

Catalogue no. 41-019-XIE

Steel, Tubular Products and Steel Wire



July 2006



Statistics Canada Statistique Canada



How to obtain more information

Specific inquiries about this product and related statistics or services should be directed to: Manufacturing, Construction and Energy Division, Statistics Canada, Ottawa, Ontario, K1A 0T6 (telephone: 1 800 263 1136).

For information on the wide range of data available from Statistics Canada, you can contact us by calling one of our toll free numbers. You can also contact us by e-mail or by visiting our website at www.statcan.ca.

National inquiries line 1 800 263-1136

National telecommunications device for the hearing impaired 1 800 363-7629

Depository Services Program inquiries 1 800 700-1033

Fax line for Depository Services Program 1 800 889-9734

E-mail inquiries infostats@statcan.ca

Website www.statcan.ca

Information to access the product

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

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed *standards of service* which its employees observe in serving its clients. 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.ca* under About us > Providing services to Canadians.



Statistics Canada

Manufacturing, Construction and Energy Division

Steel, Tubular Products and Steel Wire

July 2006

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2006

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

September 2006

Catalogue no. 41-019-XIE, Vol. 2, No. 7

ISSN 1712-980X

Frequency: Monthly

Ottawa

La version française de cette publication est disponible sur demande (nº 41-019-XIF au catalogue).

Note of appreciation

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

User information

Symbols

The following standard symbols are used in Statistics Canada publications:

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

Table of contents

Highligh	ts	4
Related	products	5
Statistic	al tables	
1 Stee	el primary forms and pig iron	7
1-1	Disposition of net shipments of rolled steel products, by product, monthly 2006	7
1-2	Disposition of net shipments of rolled steel products, by product, year-to-date 2006	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 Stee	el pipe and tubing	12
2-1	Production and shipments, monthly 2006	12
2-2	Production and shipments, year-to-date 2006	13
3 Stee	el and specified wire products	14
3-1	Factory shipments, monthly	14
3-2	Factory shipments, year-to-date	14
Data qua	ality, concepts and methodology	
Concepts	s, methodology and data quality	15
Definition	ns	18

Highlights

July 2006

- Total production of primary steel and pig iron decreased 2.7% to 1,348,898 metric tonnes in July 2006.
- Between June 2006 and July 2006, total monthly dispositions of rolled steel products declined 14.8% to 1,114,908 metric tonnes. However, monthly dispositions were up 18.5% compared with July 2005.
- In July 2006, total production of steel pipe and tubing fell 20.7% to 211,790 metric tonnes. However, production for July 2006 rose 19.6% compared with July 2005.
- In July 2006, total shipments of steel wire and specified wire products dropped 25.5% to 39, 437 metric tonnes.

Related products

Selected CANSIM tables from Statistics Canada

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

Selected surveys from Statistics Canada

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

Statistical tables

Table 1-1 Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, monthly 2006

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			
July								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses		4,947	6,797	5,692	1,804	17,304		
21 Motor vehicles and parts	513			· .		18,646	152	
22 Railway operating								
23 Railroad cars and locomotives		266						
24 Shipbuilding			4.000	4.500				
31 Steel fabrication 32 Metal building systems		349	1,099	4,503	27,191	13,833		
33 Contractors'products	•	•	•	•	69	723	381	
34 Miscellaneous stamping and coating			244	250		418		
41 Natural resources and extractive								
industries					717	9,033		
51 Agricultural equipment						615		
52 Non electrical machinery				••	•	125		-
53 Electrical machinery								
54 Industrial packaging material 61 Pipes and tubes		•	•		•		•	
62 Wire and wire products	•	•	•	•	•	2,522	15,553	
63 Containers and closures	••	•	•		••	2,022	10,000	
64 Appliances and utensils industries								
70 Miscellaneous industries								
Total domestic shipments	513	5,562	8,140	10,445	29,781	63,219	16,086	
Total domestic alloy shipments						21,146		
Exports ² (for final sale)								
81 Exports to the United States	х	3,169	12,155	6,910	1,461	40,527	х	•
82 Exports to other countries (excluding United States)			2,180			17,054	11,429	
Total disposition	x	8,731	22,475	17,355	31,242	120,800	x	
Total alloy shipments						32,680		
Producers interchange, for sale	х	-				432	103	
Exports for conversion and return ²								
Imports by producers (including conversion)	80,111							

See footnotes at the end of the table.

Table 1-1 – continued

Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, monthly 2006

SDC No.	Cold finished bars	Plates ³	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			
July							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses 21 Motor vehicles and parts 22 Railway operating 23 Railroad cars and locomotives	1,855 1,701	30,196 2,154	150,825 66,629 1,990	31,818 11,297	1,609	40,015 36,744	292,862 135,682 4,410
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	174 38 187 35 88 61 10 581	5,476 394 1,473 58 287	6,513 4,260 8,742 38 1,186 142,610 185 1,391	1,439 5,038 2,072 11,694 2,124 118 311 5,137	14,882	103 4,182 36,054 21,545 993 851 57 2,097	59,241 4,182 43,358 37,897 9,785 799 473 3,065 12,880 145,595 19,016 16,584 7,234
Total domestic shipments	4,803	40,038	384,369	71,048	16,491	142,641	793,136
Total domestic alloy shipments	106						21,252
Exports ² (for final sale)							
81 Exports to the United States 82 Exports to other countries (excluding United States)	7,335	16,690 1,582	62,242 4,653	16,881 1,284	9,143 1,796	28,857 11,060	270,734 51,038
Total disposition	12,138	58,310	451,264	89,213	27,430	182,558	1,114,908
Total alloy shipments	106						32,786
Producers interchange, for sale			2,725	x			78,096
Exports for conversion and return ²			1,912				1,912
Imports by producers (including conversion)		4,008	19,031	17,243			120,393

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

^{2.} 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 shipments¹ of rolled steel products, by product, year-to-date 2006

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		21,730	59,076	54,028	22,815	158,710		
21 Motor vehicles and parts 22 Railway operating		•	•	•	•	164,569	1,212	-
23 Railroad cars and locomotives		2,587	•	•	•		•	•
24 Shipbuilding		2,007						
31 Steel fabrication		5,497	14,561	31,853	216,422	108,699		
32 Metal building systems								
33 Contractors'products				. 700	••	5,254	2,054	
34 Miscellaneous stamping and coating 41 Natural resources and extractive	••	••	3,272	2,726	•	9,137	•	-
industries					7,059	79,864		
51 Agricultural equipment	•				7,009	2.787		
52 Non electrical machinery						4,118		
53 Electrical machinery						,		
54 Industrial packaging material								
61 Pipes and tubes				•				
62 Wire and wire products 63 Containers and closures	••	•	•	•	••	29,545	126,307	•
64 Appliances and utensils industries	•	•	•	•	•	•	•	•
70 Miscellaneous industries				•		•	•	
Total domestic shipments	2,469	29,832	77,094	88,651	247,327	562,909	129,646	
Total domestic alloy shipments						173,926		
Exports ² (for final sale)						•		
81 Exports to the United States	х	16,928	95,928	72,932	22,994	322,217	х	
82 Exports to other countries (excluding United States)	Х		2.819			130.469	x	
Total disposition		47 467	,	161,583	270,321	,		
rotal disposition	х	47,167	175,841	161,563	270,321	1,015,595	х	
Total alloy shipments	•		-		•	285,953		
Producers interchange, for sale	х					15,334	370	
Exports for conversion and return ²								
Imports by producers (including conversion)	484,921							

See footnotes at the end of the table.

Table 1-2 – continued

Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, year-to-date 2006

SDC No.	Cold finished bars	Plates ³	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	21,115	233,906	1,166,128	246,612	17,421	284,752	2,286,391
21 Motor vehicles and parts	15,378		700,636	130,238	•	429,817	1,444,294
22 Railway operating 23 Railroad cars and locomotives	•	 16,105	4,431	•	•	•	23,123
24 Shipbuilding	•	10,105	4,431	•	•	•	23,123
31 Steel fabrication	1,279	43,047	36,206	•	•	5.021	462.737
32 Metal building systems	.,	.0,0				21,297	21,476
33 Contractors'products	323	1,296	29,057	13,826		233,425	286,263
34 Miscellaneous stamping and coating	1,821	10,235	50,367	38,291		137,640	253,489
41 Natural resources and extractive industries	578			••			87,604
51 Agricultural equipment	1,258	1,696					7,686
52 Non electrical machinery	471	2,632				:	7,301
53 Electrical machinery				34,729		8,548	43,277
54 Industrial packaging material	•		3,887	89,642 16,262		 11,820	94,005
61 Pipes and tubes 62 Wire and wire products	4,985		1,155,691	1,039		330	1,183,998 162,394
63 Containers and closures	4,900	•	3,597	1,566	94,142	330	99,305
64 Appliances and utensils industries		•	0,007	42,696	54,142	21,990	64,686
70 Miscellaneous industries	1.060	•		12,000	•	21,000	1,060
Total domestic shipments	48,393	308,917	3,152,176	615,053	111,961	1,154,661	6,529,089
Total domestic alloy shipments	937		.,,				174,863
Exports 2 (for final sale)							,
81 Exports to the United States	x	123,187	434,511	128,444	71,906	279,344	2,063,004
82 Exports to other countries (excluding United	^	120,107	10 1,0 1 1	120,111	7 1,000	270,011	2,000,001
States)	-	11,148	32,480	8,421	10,896	77,993	290,965
Total disposition	x	443,252	3,619,167	751,918	194,763	1,511,998	8,883,058
Total alloy shipments	937						286,890
Producers interchange, for sale			18,836	x			540,996
Exports for conversion and return ²			21,526				22,068
Imports by producers (including conversion)		20,018	167,341	114,841			787,121

^{1.} 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

	July		Year-to-date	
	2005	2006	2005	2006
		metric tonne	s	
Production of pig iron	649,374	748,336	4,901,943	5,138,012

^{2.} 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.

^{3.} 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

	July		Year-to-date	
	2005	2006	2005	2006
		metric tonnes		
Pig iron including pre-reduced iron	630,746	767,679	5,120,060	5,338,630
Scrap Own make Purchased	148,486 423,913	178,423 536,907	1,302,674 3,622,175	1,218,160 3,676,757
Total, pig iron and scrap products	1,203,145	1,483,009	10,044,909	10,233,547

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

	Production		Shipments	
	2005	2006	2005	2006
		metric tonnes		
July				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace Basic oxygen furnace	406,755 695,890	557,524 791,374	x 	95,714 18,149
Steel, primary forms - Total	1,102,645	1,348,898	x	113,863
Included in "Steel primary forms total" above Continuous cast steel	1,086,084	1,332,845	x	109,753

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

	Production		Shipments		
	2005	2006	2005	2006	
		metric tonnes			
Steel, primary forms (carbon and alloy including continuous cast steel) Electric furnace Basic oxygen furnace	3,751,305 5,326,332	3,820,635 5,530,665	x 	x x	
Steel, primary forms - Total	9,077,637	9,351,300	x	x	
Included in "Steel primary forms total" above Continuous cast steel	8,970,689	9,231,967	x	х	

Table 2-1 Steel pipe and tubing — Production and shipments, monthly 2006

	Production	Ship	ments for sale	
	_	Domestic ¹ shipments	Exports ²	Total shipments
		metric tonn	es	
July				
Total, pipe and tubing	211,790	168,520	100,918	269,438
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	5,756 4,754 38,391	3,989 6,129 17,037	19 36,028	4,008 6,129 53,065
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	19,641 44,408	9,541 14,592	10,059 27,936	19,600 42,528
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	2,511 295	1,082 150	2,885 614	3,967 764
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	1,327 793 3,277	626 1,340 1,571	411 108 205	1,037 1,448 1,776
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	21,769 9,231	14,411 4,437	7,656 2,857	22,067 7,294
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)	44,385 13,931	59,446 32,833	8,264 3,172	67,710 36,005
Other tubular products	1,321	1,336	704	2,040

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 2006

	Production	Shipments for sale		
	_	Domestic ¹ shipments	Exports ²	Total shipments
_	metric tonnes			
Year-to-date				
Total, pipe and tubing	1,803,990	1,118,074	689,389	1,807,463
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	82,509 43,305 273,540	57,405 85,419 65,576	212 144,942	57,617 85,419 210,518
Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery	158,333 350,629	75,150 107,088	85,263 237,736	160,413 344,824
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	30,443 6,754	9,517 2,240	21,531 6,830	31,048 9,070
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	11,569 12,457 23,543	7,988 x x	1,951 x x	9,939 21,094 15,556
Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled	225,177 88,928	143,270 39,659	64,835 18,845	208,105 58,504
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)	398,207 89,027	x x	x x	456,949 107,978
Other tubular products	9,569	x	x	30,429

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 shipments¹, monthly

	Shipments			Production	
	2005 2006				
		Total shipments	Domestic shipments	Exports ²	
			metric tonnes		
July					
Barbed wire	160	364	X	x	
Uncoated steel wire	15,803	13,538	7,066	6,472	
Galvanized steel wire	11,852	11,613	4,121	7,492	
Other coated steel wire	Х	Х	X	X	
Farm fencing and wire chain link fabric	776	848	X	X	891
Wire mesh, bright or uncoated and galvanized	4,164	4,261	X	X	4,424
Wire rope	3,146	2,219	X	X	2,246
Nails and staples	Х	X	x	X	Х
Wire roofing nails of a length of 25 mm or more,					
iron or steel	4,421	3,926	x	X	Х
Staples of iron or steel	X	X	x		Х
All other wire products	х	х	Х	х	1,631
Grand total	42,237	39,437	21,620	17,817	

^{1.} Totals may not add due to rounding.

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

		Shipment	S		Production
	2005 2006				
		Total shipments	Domestic shipments	Exports ²	
			metric tonnes		
Barbed wire	х	х	x	х	
Uncoated steel wire	148,886	132,981	73,490	59,491	
Galvanized steel wire	91,618	95,486	39,071	56,415	
Other coated steel wire	Х	X	x	Х	
Farm fencing and wire chain link fabric	6,813	7,322	x	Х	7,850
Wire mesh, bright or uncoated and galvanized	Х	28,497	Х	X	30,414
Wire rope	24,211	X	Х	X	Х
Nails and staples	Х	X	X	Х	Х
Wire roofing nails of a length of 25 mm or more,					
iron or steel	Х	33,953	x	Х	X
Staples of iron or steel	Х	X	Х	Х	Х
All other wire products	Х	Х	Х	Х	х
Grand total	x	344,298	193,802	150,496	

^{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.

^{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	
	%	_	
Steel primary forms steel castings and pig iron Ingots and rolled steel products Steel pipe and tubing Steel wire	0 3 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).