



Catalogue no. 41-019-XIE

Steel, Tubular Products and Steel Wire



May 2006



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 Our Products and Services.

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 Statistics Canada > Providing services to Canadians.



Statistics Canada
Manufacturing, Construction and Energy Division

Steel, Tubular Products and Steel Wire

May 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.

July 2006

Catalogue no. 41-019-XIE, Vol. 2, No. 5

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 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 Steel pipe and tubing	12
2-1 Production and shipments, monthly 2006	12
2-2 Production and shipments, year-to-date 2006	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

May 2006

- Total production of primary steel and pig iron inched up 0.4% to 1,355,007 metric tonnes in May 2006.
- Between April and May 2006, total monthly disposition of rolled steel products climbed 14.6% to reach 1,380,673 metric tonnes. This also represented an increase of 13.0% over May 2005.
- In May 2006, production of steel pipe and tubing grew 10.4% to 287,520 metric tonnes led by increased production of hollow structure and mechanical tubing.
- Total shipments of steel wire and specified wire products rose 19.0% to 55,340 metric tonnes in May 2006.

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 tonnes								
May								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	..	2,229	6,782	7,631	5,928	24,272	..	.
21 Motor vehicles and parts	875	.	.	.	.	27,749	250	.
22 Railway operating	.	.	.	.	.	..	.	.
23 Railroad cars and locomotives	.	470	.	.	.	.	.	.
24 Shipbuilding	..	.	.	.	.	.	.	.
31 Steel fabrication	..	507	2,897	6,315	33,207	16,261	..	.
32 Metal building systems	.	.	.	.	.	..	.	.
33 Contractors' products	.	.	..	.	305	486	308	.
34 Miscellaneous stamping and coating	..	..	902	413	.	1,648	.	.
41 Natural resources and extractive industries	.	.	..	.	875	11,537	..	.
51 Agricultural equipment	.	..	..	12	.	368	.	.
52 Non electrical machinery	.	..	..	..	.	554	..	.
53 Electrical machinery	.	.	.	.	.	..	.	.
54 Industrial packaging material	.	.	.	.	.	..	.	.
61 Pipes and tubes	.	.	.	.	.	..	.	.
62 Wire and wire products	..	.	.	.	..	3,328	18,889	.
63 Containers and closures	.	.	.	.	.	.	.	.
64 Appliances and utensils industries	.	.	.	.	.	.	.	.
70 Miscellaneous industries	.	.	.	.	..	.	.	.
Total domestic shipments	875	3,206	10,581	14,371	40,315	86,203	19,447	..
Total domestic alloy shipments	.	.	.	.	.	27,500	..	.
Exports ² (for final sale)								
81 Exports to the United States	x	2,414	14,761	11,590	3,509	50,161	x	.
82 Exports to other countries (excluding United States)	x	..	142	.	..	21,965	x	..
Total disposition	x	5,620	25,484	25,961	43,824	158,329	x	..
Total alloy shipments	.	.	.	.	.	52,429	..	.
Producers interchange, for sale	x	.	..	.	.	2,389	33	.
Exports for conversion and return ²	.	.	.	.	.	..	.	.
Imports by producers (including conversion)	120,187	.	.	.	.	.	..	.

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							
May							
Domestic shipments							
11 Steel service centres and other wholesalers and warehouses	2,835	34,326	189,757	35,453	2,499	46,026	357,738
21 Motor vehicles and parts	2,475	..	116,525	21,927	.	67,643	237,444
22 Railway operating	.	..	..	..	.	.	..
23 Railroad cars and locomotives	.	3,400	36	.	.	.	3,906
24 Shipbuilding	.	..	..	..	.	.	..
31 Steel fabrication	181	6,888	5,124	..	.	877	72,257
32 Metal building systems	.	..	..	..	.	2,681	2,681
33 Contractors' products	32	272	5,820	2,885	.	33,034	43,142
34 Miscellaneous stamping and coating	314	1,266	8,604	4,873	.	19,508	37,528
41 Natural resources and extractive industries	54	..	..	..	.	13	12,479
51 Agricultural equipment	196	308	..	..	.	.	884
52 Non electrical machinery	61	223	..	..	.	.	838
53 Electrical machinery	.	..	..	6,481	.	1,198	7,679
54 Industrial packaging material	.	..	417	13,655	103	..	14,175
61 Pipes and tubes	65	..	185,958	2,633	.	2,527	191,183
62 Wire and wire products	746	..	..	140	.	86	23,189
63 Containers and closures	.	..	714	292	16,601	.	17,607
64 Appliances and utensils industries	.	..	..	6,142	.	3,443	9,585
70 Miscellaneous industries	185	..	..	..	.	.	185
Total domestic shipments	7,144	46,683	512,955	94,481	19,203	177,036	1,032,500
Total domestic alloy shipments	140	..	.	..	.	.	27,640
Exports² (for final sale)							
81 Exports to the United States	8,976	16,917	65,147	23,677	9,155	40,908	302,540
82 Exports to other countries (excluding United States)	.	2,313	5,666	1,905	1,429	9,221	45,633
Total disposition	16,120	65,913	583,768	120,063	29,787	227,165	1,380,673
Total alloy shipments	140	..	.	..	.	.	52,569
Producers interchange, for sale	.	..	3,765	x	.	.	86,382
Exports for conversion and return ²	.	..	5,046	.	.	.	5,046
Imports by producers (including conversion)	.	1,125	26,702	3,582	.	.	151,596

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 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 tonnes								
Domestic shipments								
11 Steel service centres and other wholesalers and warehouses	..	15,613	43,447	40,869	18,742	117,858	..	..
21 Motor vehicles and parts	..	..	..	..	..	125,765	870	..
22 Railway operating	..	..	..	..	..	..	..	..
23 Railroad cars and locomotives	..	1,795	..	..	..	..	..	..
24 Shipbuilding	..	..	..	..	..	..	..	..
31 Steel fabrication	..	4,070	10,098	21,934	158,629	78,616	..	..
32 Metal building systems	..	..	..	..	..	..	..	..
33 Contractors' products	..	..	..	..	..	4,352	1,445	..
34 Miscellaneous stamping and coating	..	..	2,806	2,142	..	7,446	..	..
41 Natural resources and extractive industries	..	..	..	..	5,424	57,468	..	..
51 Agricultural equipment	..	..	..	38	..	1,913	..	..
52 Non electrical machinery	..	..	..	..	..	3,520	..	..
53 Electrical machinery	..	..	..	..	..	..	..	..
54 Industrial packaging material	..	..	..	..	..	..	..	..
61 Pipes and tubes	..	..	..	..	..	..	..	..
62 Wire and wire products	..	..	..	..	..	22,121	94,154	..
63 Containers and closures	..	..	..	..	..	..	..	..
64 Appliances and utensils industries	..	..	..	..	..	..	..	..
70 Miscellaneous industries	..	..	..	..	..	..	..	..
Total domestic shipments	1,727	21,490	56,496	64,983	183,664	419,207	96,469	..
Total domestic alloy shipments	..	..	..	..	..	124,915	..	..
Exports² (for final sale)								
81 Exports to the United States	x	12,381	67,404	55,786	18,400	234,423	x	..
82 Exports to other countries (excluding United States)	x	..	546	..	..	100,974	x	..
Total disposition	x	34,117	124,446	120,769	202,064	754,604	x	..
Total alloy shipments	..	..	..	..	..	214,386	..	..
Producers interchange, for sale	x	..	..	..	..	12,607	228	..
Exports for conversion and return ²	..	..	..	..	..	..	..	..
Imports by producers (including conversion)	263,177	..	..	..	..	..	..	..

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	16,204	167,358	828,813	178,260	13,669	196,741	1,637,599
21 Motor vehicles and parts	11,380	..	539,607	98,691	.	325,678	1,103,693
22 Railway operating	.	..	.	.	.	.	..
23 Railroad cars and locomotives	.	11,236	1,924	.	.	.	14,955
24 Shipbuilding	.	.	.	.	.	.	..
31 Steel fabrication	859	31,364	23,833	..	.	4,137	333,692
32 Metal building systems	.	.	..	.	.	14,688	14,736
33 Contractors' products	242	735	20,121	9,482	.	158,026	195,269
34 Miscellaneous stamping and coating	1,406	7,498	32,977	26,933	.	97,008	178,216
41 Natural resources and extractive industries	509	.	..	..	.	..	63,464
51 Agricultural equipment	979	780	..	..	.	..	5,558
52 Non electrical machinery	340	2,275	.	..	.	..	6,215
53 Electrical machinery	.	.	.	28,991	.	6,636	35,627
54 Industrial packaging material	.	.	2,150	65,914	363	..	68,427
61 Pipes and tubes	..	..	857,166	12,634	.	9,433	879,438
62 Wire and wire products	3,675	.	..	750	.	229	120,932
63 Containers and closures	.	.	1,856	1,206	64,575	.	67,637
64 Appliances and utensils industries	.	.	.	30,001	.	15,855	45,856
70 Miscellaneous industries	743	.	.	.	.	.	743
Total domestic shipments	36,442	221,246	2,310,260	453,014	78,607	828,452	4,772,057
Total domestic alloy shipments	671	..	.	..	.	.	125,586
Exports² (for final sale)							
81 Exports to the United States	x	87,265	305,343	89,291	52,350	211,673	1,479,152
82 Exports to other countries (excluding United States)	.	7,225	24,089	5,667	7,405	57,687	208,215
Total disposition	x	315,736	2,639,692	547,972	138,362	1,097,812	6,459,424
Total alloy shipments	671	..	.	..	.	.	215,057
Producers interchange, for sale	.	.	13,976	x	.	.	368,985
Exports for conversion and return ²	.	.	15,391	.	.	.	15,933
Imports by producers (including conversion)	.	8,346	119,121	77,880	.	.	468,524

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

	May		Year-to-date	
	2005	2006	2005	2006
metric tonnes				
Production of pig iron	738,919	749,003	3,574,682	3,623,937

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

	May		Year-to-date	
	2005	2006	2005	2006
	metric tonnes			
Pig iron including pre-reduced iron	750,689	765,596	3,798,878	3,773,231
Scrap				
Own make	186,158	178,926	974,577	860,103
Purchased	550,462	549,838	2,685,198	2,596,939
Total, pig iron and scrap products	1,487,309	1,494,360	7,458,653	7,230,273

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			
May				
Steel, primary forms (carbon and alloy including continuous cast steel)				
Electric furnace	561,675	571,897	100,665	80,298
Basic oxygen furnace	781,141	783,110	14,091	19,724
Steel, primary forms - Total	1,342,816	1,355,007	114,756	100,022
Included in "Steel primary forms total" above				
Continuous cast steel	1,323,731	1,337,094	109,691	95,855

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	2,822,016	2,714,137	x	x
Basic oxygen furnace	3,897,620	3,901,975	44,892	x
Steel, primary forms - Total	6,719,636	6,616,112	x	x
Included in "Steel primary forms total" above				
Continuous cast steel	6,636,254	6,531,650	x	x

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

	Production	Shipments for sale		Total shipments
		Domestic ¹ shipments	Exports ²	
metric tonnes				
May				
Total, pipe and tubing	287,520	137,225	101,068	238,293
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	8,464	6,689	21	6,710
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	13,268	10,540	..	10,540
over 16" (40.64 cm) outside diameter	40,479	5,383	7,983	13,366
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	27,084	12,163	13,785	25,948
over 16" (40.64 cm) periphery	59,447	17,841	40,594	58,435
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	4,781	1,567	3,542	5,109
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	949	461	842	1,303
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	1,577	935	185	1,120
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	2,112	2,750	x	2,976
over 16" (40.64 cm) outside diameter	2,261	1,383	1,033	2,416
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	37,128	23,334	10,507	33,841
Mechanical tubing, welded, produced from cold rolled	12,547	5,461	2,136	7,597
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	62,285	39,306	x	55,266
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	13,544	6,433	2,496	8,929
Other tubular products	1,594	2,979	1,758	4,737

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 2006

	Production	Shipments for sale		Total shipments
		Domestic ¹ shipments	Exports ²	
metric tonnes				
Year-to-date				
Total, pipe and tubing	1,324,997	809,756	490,134	1,299,890
Pipe welded and seamless				
Line pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	68,305	48,405	179	48,584
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	31,436	62,067	..	62,067
over 16" (40.64 cm) outside diameter	188,463	45,013	97,345	142,358
Hollow structural sections				
up to and including 16" (40.64 cm) periphery	115,715	55,349	63,513	118,862
over 16" (40.64 cm) periphery	255,626	78,292	175,360	253,652
Standard pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	24,596	7,231	16,024	23,255
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	5,275	1,735	4,882	6,617
Other pipe				
up to and including 4 1/2" (11.43 cm) outside diameter	8,813	6,039	1,229	7,268
over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter	9,728	x	x	16,047
over 16" (40.64 cm) outside diameter	13,334	x	x	10,468
Mechanical tubing				
Mechanical tubing, welded, produced from hot rolled	164,890	107,506	46,312	153,818
Mechanical tubing, welded, produced from cold rolled	65,669	30,112	12,741	42,853
Oil country tubular goods				
Oil country tubular goods, welded and seamless, casing (including coupling)	312,138	x	x	326,598
Oil country tubular goods, welded and seamless, oilwell tubing (including coupling)	53,759	x	x	63,903
Other tubular products	7,250	x	x	23,540

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	
	2005	2006			
		Total shipments	Domestic shipments		Exports ²
metric tonnes					
May					
Barbed wire	x	x	x	x	.
Uncoated steel wire	21,776	20,203	10,749	9,454	.
Galvanized steel wire	14,037	16,044	6,594	9,450	.
Other coated steel wire	x	x	x	x	.
Farm fencing and wire chain link fabric	1,135	1,331	x	x	1,230
Wire mesh, bright or uncoated and galvanized	x	5,068	x	x	5,632
Wire rope	4,122	4,141	x	x	4,078
Nails and staples	x	x	2,217	x	5,289
Wire roofing nails of a length of 25 mm or more, iron or steel	4,623	5,350	x	x	x
Staples of iron or steel	x	x	x	x	x
All other wire products	x	2,256	x	x	2,377
Grand total	x	55,340	30,438	24,902	.

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	
	2005	2006			
		Total shipments	Domestic shipments		Exports ²
metric tonnes					
Barbed wire	x	x	x	x	.
Uncoated steel wire	110,973	99,926	55,744	44,182	.
Galvanized steel wire	66,459	68,814	28,748	40,066	.
Other coated steel wire	x	x	x	x	.
Farm fencing and wire chain link fabric	5,172	5,401	x	x	5,831
Wire mesh, bright or uncoated and galvanized	x	19,544	x	x	20,828
Wire rope	17,480	x	x	x	x
Nails and staples	x	x	x	x	x
Wire roofing nails of a length of 25 mm or more, iron or steel	x	24,584	x	x	x
Staples of iron or steel	x	x	x	x	x
All other wire products	x	x	x	x	x
Grand total	x	251,962	142,243	109,719	.

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 or ASM (Survey ID 2103). This means that estimates from the monthly surveys do not cover the entire universe of steel production in Canada because the ASM does not survey all manufacturers. Instead, the ASM uses administrative data to cover the small and medium-sized manufacturers. These manufacturers are not part of the four monthly surveys.

General methodology

Data are collected monthly using a mail-out / mail-back process. Respondents are mailed a questionnaire but given the option of electronic data reporting (EDR) in a common format. Received data are subject to manual and automated editing to detect errors and inconsistencies as well as to follow-up with respondents by phone or fax if necessary. Follow-up is also carried out for missing reports after a pre-specified period of time. Data are imputed when they are missing. 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 direct or residual disclosure of identifiable data.

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 year-to-date totals in this publication.

Data accuracy

The methodology for these surveys has been designed to promote data accuracy. Since data are collected from all Canadian producers of primary steel, steel product, pig iron, steel pipe and tubing, and steel wire in the target population (see description above), 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, the data are analyzed for consistency and compared with general economic conditions and industry trends using surveys such as the Steel Primary Forms Weekly survey (Survey ID 2131) and the Monthly Survey of Manufacturing (Survey ID 2101).

Coverage errors

The list of businesses included in the four steel surveys is derived from the Annual Survey of Manufactures (ASM). This leads to some under-coverage in the sub-annual surveys since it takes 15 months to compile and publish ASM survey results. This under-coverage is however, kept at a minimum by using advance information from the ASM frame, feedback from the Monthly Survey of Manufactures (MSM) and other sources such as the Steel producers association, trade journals and newspaper articles.

Non-response

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

This error 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 because of definitional difficulties. To reduce such errors the format and wording in the questionnaire is 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 accuracy of reported information.

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. (see text table 1)

Text table 1
Coverage ratio and non-response rate by survey

	Coverage ratio	Non-response rate
	%	
Steel, Primary forms steel castings and Pig iron	91	11
Ingots and Rolled steel products	98	18
Steel pipe and tubing	82	2
Steel wire	92	2

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 during a reference period. These 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, 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 line: 613-951-9499; Internet: manufact@statcan.ca) .