х	X
Wire roofing nails of a length of 25 mm or more, iron or steel	3,245	2,290	Х	Х	3,236
Staples of iron or steel	Х	Х	Х	X	Х
All other wire products	Х	Х	Х	3	Х
Grand total	37,868	50,789	27,892	22,897	

<sup>1.</sup> Totals may not add due to rounding.

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

	Shipments			Production	
<del>-</del>	2010 2011				
		Total shipments	Domestic shipments	Exports	
<u> </u>	metric tonnes				
Barbed wire	x	x	x	X	
Uncoated steel wire	75,180	78,060	33,411	44,649	
Galvanized steel wire Other coated steel wire	30,170	59,484	31,233	28,251	
Farm fencing and wire chain link fabric	X X	X X	X X	X X	
Wire mesh, bright or uncoated and galvanized	12,942	17,429	X	X	17,954
Wire rope	12,342 X	17,429 X	X	X	17,954 X
Nails and staples	X	X	X	X	X
Wire roofing nails of a length of 25 mm or more, iron or steel	11,588	9,567	X	X	14,681
Staples of iron or steel	X	X	X	х	X
All other wire products	х	x	х	X	x
Grand total	151,971	231,296	131,008	100,288	

<sup>1.</sup> 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 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.

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 OT6 (Telephone: 1-866-873-8789 or 613-951-9497; Fax line: 613-951-3877; Internet: *manufact@statcan.gc.ca* ).