# Steel, Tubular Products and Steel Wire



February 2011



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# February 2011

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# **Symbols**

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- . 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**

# February 2011

- Monthly production of primary steel and pig iron decreased 13.7% in February 2011 to 906,773 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products decreased 12.2% to 910,146 metric tonnes.
- Between January 2010 and February 2011, production of steel pipe and tubing decreased 1.5% to 190,132 metric tonnes.
- Total shipments of steel wire and specified wire products increased 4.5% to 58,159 metric tonnes in February 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			
February								,
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	0 182 0	1,082 0	4,184 155  267 0 0 170 0 0 1,260	2,389 39 1,460 0 243 0 0 0	3,642 0 24,266 0 1,334 1,018 0 	x 5,058 0 x 0 0 0 1,200 15,513 129 6,652 0 0 0 315	0 0 0	59
Total domestic shipments	182	1,247	6,036	4,131	30,260	38,905	х	59
Total domestic alloy shipments	0		-	•		4,211	x	
81 Exports to the United States 82 Exports to other countries (excluding United States)	x x	1,470 0	3,218 41	3,741 0	0	22,567 19,394	x x	. 0
Total disposition	74,205	2,717	9,295	7,872	30,260	80,866	x	59
Total alloy shipments	0					8,753	0	
Producers interchange, for sale	x		0			713	15	
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			
February							
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 703  x  0 28 35 73 0  0 x	16,902 0 0 15 2,139 277 0 0 69 0  0	206,207 25,040 0 0 2,407 0 4,195 4,950 0 832 435 0 93,494 179 0 0	18,769 7,099  0 3,015 5,091 0 0 0 2,302 4,094 416 0 0 649 1,751	982 0 	31,564 38,100 0 1,881 2,682 17,658 12,282 2 0 0 1,495 0 2,390 0	296,953 76,376 0 15 0 x 2,682 26,552 23,964 16,707 330 8,744 4,232 4,094 96,300 x 799 3,509 180
Total domestic shipments	х	19,402	337,739	43,186	1,132	109,812	611,868
Total domestic alloy shipments	299	0		0	-		x
81 Exports to the United States 82 Exports to other countries (excluding United States) Total disposition	1,148 0 <b>x</b>	12,464 1,769 <b>33,635</b>	x x 396,497	15,017 1,369 <b>59,572</b>	12,112 557 <b>13,801</b>	28,461 8,868 <b>147,141</b>	237,390 60,888 <b>910,146</b>
Total alloy shipments	511	0		0			9,264
Producers interchange, for sale	0		0	0	-	0	х
Exports for conversion and return			0	0		10	10
Imports by producers (including conversion)		0	1,815	439		0	2,254

<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	6 292 0	2,975 0 0	12,711 321	10,495 59	5,392 0	8,906 113	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	128 0 0 0 325	1,845 0 0 442 0	4,348 0 492 14	53,267 0 2,688 2,650	x 0 94 1,482 26,783	0 .73	
51 Agricultural equipment 52 Non electrical machinery 53 Electrical machinery 54 Industrial packaging material 61 Pipes and tubes		0 0	4,772	5 0	0	270 17,053 0 0	0	59
62 Wire and wire products 63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	0 0	0	· · ·	· · ·	0	470	X	
Total domestic shipments	298	3,428	20,091	15,413	63,997	77,724	x	59
Total domestic alloy shipments	0		-			11,584	x	
81 Exports to the United States 82 Exports to other countries (excluding United States)	X X	2,378 0	8,279 41	9,801 0	0	44,790 35,909	x x	0
Total disposition	110,869	5,806	28,411	25,214	63,997	158,423	x	59
Total alloy shipments	0					19,346	0	
Producers interchange, for sale	х	·	0	•	•	1,096	53	•
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 70 Miscellaneous industries	x 1,367	31,714 0 0 133 5,102 277 0 0 836 0  0	490,621 51,134 0 0 5,141 0 9,420 11,190 0 0 1,992 549 0 185,768 271 169 0 0	45,643 14,662  0 4,868 8,729 0 0 0,3,705 10,111 824 38 1,153 3,365	2,909 0	66,251 76,617 0 3,979 3,791 35,791 25,267 2 0 0 2,971 0 4,447 72 3,386	693,938 153,358 113 133 0 x 3,791 53,211 47,645 29,867 1,296 23,817 7,225 10,111 191,039 x 1,587 6,751 216
Total domestic shipments	x	38,062	756,255	93,098	3,174	222,574	1,334,623
Total domestic alloy shipments	644	0		0			x
Exports <sup>2</sup> (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	2,512 0	23,892 9,125	x x		27,296 1,518	62,488 15,208	505,845 106,609
Total disposition	x	71,079	909,078	129,838	31,988	300,270	1,947,077
Total alloy shipments	1,114	0		0			20,460
Producers interchange, for sale	0	•	226	0	•	0	х
Exports for conversion and return <sup>2</sup>	•		0	0		10	10
Imports by producers (including conversion)		0	6,636	1,298		0	7,934

<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

	February		Year-to-date	
	2010	2011	2010	2011
		metric tonnes		
Production of pig iron	611,770	475,663	1,248,938	1,055,438

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

	February		Year-to-date				
	2010	2011	2010	2011			
	metric tonnes						
Pig iron including pre-reduced iron	623,347	499,127	1,241,523	1,115,058			
Scrap Own make Purchased	115,937 399,177	87,778 424,735	227,727 814,849	193,159 879,776			
Total, pig iron and scrap products	1,138,461	1,011,640	2,284,099	2,187,993			

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		
February				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace Basic oxygen furnace	411,659 596,737	446,463 460,310	x x	X X
Steel, primary forms - Total	1,008,396	906,773	267,709	142,426
Included in "Steel primary forms total" above Continuous cast steel	1,029,012	893,187	259,482	133,185

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	831.012	898.442	x	x
Basic oxygen furnace	1,215,477	1,059,458	x	x
Steel, primary forms - Total	2,046,489	1,957,900	536,880	379,679
Included in "Steel primary forms total" above Continuous cast steel	2,055,937	1,929,701	520,033	359,126

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

	Production Shipments for sale			
		Domestic shipments <sup>1</sup>	Exports	Total shipments
_	metric tonnes			
February				
Total, pipe and tubing	190,132	133,588	73,918	207,506
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	2,183 14,102 x	2,297 x 3,543	0 x x	2,297 17,264 x
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	6,109 x	6,162 x	4,370 x	10,532 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	3,756 818	2,883 1,084	425 x	3,308 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 2,284 767	698 x 530	15 x 0	713 x 530
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	15,243 8,155	15,980 5,155	5,256 1,411	21,236 6,566
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)	60,079 11,993	42,504 8,766	x x	x x
Other tubular products	642	1,203	564	1,767

<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	383,119	284,330	138,991	423,321
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	5,344 27,180 x	x x 20,065	x x x	5,005 34,355 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	20,910 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	6,864 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 3,725 1,901	1,350 x x	37 x x	1,387 × ×
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	28,890 16,753	28,632 9,610	10,231 3,241	38,863 12,851
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	90,360 19,243	x x	x x
Other tubular products	x	2,748	1,027	3,775

<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	2011			
		Total shipments	Domestic shipments	Exports	
			metric tonnes		
February					
Barbed wire	x	x	х	x	
Uncoated steel wire	18,580	18,527	8,181	10,346	
Galvanized steel wire	7,746	15,442	8,407	7,035	
Other coated steel wire	Х	Х	Х	0	
Farm fencing and wire chain link fabric	X	X	Х	Х	3,761
Wire mesh, bright or uncoated and galvanized	3,017	4,148	Х	Х	4,223
Wire rope	Х	Х	X	Х	Х
Nails and staples	X	X X	1,555	X	X
Wire roofing nails of a length of 25 mm or more, iron or steel	2,778	2,509	X	X	3,829
Staples of iron or steel	X	X	X	х 2	X
All other wire products	Х	Х	Х	2	Х
Grand total	38,378	58,159	34,064	24,095	

<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
	2010	2011			
		Total shipments	Domestic shipments	Exports	
<u> </u>			metric tonnes		
Barbed wire	х	х	х	х	
Uncoated steel wire	36,310	37,744	16,758	20,986	
Galvanized steel wire	14,368	30,835	16,349	14,486	
Other coated steel wire	X	Х	X	X	
Farm fencing and wire chain link fabric	X	Х	Х	X	Х
Wire mesh, bright or uncoated and galvanized	5,982	8,262	Х	X	8,307
Wire rope	X	Х	Х	X	Х
Nails and staples	X	Х	Х	X	Х
Wire roofing nails of a length of 25 mm or more, iron or steel	4,883	4,272	X	X	7,767
Staples of iron or steel	X	Х	X	X	Х
All other wire products	х	х	X	Х	x
Grand total	72,024	113,824	65,770	48,054	

<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* ).