



Catalogue no. 41-019-XIE

Steel, Tubular Products and Steel Wire

February 2007



Statistics
Canada

Statistique
Canada

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, courteous, and fair manner. To this end, the Agency has developed standards of service that 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

February 2007

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2007

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.

April 2007

Catalogue no. 41-019-XIE, Vol. 3, No. 2

ISSN 1712-980X

Frequency: Monthly

Ottawa

La version française de cette publication est disponible sur demande (n° 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
- 0^s 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

Highlights	4
Related products	5
Statistical tables	
1 Steel primary forms and pig iron	7
1-1 Disposition of net shipments of rolled steel products, by product, monthly 2007	7
1-2 Disposition of net shipments of rolled steel products, by product, year-to-date 2007	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 Steel pipe and tubing	12
2-1 Production and shipments, monthly 2007	12
2-2 Production and shipments, year-to-date 2007	13
3 Steel and specified wire products	14
3-1 Factory shipments, monthly	14
3-2 Factory shipments, year-to-date	14
Data quality, concepts and methodology	
Concepts, methodology and data quality	15
Definitions	17

Highlights

February 2007

- Monthly production of primary steel and pig iron decreased 8.3% in February 2007 to 1,253,472 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products declined 2.6% to 1,197,002 metric tonnes.
- Between January 2007 and February 2007, production of steel pipe and tubing declined 4.5% to 221,965 metric tonnes.
- Total shipments of steel wire and specified wire products fell 4.9% to 42,295 metric tonnes in February 2007.

Related products

Selected CANSIM tables from Statistics Canada

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

Selected surveys from Statistics Canada

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

Statistical tables

Table 1-1

Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, monthly 2007

SDC No.	Steel primary forms	Rails and heavy structural sections	Intermediate structural sections	Light structural sections	Concrete reinforcing bars	Other hot rolled bars	Wire rods	Railway track material
metric tonnes								
February								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	332	7,035	7,530	10,589	2,956	17,600	73	.
21 Motor vehicles and parts	295	.	.	.	.	19,010	305	.
22 Railway operating	.	.	.	.	.	0	.	.
23 Railroad cars and locomotives	.	616	.	.	.	.	.	.
24 Shipbuilding	0	.	.	.	.	.	.	.
31 Steel fabrication	0	796	687	5,416	31,095	15,471	0	.
32 Metal building systems	.	.	.	.	0	0	.	.
33 Contractors' products	.	.	0	.	144	172	0	.
34 Miscellaneous stamping and coating	0	0	541	396	.	1,188	.	.
41 Natural resources and extractive industries	.	.	0	.	895	10,920	0	.
51 Agricultural equipment	.	0	0	17	.	237	.	.
52 Non electrical machinery	.	18	0	0	.	618	0	.
53 Electrical machinery	.	.	.	.	.	0	.	.
54 Industrial packaging material	.	.	.	.	.	0	.	.
61 Pipes and tubes	.	.	.	.	.	0	.	.
62 Wire and wire products	223	.	.	.	0	2,289	22,069	.
63 Containers and closures	.	.	.	.	.	.	.	.
64 Appliances and utensils industries	.	.	.	.	.	.	.	.
70 Miscellaneous industries	.	.	.	.	0	.	.	.
Total domestic shipments	850	8,465	8,758	16,418	35,090	67,505	22,447	0
Total domestic alloy shipments	.	.	.	.	.	24,426	0	.
Exports ² (for final sale)								
81 Exports to the United States	x	4,111	11,008	10,676	1,303	34,743	38,652	.
82 Exports to other countries (excluding United States)	15,096	0	113	.	0	11,469	446	0
Total disposition	x	12,576	19,879	27,094	36,393	113,717	61,545	0
Total alloy shipments	.	.	.	.	.	36,384	0	.
Producers interchange, for sale	x	.	0	.	.	2,424	19	.
Exports for conversion and return ²	.	.	.	.	.	0	.	.
Imports by producers (including conversion)	0	.	.	.	.	.	0	.

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 2007

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							
February							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses	2,757	33,110	165,824	44,320	2,463	42,474	337,063
21 Motor vehicles and parts	2,011	0	64,660	16,407	.	57,029	159,717
22 Railway operating	.	0	.	.	.	.	0
23 Railroad cars and locomotives	.	1,960	0	.	.	.	2,576
24 Shipbuilding	.	.	.	.	.	.	0
31 Steel fabrication	86	4,199	2,841	0	.	260	60,851
32 Metal building systems	.	.	0	.	.	1,870	1,870
33 Contractors' products	37	5	4,796	2,198	.	26,568	33,920
34 Miscellaneous stamping and coating	239	994	6,678	2,902	.	13,008	25,946
41 Natural resources and extractive industries	77	6	3	0	.	0	11,901
51 Agricultural equipment	134	182	336	87	.	.	993
52 Non electrical machinery	28	42	284	0	.	.	990
53 Electrical machinery	.	.	.	1,832	.	1,532	3,364
54 Industrial packaging material	.	.	1,991	9,590	71	0	11,652
61 Pipes and tubes	8	0	151,931	4,308	.	1,564	157,811
62 Wire and wire products	473	.	826	34	.	0	25,914
63 Containers and closures	.	.	168	27	7,277	.	7,472
64 Appliances and utensils industries	.	.	.	5,438	.	2,302	7,740
70 Miscellaneous industries	215	.	.	.	.	.	215
Total domestic shipments	6,065	40,498	400,338	87,143	9,811	146,607	849,995
Total domestic alloy shipments	142	0	.	0	.	.	24,568
Exports ² (for final sale)							
81 Exports to the United States	7,266	20,573	90,116	x	8,432	28,551	304,046
82 Exports to other countries (excluding United States)	.	620	2,953	1,095	1,174	9,995	42,961
Total disposition	13,331	61,691	493,407	x	19,417	185,153	1,197,002
Total alloy shipments	142	0	.	0	.	.	36,526
Producers interchange, for sale	.	.	1,470	x	.	.	53,481
Exports for conversion and return ²	.	.	0	0	.	0	0
Imports by producers (including conversion)	.	3,122	5,221	0	.	0	8,343

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.

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 1-2

Steel primary forms and pig iron — Disposition of net shipments¹ of rolled steel products, by product, year-to-date 2007

SDC No.	Steel primary forms	Rails and heavy structural sections	Intermediate structural sections	Light structural sections	Concrete reinforcing bars	Other hot rolled bars	Wire rods	Railway track material
metric tonnes								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	342	8,228	22,106	18,450	5,026	40,741	..	.
21 Motor vehicles and parts	533	.	.	.	.	37,062	527	.
22 Railway operating	.	.	.	.	.	..	.	.
23 Railroad cars and locomotives	.	1,106	.	.	.	.	.	.
24 Shipbuilding	..	.	.	.	.	.	.	.
31 Steel fabrication	..	1,620	3,313	8,999	53,743	31,776	..	.
32 Metal building systems	.	.	.	.	..	..	.	.
33 Contractors' products	.	.	..	.	137	649	175	.
34 Miscellaneous stamping and coating	..	..	1,667	800	.	3,173	.	.
41 Natural resources and extractive industries	.	.	..	.	2,423	23,421	..	.
51 Agricultural equipment	.	..	..	67	.	383	.	.
52 Non electrical machinery	.	36	..	..	.	1,057	..	.
53 Electrical machinery	.	.	.	.	.	..	.	.
54 Industrial packaging material	.	.	.	.	.	..	.	.
61 Pipes and tubes	.	.	.	.	.	..	.	.
62 Wire and wire products	266	.	.	.	..	5,580	40,410	.
63 Containers and closures	.	.	.	.	.	.	.	.
64 Appliances and utensils industries	.	.	.	.	.	.	.	.
70 Miscellaneous industries	.	.	.	.	..	.	.	.
Total domestic shipments	1,141	10,990	27,086	28,316	61,329	143,842	41,185	..
Total domestic alloy shipments	.	.	.	.	.	48,869	..	.
Exports ² (for final sale)								
81 Exports to the United States	x	5,793	28,066	20,453	1,784	75,218	72,835	.
82 Exports to other countries (excluding United States)	x	..	333	.	..	28,411	726	..
Total disposition	x	16,783	55,485	48,769	63,113	247,471	114,746	..
Total alloy shipments	.	.	.	.	.	76,836	..	.
Producers interchange, for sale	x	.	..	.	.	4,693	90	.
Exports for conversion and return ²	.	.	.	.	.	..	.	.
Imports by producers (including conversion)	..	.	.	.	.	.	..	.

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 2007

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	5,922	66,282	341,270	91,469	6,168	85,115	691,192
21 Motor vehicles and parts	4,203	..	140,594	30,030	.	92,658	305,607
22 Railway operating	.	..	.	.	.	.	..
23 Railroad cars and locomotives	.	3,769	..	.	.	.	4,875
24 Shipbuilding	.	.	.	.	.	.	..
31 Steel fabrication	179	9,633	6,150	..	.	669	116,082
32 Metal building systems	.	.	..	.	.	4,141	4,141
33 Contractors' products	168	106	9,326	4,738	.	49,766	65,065
34 Miscellaneous stamping and coating	509	..	14,566	6,906	.	28,315	56,930
41 Natural resources and extractive industries	118	12	..	..	.	1	25,978
51 Agricultural equipment	181	364	930	162	.	.	2,087
52 Non electrical machinery	75	124	..	..	.	.	1,576
53 Electrical machinery	.	.	.	8,028	.	3,335	11,363
54 Industrial packaging material	.	.	4,480	20,950	..	..	25,501
61 Pipes and tubes	..	..	318,146	6,640	.	3,082	327,876
62 Wire and wire products	1,071	.	1,266	195	.	17	48,805
63 Containers and closures	.	.	533	110	11,929	.	12,572
64 Appliances and utensils industries	.	.	.	11,952	.	5,279	17,231
70 Miscellaneous industries	460	.	.	.	.	.	460
Total domestic shipments	12,894	81,284	837,548	181,180	18,168	272,378	1,717,341
Total domestic alloy shipments	272	..	.	..	.	.	49,141
Exports ² (for final sale)							
81 Exports to the United States	15,816	39,523	180,785	x	18,843	61,029	624,760
82 Exports to other countries (excluding United States)	.	1,472	7,020	x	2,529	20,307	84,368
Total disposition	28,710	122,279	1,025,353	x	39,540	353,714	2,426,469
Total alloy shipments	272	..	.	..	.	.	77,108
Producers interchange, for sale	.	.	3,190	x	.	.	112,156
Exports for conversion and return ²	.	.	..	..	.	..	..
Imports by producers (including conversion)	.	3,693	7,383	1,344	.	..	12,420

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.

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 1-3

Steel primary forms and pig iron — Production of pig iron

	February		Year-to-date	
	2006	2007	2006	2007
metric tonnes				
Production of pig iron	695,792	660,235	1,402,199	1,413,390

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

	February		Year-to-date	
	2006	2007	2006	2007
	metric tonnes			
Pig iron including pre-reduced iron	715,016	689,231	1,440,537	1,466,648
Scrap				
Own make	153,700	159,257	336,673	316,159
Purchased	487,568	547,581	1,002,777	1,102,499
Total, pig iron and scrap products	1,356,284	1,396,069	2,779,987	2,885,306

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

	Production		Shipments	
	2006	2007	2006	2007
	metric tonnes			
February				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace	508,255	538,879	x	78,442
Basic oxygen furnace	733,713	714,593	x	23,064
Steel, primary forms - Total	1,241,968	1,253,472	74,507	101,506
Included in "Steel primary forms total" above				
Continuous cast steel	1,227,071	1,239,474	70,186	97,980

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

	Production		Shipments	
	2006	2007	2006	2007
	metric tonnes			
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace	1,041,186	1,072,884	x	127,781
Basic oxygen furnace	1,494,906	1,546,947	x	59,210
Steel, primary forms - Total	2,536,092	2,619,831	x	186,991
Included in "Steel primary forms total" above				
Continuous cast steel	2,504,855	2,593,234	x	178,046

Table 2-1
Steel pipe and tubing — Production and shipments, monthly 2007

	Production	Shipments for sale		Total shipments
		Domestic ¹ shipments	Exports ²	
		metric tonnes		
February				
Total, pipe and tubing	221,965	136,152	86,922	223,074
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	3,059	4,539	19	4,558
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	3,746	5,229	1,105	6,334
over 16" (40.64 cm) outside diameter	44,515	18,528	16,225	34,753
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	19,287	9,962	9,277	19,239
over 16" (40.64 cm) periphery	47,249	14,819	30,308	45,127
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	5,154	2,693	2,440	5,133
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	798	536	770	1,306
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	1,586	923	175	1,098
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	551	1,249	8	1,257
over 16" (40.64 cm) outside diameter	2,092	1,293	303	1,596
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	26,353	18,774	8,152	26,926
Mechanical tubing, welded, produced from cold rolled	15,389	5,777	3,270	9,047
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	43,576	x	x	56,793
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	8,041	8,015	451	8,466
Other tubular products	569	x	x	x

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

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

Table 2-2
Steel pipe and tubing — Production and shipments, year-to-date 2007

	Production	Shipments for sale		Total shipments
		Domestic ¹ shipments	Exports ²	
metric tonnes				
Year-to-date				
Total, pipe and tubing	454,426	299,806	165,295	465,101
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	11,188	7,404	41	7,445
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	6,879	14,145	2,291	16,436
over 16" (40.64 cm) outside diameter	95,189	46,691	31,835	78,526
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	35,974	19,416	18,000	37,416
over 16" (40.64 cm) periphery	86,758	27,231	57,446	84,677
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	10,485	4,918	5,440	10,358
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	2,540	1,275	2,150	3,425
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	2,413	1,190	238	1,428
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	1,718	3,176	71	3,247
over 16" (40.64 cm) outside diameter	5,238	2,526	825	3,351
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	51,765	36,479	15,873	52,352
Mechanical tubing, welded, produced from cold rolled	29,303	12,131	6,815	18,946
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	97,423	x	x	124,288
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	16,437	17,415	1,194	18,609
Other tubular products	1,116	x	x	x

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

2. 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
	2006	2007			
		Total shipments	Domestic shipments	Exports ²	
	metric tonnes				
February					
Barbed wire	x	x	x	x	.
Uncoated steel wire	19,271	15,650	8,764	6,886	.
Galvanized steel wire	12,551	11,460	4,498	6,962	.
Other coated steel wire	x	x	x	x	.
Farm fencing and wire chain link fabric	815	x	x	x	x
Wire mesh, bright or uncoated and galvanized	3,506	4,032	x	x	4,204
Wire rope	3,482	3,202	x	x	3,508
Nails and staples	x	4,270	x	x	x
Wire roofing nails of a length of 25 mm or more, iron or steel	5,092	4,203	x	x	x
Staples of iron or steel	x	x	x	x	x
All other wire products	x	x	x	x	1,804
Grand total	48,090	42,295	24,625	17,670	.

1. Totals may not add due to rounding.

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

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

	Shipments				Production
	2006	2007			
		Total shipments	Domestic shipments	Exports ²	
	metric tonnes				
Barbed wire	x	x	x	x	.
Uncoated steel wire	39,333	33,467	18,798	14,669	.
Galvanized steel wire	25,173	24,665	10,052	14,613	.
Other coated steel wire	x	x	x	x	.
Farm fencing and wire chain link fabric	1,656	x	x	x	x
Wire mesh, bright or uncoated and galvanized	6,495	7,458	x	x	7,898
Wire rope	x	6,831	x	x	6,843
Nails and staples	x	x	x	x	x
Wire roofing nails of a length of 25 mm or more, iron or steel	9,974	8,282	x	x	x
Staples of iron or steel	x	x	x	x	x
All other wire products	x	x	x	x	3,677
Grand total	94,258	86,766	49,190	37,576	.

1. Totals may not add due to rounding.

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

Concepts, methodology and data quality

This publication presents the results of four monthly surveys: Steel Primary Forms, Steel Castings and Pig Iron; Ingots and Rolled Steel Products; Steel Pipe and Tubing; and Steel Wire and Specified Wire Products. These surveys measure, on a monthly basis, the quantities of selected steel products that are produced and shipped by Canadian manufacturers. The target population for these surveys includes manufacturers in Canada of primary steel, steel products, pig iron, steel pipe and tubing as well as, steel wire as defined in the Standard Classification of Goods (SCG) that report these products to the Annual Survey of Manufactures and Logging or ASML (Survey ID 2103). This means that estimates from the monthly surveys do not cover the entire universe of steel producers in Canada because the ASML does not survey all businesses. Instead, the ASML uses administrative data to cover the small and medium-sized establishments. These manufacturers are not part of the four monthly surveys.

General methodology

Data are collected each month, directly from survey respondents using a mail-out / mail-back process. Data capture and preliminary editing are performed simultaneously to ensure validity of the data. Businesses from whom no response has been received or whose data may contain errors are followed-up by telephone or fax.

Missing data for the current month are imputed automatically by applying to the previous month's value, the month-to-month change observed for the same period in the previous year, for the unit in question. However, an option exists for analysts to manually override this imputation with a better estimate based on pertinent knowledge about the industry or the business.

Various confidentiality rules are applied to all data before they are released to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent the direct or residual disclosure of identifiable data.

Direct disclosure could occur when the value in a tabulation cell is composed of a few respondents or when the cell is dominated by a few companies. Residual disclosure could occur when confidential information can be derived indirectly by piecing together information from different sources or data series.

Under normal circumstances, data are collected, captured, edited, tabulated and published within 6-8 weeks after the reference month.

Revisions

Data may be revised to include amended information or reports from respondents that are received after the end of a collection cycle. Revisions are disseminated in subsequent periods and reflected in the CANSIM series and in the tables of this publication.

Data accuracy

The methodology of these surveys has been designed to promote data accuracy. Since data are collected from all Canadian producers of primary steel, steel products, pig iron, steel pipe and tubing and steel wire within the target population, the resulting estimates are not subject to sampling error. However, the results are still subject to the non-sampling errors associated with coverage, non-response, inaccurate reporting, and processing. Errors relating to coverage and non-response can be measured and are summarized in text table 1. All attempts are made to control inaccurate reporting and processing errors.

Moreover, survey results are analyzed to ensure comparability with patterns observed in historical data series and the economic condition of the industry. Information available from other sources such as the Steel Primary Forms Weekly Survey (Survey ID 2131) and the Monthly Survey of Manufacturing or MSM (Survey ID 2101) are also used in the validation process.

Coverage error

There is a degree of under coverage (referred to as coverage error) in the survey results as there is generally a lag between the time a new business comes into existence and when it is included in the universe of these sub-annual surveys. This occurs because the list of businesses surveyed is derived from the latest available survey results for the ASML which are not available until 15 months after the reference period.

This error is kept at a minimum by also using advance information from the ASML frame, feedback from the MSM and other sources such as the Canadian Steel Producer's Association, trade journals and newspaper articles, to identify new survey units.

Non-response error

Some respondents may be unable to provide data for numerous reasons (i.e. fire, theft, strike, economic hardship, etc.), while others may be late in responding. To minimize non-response, delinquent respondents are followed up rigorously by phone or fax. Data for non-responding units are imputed using industry trend and other related information. Data are revised at a later date, if completed questionnaires are received after the end of a collection cycle.

Inaccurate response

Inaccuracy may result from poor questionnaire design or an inability on the part of respondents to provide the requested information or from misinterpretation of the survey questions. To reduce such errors the format and wording in the questionnaire are reviewed from time to time and modified based on feedback from survey respondents and data users. Respondents are also reminded of the importance of their contribution and of the need for accurate data reporting.

Processing errors

These errors may occur at various stages in the processing of survey data such as data entry, verification, editing and tabulation. Data are examined for such errors using automated edits along with an analytical review by subject matter experts. Several checks are performed on the collected data to verify internal consistency and comparability over time.

Text table 1
Coverage and non-response errors

	Coverage error based on ASML 2004	Non-response error- annual average 2005
	percentage	
Steel primary forms steel castings and pig iron	0	6
Ingots and rolled steel products	3	0
Steel pipe and tubing	0	0
Steel wire	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 0T6 (Telephone: 1-866-873-8789 or (613) 951-9497; Fax: (613) 951-9499; Internet: manufact@statcan.ca).