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## Steel, Tubular Products and Steel Wire



November 2008



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Statistics Canada Manufacturing, Construction and Energy Division

# Steel, Tubular Products and Steel Wire

### November 2008

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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**

#### November 2008

- Monthly production of primary steel and pig iron decreased 42% in November 2008 to 616,547 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products decreased 23.6% to 828,639 metric tonnes.
- Between October 2008 and November 2008, production of steel pipe and tubing decreased 5.4% to 203,688 metric tonnes.
- Total shipments of steel wire and specified wire products decreased 16.3% to 35,869 metric tonnes in November 2008.

## **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 2008

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			
November								
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	x 0 0	x x	3,419 81	3,416 3	923 0	7,703 x 0	0 37 0	
31 Steel fabrication 32 Metal building systems 33 Contractors'products 34 Miscellaneous stamping and coating	0 0	x 0 0 0	1,793 0 159	2,747 40	31,806 0 217	x 0 x x	0 110	- - - -
41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 53 Electrical machinery	· · ·	0	70 0 1,813	0 0 18	1,090 0	x x x 0	0 0	
54 Industrial packaging material 61 Pipes and tubes 62 Wire and wire products 63 Containers and closures	0	-	· · ·		0	0 0 402	X	
64 Appliances and utensils industries 70 Miscellaneous industries	:	0		•	0	901		
Total domestic shipments	x	x	7,335	6,224	34,036	32,145	x	0
Total domestic alloy shipments	0		•	•	•	7,866	0	
81 Exports to the United States 82 Exports to other countries (excluding United States)	x 0	x 0	4,650 0	3,175	0 0	x x	x 0	0
Total disposition	11,712	x	11,985	9,399	34,036	62,549	х	0
Total alloy shipments	0					18,069	0	
Producers interchange, for sale	x		0			391	0	
Exports for conversion and return						0		
Imports by producers (including conversion)	0						0	

See footnotes at the end of the table.

#### Table 1-1 - continued

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			
November							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses 21 Motor vehicles and parts 22 Railway operating 23 Railroad cars and locomotives	2,147 x	x 0 0 x	82,719 32,128 0	x x	1,189 0	27,700 37,984	176,288 85,024 0 x
24 Shipbuilding	•			0	•		0 50,899
<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>	x	x x 16	x x 2,539 870	1,688 4,254	· · ·	4,323 3,062 22,831 22,307	50,899 x 27,466 28,584
41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery 53 Electrical machinery	112 168 0	0 × ×	0 0 53 0	0 0 1,395		0 0 697	x 1,612 9,825 2,092
54 Industrial packaging material 61 Pipes and tubes 62 Wire and wire products	0 x	0	0 x x	x x 122	0	0 468 50	2,032 x 146,975 16,977
63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	0 x	X	x x	x 4,718	6,366	2,031	x 6,749 x
Total domestic shipments	4,571	30,409	269,398	x	7,555	121,453	578,626
Total domestic alloy shipments	163	0		0			8,029
81 Exports to the United States 82 Exports to other countries (excluding United States)	801 0	x x	66,326 29,792	x 3,858	10,485 479	38,676 6,904	197,051 52,962
Total disposition	5,372	x	365,516	x	18,519	167,033	828,639
Total alloy shipments	163	0		0			18,232
Producers interchange, for sale	0		171	0		0	х
Exports for conversion and return			0	0		0	0
Imports by producers (including conversion)	•	309	696	2,522		0	3,527

1. 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 2008

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 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 2,399 0 0 0	x x 44 0 31 21 22 0	87,104 81 24,788 0 5,000 227 85 1,835	x 3 38,068 x x 65 90 29	58,353 21 476,820 0 x x 0 0 0 0 0 0	228,321 x 0 x 78 x x x x x x 0 0 0 0 x x x x x	4,241 477 0 1,487	- - - - - - - - - - - - - - - - - - -
Total domestic shipments	x	x	119,120	117,171	x	682,777	x	0
Total domestic alloy shipments	0		•			x	0	
81 Exports to the United States 82 Exports to other countries (excluding United States)	x x	x 868	119,835 1,368	84,484	39 64	x x	x x	0
Total disposition	x	x	240,323	201,655	x	1,170,833	x	0
Total alloy shipments	0					x	0	
Producers interchange, for sale	х		0			9,335	369	
Exports for conversion and return						0		
Imports by producers (including conversion)	х						x	

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 2008

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
			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 24 Shipbuilding	x x	x 0 0 x	1,588,533 454,548 0	x x	11,125 0	x x	21 x 0
31 Steel fabrication 32 Metal building systems 33 Contractors'products 34 Miscellaneous stamping and coating	x	x	x x x x	x x x		x x x x	825,537 x x x x
41 Natural resources and extractive industries 51 Agricultural equipment 52 Non electrical machinery	594 x 0	x x x	1 123 2,529	0 764 0	· · ·	327 55	x x x
53 Electrical machinery 54 Industrial packaging material 61 Pipes and tubes 62 Wire and wire products	185 x	X	157 x x x x	20,642 x x 1,362	47	13,388 0 x x	34,187 x 1,865,518 285,990
63 Containers and closures 64 Appliances and utensils industries 70 Miscellaneous industries	0 X	X	× × · ×	x 66,394	79,980	×	203,990 X X X
Total domestic shipments	x	x	4,011,990	x	91,152	x	8,699,947
Total domestic alloy shipments	3,055	0		0			x
Exports <sup>2</sup> (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	12,327 14	x x	x x	x x	x x		4,468,127 1,066,938
Total disposition	x	x	5,983,846	x	227,874	x	14,235,012
Total alloy shipments	3,232	0		0			x
Producers interchange, for sale	0		х	х		5	x
Exports for conversion and return <sup>2</sup>			0	0		0	0
Imports by producers (including conversion)		х	x	x		0	174,765

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

	November		Year-to-date				
	2007	2008	2007	2008			
	metric tonnes						
Production of pig iron	705,754	352,116	7,836,265	8,358,914			

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

	November		Year-to-date	•
	2007	2008	2007	2008
		metric tonne	S	
Pig iron including pre-reduced iron	682,858	320,815	8,187,506	8,124,546
<b>Scrap</b> Own make Purchased	157,924 498,095	96,328 288,245	1,738,649 5,816,504	1,403,630 6,028,123
Total, pig iron and scrap products	1,338,877	705,388	15,742,659	15,556,299

#### Table 1-5

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

	Production		Shipments		
	2007	2008	2007	2008	
	metric tonnes				
November					
Steel, primary forms (carbon and alloy including continuous cast steel)					
Electric furnace	508,595	289,806	х	х	
Basic oxygen furnace	715,680	326,741	х	х	
Steel, primary forms - Total	1,224,275	616,547	164,921	83,223	
Included in "Steel primary forms total" above Continuous cast steel	1,208,445	603,767	151,079	73,986	

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

	Production		Shipments	
	2007	2008	2007	2008
		metric tonnes	3	
Steel, primary forms (carbon and alloy including continuous cast steel) Electric furnace	5,897,971	5,688,725	х	x
Basic oxygen furnace	8,417,632	8,544,517	Х	х
Steel, primary forms - Total	14,315,603	14,233,242	1,628,070	2,445,398
Included in "Steel primary forms total" above Continuous cast steel	14,146,629	14,097,977	1,546,917	2,298,167

#### Table 2-1

#### Steel pipe and tubing — Production and shipments, monthly 2008

	Production	Ship	ments for sale	
		Domestic shipments <sup>1</sup>	Exports	Total shipments
_		metric tonn	es	
November				
Total, pipe and tubing	203,688	163,634	60,157	223,791
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 10,630 44,858	2,564 13,332 41,557	0 0 5,416	2,564 13,332 46,973
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	11,517 34,194	11,056 12,558	6,403 19,413	17,459 31,971
<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	2,049 126	788 225	2,235 172	3,023 397
<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	1,276 x 657	236 738 134	32 40 125	268 778 259
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	12,431 7,173	9,366 3,513	3,842 1,884	13,208 5,397
<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)	55,461 17,687	59,107 7,359	15,419 4,825	74,526 12,184
Other tubular products	240	1,101	351	1,452

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 2008

	Production	Shi	pments for sale	
		Domestic shipments <sup>1</sup>	Exports	Total shipments
_		metric ton	nes	
Year-to-date				
Total, pipe and tubing	2,365,308	1,400,900	1,067,995	2,468,895
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 73,190 470,496	34,686 89,031 224,291	2,257 9,504 224,845	36,943 98,535 449,136
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	228,845 547,501	137,500 177,062	123,832 360,011	261,332 537,073
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	56,501 13,838	21,866 x	35,543 x	57,409 16,448
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	19,755 x x	x x x	x x x	14,826 10,196 4,362
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	191,889 100,753	132,013 43,109	58,464 29,820	190,477 72,929
<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)	491,556 106,965	x x	x x	591,220 102,353
Other tubular products	х	18,309	7,347	25,656

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

#### Table 3-1

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

	Shipments			Production	
	2007 2008		2008		
		Total shipments	Domestic shipments	Exports	
_			metric tonnes		
November					
Barbed wire	х	х	х	х	
Uncoated steel wire	17,826	10,902	5,719	5,183	
Galvanized steel wire	14,325	9,449	3,746	5,703	
Other coated steel wire	х	Х	х	3	
Farm fencing and wire chain link fabric	760	2,542	Х	Х	2,729
Wire mesh, bright or uncoated and galvanized	5,414	3,014	Х	х	3,259
Wire rope	3,589	4,498	Х	х	5,505
Nails and staples	х	Х	Х	х	х
Wire roofing nails of a length of 25 mm or more, iron or steel	3,807	676	371	305	543
Staples of iron or steel	х	х	х	х	х
All other wire products	1,140	х	х	2	х
Grand total	47,316	35,869	21,811	14,058	

1. Totals may not add due to rounding.

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

	Shipments			Production	
_	2007 2008				
		Total shipments	Domestic shipments	Exports	
_			metric tonnes		
Barbed wire	х	х	х	х	
Uncoated steel wire	193,887	183,659	97,579	86,080	
Galvanized steel wire	144,650	141,348	55,912	85,436	
Other coated steel wire	Х	Х	Х	х	
Farm fencing and wire chain link fabric	Х	Х	Х	Х	х
Wire mesh, bright or uncoated and galvanized	51,931	56,581	Х	х	58,254
Wire rope	Х	Х	Х	Х	Х
Nails and staples	Х	Х	Х	Х	Х
Wire roofing nails of a length of 25 mm or more, iron or steel	48,218	17,947	6,520	11,427	15,056
Staples of iron or steel	Х	Х	Х	Х	Х
All other wire products	х	х	х	51	х
Grand total	511,293	536,021	311,100	224,921	

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 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.gc.ca* ).