



Industry Canada

Industrie Canada

Wire and Wire Products Industries in Canada



Industry Snapshot



**Industry
Sector**
Metals and
Minerals Processing

**Secteur
de l'industrie**
Transformation
des métaux et minéraux

Canada 

Contents

Introduction	1
1 Industry Overview	3
2 Industry Structure	7
3 Industry Performance	9
Major Firms in the Industry	12
Industry Associations	13
Major Industry Products	15
Glossary	17
Glossary of Steel Terms	19
For More Information	24
Appendix - Canadian Industry Statistics	26

For further information, contact:

David Fife

Tel (613) 954-1488

Fax (613) 954-3079

E-Mail: fife.david@ic.gc.ca

La version française est aussi disponible.

Industry Snapshot Wire and Wire Products Industries

Introduction

This document presents an economic profile of the wire and wire products industries over the 1988-1995 time period.

The analysis contained in this profile is based on statistics collected by Statistics Canada for the wire and wire products industries. For the purpose of data collection, Statistics Canada uses a coding system, known as the Standard Industrial Classification (SIC) that categorizes companies, whose major activities are similar, into industrial groups. Statistics Canada classifies the Canadian Fabricated Metal Products Industries into the following SICs:

- 3011 Power Boiler and Heat Exchanger Industry
- 302 Fabricated Structural Metal Products Industries
- 3021 Metal Tanks (Heavy Gauge) Industry
- 3022 Plate Work Industry
- 3023 Ore-Engineered Metal Buildings Industry (Except Portable)
- 3029 Other Fabricated Structural Metal Products Industries
- 303 Ornamental and Architectural Metal Products Industries
- 3031 Metal Door and Window Industry
- 3032 Prefabricated Portable Metal Buildings Industry
- 3039 Other Ornamental and Architectural Metal Products Industries
- 304 Stamped, Pressed and Coated Metal Products Industries
- 3041 Custom Coating of Metal Products Industry
- 3042 Metal Closure and Container Industry
- 3049 Other Stamped and Pressed Metal Products Industries
- 305 Wire and Wire Products Industries
- 3051 Upholstery and Coil Spring Industry*
- 3052 Wire and Wire Rope Industry
- 3053 Industrial Fastener Industry
- 3059 Other Wire Products Industries*
- 306 Hardware, Tool and Cutlery Industries
- 3061 Basic Hardware Industry
- 3062 Metal Dies, Moulds and Patterns Industry
- 3063 Hand Tool and Implement Industry
- 3069 Other Hardware and Cutlery Industries

* In order to maintain confidentiality, data for SIC 3051 and SIC 3059 have been combined and are discussed as SIC 3058 throughout this document.

- 3071 Heating Equipment Industry
- 3081 Machine Shop Industry
- 309 Other Metal Fabricating Industries
- 3091 Metal Plumbing Fixtures and Fittings Industry
- 3092 Metal Valve Industry
- 3099 Other Metal Fabricating Industries n.e.c.

This profile has three main sections:

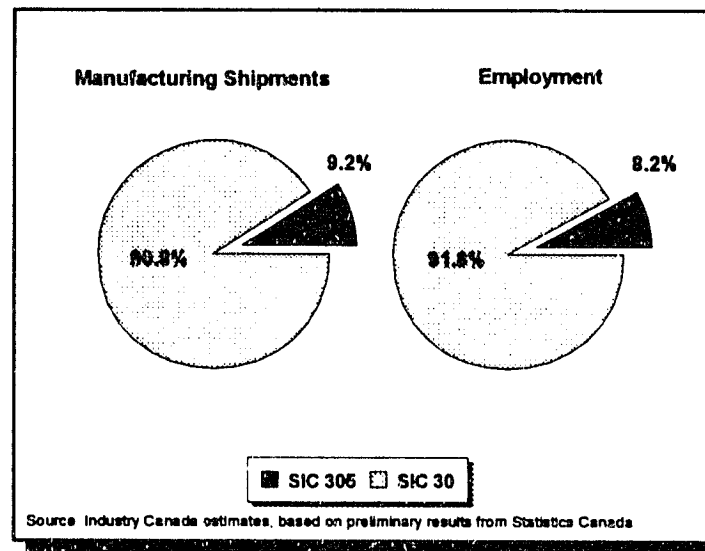
- Industry Overview — a summary of the industry's manufacturing processes and its economic outlook
- Industry Structure — information on structural measures such as industry size, trade, concentration and costs as of 1995
- Industry Performance — data on performance measures, including changes in industry size and efficiency indicators, between 1988 and 1995

The information provided in this document should be useful for firms to observe trends and to measure performance against industry averages. This profile also contains useful reference information: a list of the major firms in the industry, a partial listing of industry products, a glossary and references to additional information on the industry.

1 Industry Overview

Wire and wire products industries are part of the fabricated metal products industries (Figure 1). In the Standard Industrial Classification (SIC), SIC 305 represents Wire and Wire Products Industries, SIC 30 the Fabricated Metal Products Industries (SIC 30 does *not* include either machinery or transportation equipment industries.). SIC 305 consists in turn of four-digit industries: SIC 3051, the Upholstery and Coil Spring Industry; SIC 3052, the Wire and Wire Rope Industry; SIC 3053, the Industrial Fastener Industry; and SIC 3059 Other Wire Products Industries. In order to maintain confidentiality SIC 3051 and SIC 3059 have been combined and are discussed as SIC 3058 in this document.

Figure 1: SIC 305 and SIC 30, 1995



SIC 305 defines the wire and wire products industries as follows:

SIC 3051 - Upholstery and Coil Spring Industry

Establishments primarily engaged in wire springs. Establishments primarily engaged in manufacturing motor vehicle chassis springs are classified in **3254 - Motor Vehicle Steering and Suspension Parts Industry**.

SIC 3051 includes:

Bed springs	Motor vehicle upholstering springs
Coil springs (exc. motor vehicle suspension)	Upholstering springs

SIC 3052 - Wire and Wire Rope Industry

Establishments primarily engaged in manufacturing plain, coated or uncoated steel wire; flat, twisted or braided steel wire; and steel wire rope. Secondary products of establishments in this industry include nuts and bolts. Establishments primarily engaged in manufacturing nuts, bolts and other industrial fasteners are classified in **3053 - Industrial Fastener Industry**; those primarily engaged in manufacturing non-ferrous, non-electric wire are classified in **2961 -**

Aluminum Rolling, Casting and Extruding Industry or 2971 - Copper and Copper Alloy Rolling, Casting and Extruding Industry or 2999 - Other Rolled Cast or Extruded Non-Ferrous Metal Products Industries; and those primarily engaged in manufacturing electric wire and cable are classified in **3381 - Communications and Energy Wire and Cable Industry.**

SIC 3052 includes:

Flat, twisted or braided wire
Wire rope, steel

Wire, multiple strand, steel
Wire, plain, coated or not (exc. insulated), steel

SIC 3053 - Industrial Fastener Industry

Establishments primarily engaged in manufacturing industrial metal fasteners. A secondary product of establishments in this industry is wire. Establishments primarily engaged in manufacturing wire are classified in **3052 - Wire and Wire Rope Industry** and those producing fasteners for clothing, such as slide fasteners, are classified in **3992 - Button, Buckle and Clothes Fastener Industry.**

Bolts, metal
Fasteners (snap-type and speed)
Nuts

Rivets
Screws
Washers from wire

SIC 3059 - Other Wire Products Industries

Establishments primarily engaged in manufacturing wire products not elsewhere classified. Establishments primarily engaged in manufacturing wire display racks are classified in **3971 - Sign and Display Industry.**

Animal and pet cages, wire
Barbed wire
Coil chain
Garment hangers, wire
Nails, wire
Staples
Tacks
Wardrobe accessories, wire

Welding electrodes (rods)
Welding wire
Wire chain links, shackles and fittings
Wire fencing
Wire filled gates
Wire hoops
Wire mesh
Wire screen
Wire shelves

Summary and Outlook

Over the period 1988 to 1995, manufacturing shipments for the wire and wire products industries rose by about 7% to \$2.2 billion while total employment fell by approximately 15% to 12,900. At the same time, the number of establishments declined by almost 17% to 265. While the value of trade grew significantly, the balance of trade deteriorated over the period. By 1995, exports were equivalent to almost 46% of domestic shipments while imports accounted for almost 57% of the domestic market. The apparent domestic market was 15% larger than it was in 1988.

Exports are focused almost exclusively on the U.S. with exports to all other countries increasing from about 4.5% of total exports in 1988 to 5% in 1995. Although imports are more diversified, non-U.S. imports declined from about 34% of total imports in 1988 to 29% in 1995. While our trade deficit is primarily due to our large trade deficit with all countries other than the U.S., the trade deficit with the U.S. also increased so that in 1995, Canada ran a deficit of about \$485 million in wire and wire products with all countries.

Despite the large number of enterprises in this industry, it is a highly concentrated one. In 1991, the four largest enterprises in each of the four subsectors accounted for just 20 establishments but 54.2% of the manufacturing shipments. In 1992, the 8 largest enterprises in each of the 4 subsectors, accounted for just 36 establishments but 68.6% of the manufacturing shipments.

The industry is largely Canadian owned, as in 1990 and 1991 Canadian owned firms accounted for 80% of all establishments and 72 to 74% of the manufacturing shipments, the manufacturing value added and total employment. Since then though, several large firms have become foreign owned so the percentage would be different today.

While the aggregated figures present one story, a different one emerges if you look at the 4 subsectors that comprise SIC 305. The wire and wire rope industry sub-sector (SIC 3052) contains the smallest number of establishments and is also the most highly concentrated. In 1992, the 4 largest enterprises accounted for 20% of all establishments and 75% of the manufacturing shipments while the 8 largest accounted for 32.5% of all establishments and 89.7% of the manufacturing shipments. While exports here are predominantly to the U.S., the trade surplus with the U.S. has remained at about \$100 million (current) annually while the trade balance with all other countries has improved marginally from a trade deficit of \$115 to \$96 million over the period. The trade balance with all countries has improved from a trade deficit of \$15 million in 1988 to \$5.7 million in 1995. While both exports and imports have grown in importance over the period, exports as a percentage of the domestic market were 44% in 1995.

Major Firms

- Central Wire Industries Ltd. — stainless & alloy steel wire (3052)
- Duschene et Fils Ltée — welded mesh, nails (bulk), other wire products (3059)
- Greening Donald Co. Ltd. — stainless steel & other alloy wire (3052)
- Ivaco Inc. (SNW Quebec) — steel wire nails and spikes, high and low carbon wire, galvanized wire, cold heading wire, welded wire fabric (3052)
- Ivaco Inc. (SNW Ontario) — steel wire, other alloy wire
- Laurel Steel (Harris Steel) — steel wire, welded mesh
- Sidbec-Dosco (Ispat) Inc. — steel wire, zinc coated steel wire, nails (bulk) (3052)
- Stelco Inc. — barbed wire, steel wire, alloy wire, zinc coated steel wire, other coated steel wire, woven or welded mesh, zinc coated welded mesh, single strand wire rope, nails (bulk), staples, other wire products (3053)
- Titan Steel & Wire Co. Ltd. — steel wire, zinc coated steel wire, single strand wire rope, nails (bulk), staples (3052)
- Tree Island Steel Co. Ltd. — barbed wire, zinc coated steel wire, welded or woven farm fencing, welded mesh, nails, bulk nails, other wire products (3059)

The industrial fastener industry (SIC 3053) contains the second largest number of establishments and is less concentrated than SIC 3052. In 1992, the 4 largest enterprises accounted for 9% of all establishments and 58% of all manufacturing shipments while the 8 largest enterprises accounted for 18% of all establishments and 69% of all manufacturing shipments. While exports were again focused primarily on the U.S., Canada ran a large and expanding trade deficit with the U.S. along with a smaller but expanding trade deficit with all other countries. Consequently, by 1995 Canada's trade deficit with all countries for SIC 3053 has increased 54% (based on \$ current) to \$457.7 million in 1995. This SIC was the one with by far the highest level of exports as a percentage of domestic shipments (58.6%) and imports as a percentage of the domestic market (75%) in 1995.

The Upholstery and Coil Spring Industry (SIC 3051) and the Other Wire Products Industries (SIC 3059) combined together into SIC 3058 had the lowest level of concentration. In 1991, the 4 largest enterprises accounted for 2.6% of all establishments and 32.7% of all manufacturing shipments while in 1992 the 8 largest enterprises accounted for 6% of all establishments and 46.5% of all manufacturing shipments. Exports are concentrated almost exclusively in the U.S. but that is where most imports also come from (though to a lesser extent) so the industry ran a positive trade balance with the U.S. Trade with the rest of the world resulted in a negative trade balance almost entirely offset by the U.S. trade surplus. The result was a very modest global trade deficit for this subsector. Over the period 1988 to 1995, exports as a percentage of domestic shipments and imports as a percentage of the domestic market have each doubled to 49%.

2 Industry Structure

- In 1995, the value of industry shipments in SIC 305 was \$2.0 billion, measured in current dollars (Table 1). In the same year, the value of all exports was approximately \$1.0 billion, and the value of all imports was approximately \$1.5 billion (Table 2). Canada was a net importer of the products of this industry in 1995, having a net trade balance with all countries of -\$484.6 million (Table 2).
- In 1995, manufacturing value added totalled \$907.7 million (Table 1), and manufacturing value added per worker was \$70,217.
- There are 265 establishments in the Canadian industry (Table 1). In 1994, 55.1% of all establishments in SIC 305 were in Ontario, 26.0% in Quebec. The majority of manufacturing shipments also came from Ontario and Quebec in that year — 49.3% from Ontario, 35.4% from Quebec. The concentration of establishments and shipments in Ontario and Quebec is a result of most firms establishing themselves here to serve to domestic Canadian markets, largely concentrated in these two provinces, and increasingly export markets in the U.S. - particularly in adjacent border states.
- Concentration in SIC 305 is quite high, with the eight largest enterprises accounting for 68.6% of the industry's manufacturing shipments in 1992 (Table 3). These eight enterprises accounted for 13.6% of the industry's establishments, 61.0% of its wages and salaries, 72.4% of its fuel and electricity costs and 70.8% of the costs of materials and supplies used in the industry (Table 3).

Table 1: Industry Size, Wire and Wire Products Industries, 1995

Indicator	Value*
Number of Establishments	265
Total Revenue (\$)	2,176.9
Manufacturing Shipments (\$)	2,017.4
Manufacturing Shipments (constant 1986 \$)	1,576.1
Apparent Domestic Market** (\$)	2,459.1
Manufacturing Value Added (\$)	907.7
Total Employment	12,927

* Unless otherwise indicated, dollar amounts are in millions of current dollars.

** Apparent domestic market is defined as the value of manufacturing shipments plus the value of imports minus the value of exports.

Source: Industry Canada estimates, based on preliminary results from Statistics Canada.

Table 2: Value of Trade, Wire and Wire Products Industries, 1995

	Source/Destination		
	United States	Rest of World	All Countries
Imports	1,054.5	440.0	1,494.5
Exports	959.9	50.1	1,010.0
Trade Balance**	-94.6	-390.0	-484.6

* Millions of current dollars.

** Exports minus imports.

Source: Statistics Canada.

- In 1995, materials and supplies accounted for 67.72% of total industry operating costs, wages and salaries for 29.01%, and fuel and electricity for only 3.26% (Table 4). This cost distribution is quite similar to that for all manufacturing, which averaged the following in the 1988-94 period: 72.0% for materials and supplies, 24.6% for wages and salaries, and 3.4% for fuel and electricity.
- Wages are slightly lower than in the manufacturing sector as a whole. In 1995, the average wage was \$35,353 in SIC 305, \$36,916 in all manufacturing (source: Statistics Canada/CANSIM). However, for each of the three subsectors the story was different. The average wage in 1995 for SIC 3058 (SIC 3051 & SIC 3059 combined) was \$32,186, for SIC 3053 it was \$35,663 and for SIC 3052 it was \$40,061. The wages are correlated to the degree of concentration in the industry and to the manufacturing shipments per worker. The subsector with the highest level of concentration and the highest value of manufacturing shipments per worker paid the highest wages whereas the subsector with the lowest values for these two categories paid the lowest wage. The same relationship held true for the manufacturing value added per production worker but the correlation does not seem to be as pronounced.
- In 1994, the turnover ratio for SIC 305 was 4.93. (The turnover ratio is the value of manufacturing shipments divided by the value of closing inventories of raw materials, goods in process and finished goods.) The corresponding figure for all manufacturing was 8.88 in 1994.
- In 1995, capital expenditure totalled \$55.3 million, measured in current dollars; this amount represents 2.7% of the value of manufacturing shipments. Total gross (undepreciated) capital stock was valued at approximately \$1.0 billion in 1995, total net (depreciated) capital stock at approximately \$436.1 million.

Table 3: Industry Concentration, Wire and Wire Products Industry, 1992*

Indicator	% of Industry Total	
	Four Largest Enterprises	Eight Largest Enterprises
Establishments	N/A	13.6
Manufacturing Shipments	N/A	68.6
Wages and Salaries	N/A	61.0
Fuel and Electricity	N/A	72.4
Materials and Supplies Used	N/A	70.8

Source: Statistics Canada/Industry Canada Business Integrated Database (BID).

Table 4: Operating Costs, Wire and Wire Products Industry, 1995

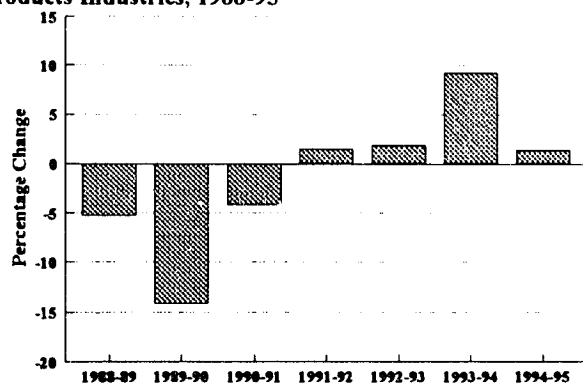
Input	% of Total Operating Costs
Materials and Supplies	67.72
Wages and Salaries	29.01
Fuel and Electricity	3.26
All Operating Costs	100.00

Source: Industry Canada estimates, based on preliminary results from Statistics Canada.

3 Industry Performance

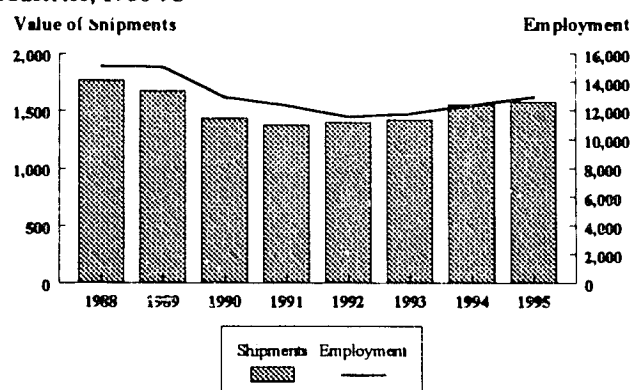
- Measured in constant 1986 dollars, industry shipments were dominated by decreases or negligible increases between 1988 and 1995 (Chart 1). Only in 1993-94 did the value of shipments increase by more than 2%. The value of shipments in 1995 was about 10% lower than the 1988 value (Chart 2).
- The number of establishments in SIC 305 dropped between 1988 and 1995, from 318 to 265. In only two of the years in this time period did the number of establishments increase: from 318 to 325 in 1989 and from 254 to 265 in 1995. Total employment also decreased in 1988-95, but the pattern differed from that for establishments. Total employment decreased steadily from over 15,000 in 1988 to approximately 11,500 in 1992, then increased steadily to reach almost 13,000 in 1995. The decrease in total employment of about 15% was consistent with the overall decline in the number of establishments.
- Measured in constant dollars, the value of SIC 305 shipments exported to the United States declined steadily from 1988 until 1991 and then increased steadily through 1995 (Chart 3). Exports to the U.S. are concentrated in a few states. In 1988, 9 states received Canadian exports totalling \$10 million/year or more and these states accounted for 56% of all U.S. bound exports. Even here, exports were concentrated in the states of California, Illinois, Michigan, New York and Ohio. By 1995, using the same criteria, Canadian exports were focussed on 16 states and those states accounted for 65% of Canadian exports of all U.S. bound wire and wire products exports. In 1995 though, the largest concentration of those exports was just 2 states - Michigan and Ohio. Exports to the rest of the world fluctuated considerably more, decreasing and increasing notably several times in the 1988-95 period. Exports to the United States increased in value almost 30% during this time, exports to the rest of the world about 50%.

Chart 1: Change in Value of Shipments, Wire and Wire Products Industries, 1988-95*



* Calculations are based on the value of shipments in constant 1986 dollars.
Source: For 1995, Industry Canada estimates, based on preliminary Statistics Canada results; for all other years, Statistics Canada/Industry Canada BID.

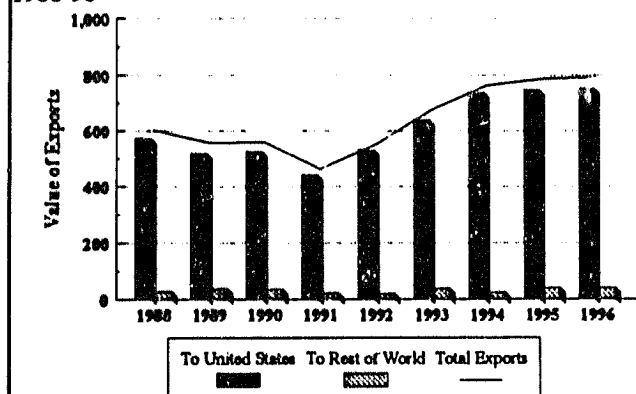
Chart 2: Shipments and Employment, Wire and Wire Products Industries, 1988-95*



* Shipments are valued in millions of constant 1986 dollars.
Source: For 1995, Industry Canada estimates, based on preliminary Statistics Canada results; for all other years, Statistics Canada/Industry Canada BID.

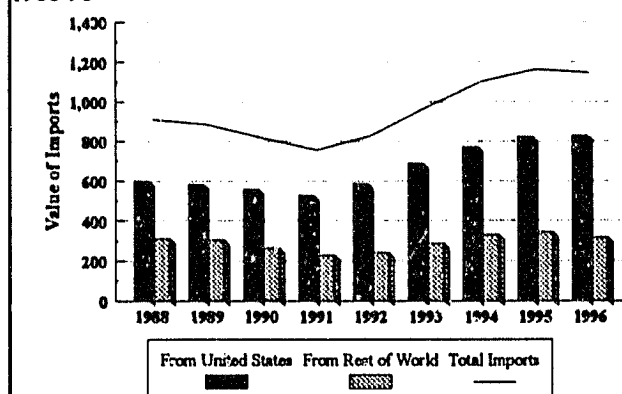
- The percentage of domestic shipments exported has increased since 1988. Exports totalled 35.8% of domestic shipments in 1988, 51.8% in 1995. Similarly for imports, which equalled 51.5% of domestic shipments in 1988, 73.7% in 1995.
- Measured in constant dollars, imports of the products of SIC 305 from the United States followed a pattern similar to that for exports to the United States — dropping steadily in value between 1988 and 1991 and then increasing steadily in value through 1995 (Chart 4). In this period, imports from the United States increased in value by about 25%. Canadian imports from the U.S. were largely from an even smaller number of states. In 1988, 9 states had exports to Canada totalling \$10 million/year or more and these states accounted for 60% of all U.S. exports of such goods. That year, those exports were concentrated in 4 states - California, Illinois, Michigan and Ohio. By 1995, using the same criteria, U.S. exports to Canada were focussed on 14 states which accounted for 71% of all U.S. exports of such goods. In 1995, these exports were concentrated in just 3 states: Illinois, Michigan and Ohio. The value of imports from the rest of the world decreased and increased between 1988 and 1995, but their 1995 value was essentially the same as that in 1988. The United States was dominant source of imports in every year in the 1988-95 period.
- Canada was a net importer of the products of SIC 305 throughout 1988-95. While the trade balance with the United States was unfavourable in every year, it never dropped below -\$85 million. By contrast, the trade balance with the rest of the world exceeded -\$200 million in every year between 1988 and 1995. Measured in constant 1986 dollars, the trade balance was -\$282.1 million in 1988, -\$303.9 million in 1995.
- The distribution of operating costs changed remarkably little in 1988-95. During that period, materials and supplies used accounted for 66% to 69% of operating costs, wages and salaries for 28% to 31%.
- Measured in constant (1995) dollars, wages in SIC 305 rose approximately \$700 between 1988 and 1995, from \$34,651 to \$35,353. During the 1988-95 period, average wages in all manufacturing rose by nearly \$1,050, from \$35,860 to \$36,916.

Chart 3: Value of Exports, Wire and Wire Products Industries, 1988-96



* Exports are valued in millions of constant 1986 dollars.
Source: Statistics Canada/Industry Canada BID.

Chart 4: Value of Imports, Wire and Wire Products Industries, 1988-96

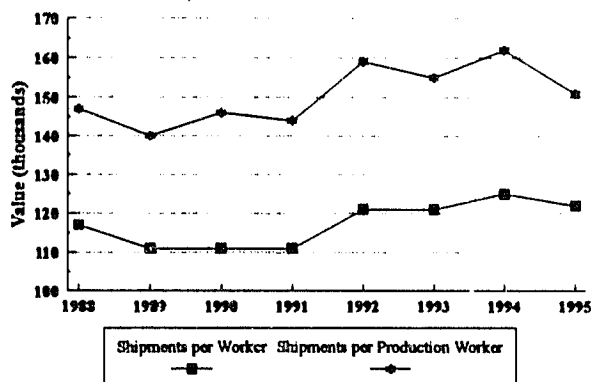


* Imports are valued in millions of constant 1986 dollars.
Source: Statistics Canada/Industry Canada BID.

Standard efficiency indicators followed similar overall patterns between 1988 and 1995:

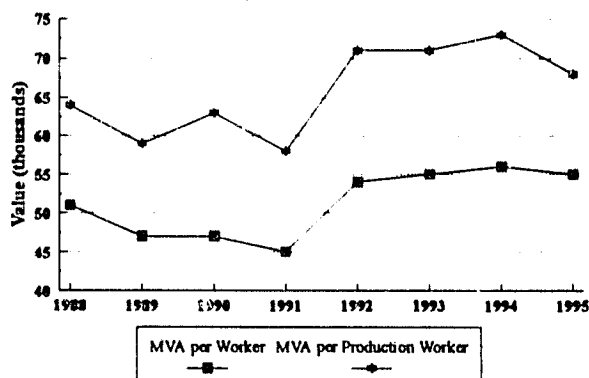
- manufacturing shipments per worker.* Measured in constant 1986 dollars, both manufacturing shipments per worker and manufacturing shipments per production worker increased little —by less than 5% — between 1988 and 1995 (Chart 5). Both indicators declined between 1988 and 1991 and increased thereafter. However, manufacturing shipments per production worker fluctuated more than manufacturing shipments per worker over the entire period and increased by a smaller percentage.
- manufacturing value added (MVA) per worker.* Measured in constant 1986 dollars, both MVA per worker and MVA per production worker increased very little in 1988-95 (Chart 6). Moreover, both measures decreased from 1988 to 1991 and increased between 1991 and 1995. But as occurred with manufacturing shipments, efficiency per production worker both fluctuated more than the per-worker measure and increased by a smaller percentage over the 1988-95 period. This pattern differs from the trend in all manufacturing, where MVA per worker and per production worker increased steadily between 1988 and 1995.

Chart 5: Manufacturing Shipments per Worker, Wire and Wire Products Industries, 1988-95*



* Calculations are based on the value of shipments in constant 1986 dollars.
Source: For 1995, Industry Canada estimates, based on preliminary Statistics Canada results; for all other years, Statistics Canada/Industry Canada BID

Chart 6: Manufacturing Value Added per Worker, Wire and Wire Products Industries, 1988-95*



* Calculations are based on the value of shipments in constant 1986 dollars.
Source: For 1995, Industry Canada estimates, based on preliminary Statistics Canada results; for all other years, Statistics Canada/Industry Canada BID

Major Firms in the Industry

In the following list, names in parentheses are those of establishments that produce products in SIC 305, according to Statistics Canada. The establishments listed are those that have one hundred or more employees.

Central Wire Industries Ltd. [3052]
Collison-Goll Ltd. [3053]
Cummings Point (1989) Ltd. (WS Tyler Canada Div.) [3059]
Duchesne Et Fils Ltée (Duchesne & Sons) [3059]
Eaton Yale Ltd. [3053]
Falcon Canada Inc. (Falcon Fasteners Reg'd) [3059]
Frost Wire Products Ltd. [3059]
Greening Donald Co. Ltd. [3052]
Hobart Brothers of Canada Limited [3059]
Industrie Duo-Fast Canada Inc. [3059]
Industries Hagen Ltée [3053]
Ivaco Inc. (Infasco [3053], Ingersoll Fasteners [3053], SNW Quebec [3052], Wrights Canadian Ropes [3052])
Jancee Screw Products Limited [3053]
Les Industries Aérospatiales Mecair Inc. [3053]
National Standard Co. of Canada Ltd. [3052]
Parker-Hannifin (Canada) Inc. [3053]
PJ Wallbank Manufacturing Co. Limited [3051]
Produits Cari-All Inc. [3059]
Ranger Metal Products Limited [3059]
Robertson Whitehouse Inc. [3053]
Sidbec-Dosco Incorporated [3052]
Stanley Canada Inc. (Stanley-Bostitch) [3059]
SteelWire Ltd. (Parkdale Works) [3052]
Stelco Fasteners Ltd. (Stelco Fastener Works) [3053]
Stelfil Ltée (Dominion Works) [3052]
Textron Canada Limitée (Townsend Division) [3053]
Titan Steel & Wire Co. Ltd. [3052]
Tree Island Industries Ltd. [3059]
Triplex Consumer Products Inc. [3053]
Wire Rope Industries Ltd. (Industries de Câbles D'Acier) [3052]
Wiresmith Ltd. [3059]

Industry Associations

Canadian Steel Producers Association (CSPA)

Formed in 1986, the Association has as its mission to enhance the long term competitiveness of steel and the Canadian steel industry. It is headed by a Board of Directors composed of the CEO's of member companies and has a full time President located in Ottawa.

Among other activities, the CSPA provides information about Canada's steel industry to a wide variety of audiences, including all levels of government, the media, associated industries, analysts and educators. The Association also takes positions reflecting a consensus of its member companies on government activities that affect the industry. These include such topics as continental and global trade issues.

Mrs. Jean Van Loon, President CSPA

cspacpa@magma.com.com

50 O'Connor Street

Suite 1425

Ottawa, Ontario

K1P 6L2

Tel: (613) 238-6049

Fax: (613) 238-1832

WWW: <http://www.canadiansteel.ca>

Industrial Fasteners Institute (IFI)

The Industrial Fasteners Institute is an association of leading North American manufacturers of bolts, nuts, screws, rivets, and all types of special formed parts. IFI member companies combine their technical knowledge to advance the technology and application engineering of fasteners and formed parts through planned programs of research and education.

The Institute and its member companies work closely with leading national and international technical organizations in developing standards and other technical practices related to fastener design and application. Interaction is ongoing with such organizations as ANSI, ASME, ASTM, SAE, ISO and the government.

Users of fasteners and formed parts in all industries benefit from the continual advances made by IFI member companies in the design, manufacture, and application of fasteners and formed parts. Thus, users are assured of maximum engineering efficiency and reliability for completed assemblies at the lowest possible cost.

IFI headquarters are located in Cleveland, Ohio with staff representation as follows:

Managing Director - Robert (Rob) Harris

Director of Engineering - Charles J. Wilson

Office Manager and Treasurer - Jewetta R. Haselbusch

Staff Engineer - Frank W. Akstens

Staff Engineer - David M. Sutula

WWW: <http://www.industry.net/industrial-fasteners>

Canadian Fence Industry Association (CFIA)

The Canadian Fence Industry Association is a non-profit organization whose members include professional installation contractors, retailers, agents, wholesalers and manufacturers of fence products and related services. They are dedicated to representing high construction standards as well as high level of ethical business behaviour in a competitive market place.

P.O Box 671, 17 Second Street

Morrisburg, Ontario

K0C 1X0

Tel: (613) 543-4558

Fax: (613) 543-3644

WWW: <http://www.webdirect.ca/info>

Major Industry Products

The following list itemizes and describes 70 Harmonized System (HS) export codes assigned to SIC 305 for 1996. The HS code is an international system of Commodity Classification which is employed to keep track of imports and exports passing through customs.

HS Code	Description
7217.11.00	Wire, I/nas, polished or not, but not plated or coated, cntg by wght <0.25%C
7217.12.00	Wire, I/nas, plated or coated with zinc, containing by wght less than 0.25%C
7217.13.00	Wire, I/nas. plated or coated with other base metals flea, cntg by wght <0.25%C
7217.19.00	Wire, I/nas, containing by weight less than 0.25% carbon, not elsewhere specified
7217.21.00	Wire, I/nas, polished or not, but not pltd or ctd, cntg by wght $0.25\% \leq C < 0.6\%$
7217.22.00	Wire, I/nas, plated or coated with zinc containing by wght $0.25\% \leq$ carbon <0.6%
7217.23.00	Wire, I/nas, pltd or ctd with other base metals not elsewhere specified, cntg by wght $0.25\% \leq C < 0.6\%$
7217.29.00	Wire, iron or non-alloy steel, not elsewhere specified, containing by wght $0.25\% \leq$ carbon <0.6%
7217.31.00	Wire, I/nas, polished or not, but not pltd or ctd, containing by wght $\geq 0.6\% C$
7217.32.00	Wire, I/nas, plated or coated with zinc containing by wght 0.6% or more carbon
7217.33.00	Wire, I/nas, pltd or ctd with other base metals not elsewhere specified, cntg by wght $\geq 0.6\%$ carbon
7217.39.00	Wire, iron or non-alloy steel, not elsewhere specified containing by weight 0.6% or more carbon
7223.00.00	Wire of stainless steel
7220.10.00	Wire of high speed steel
7229.20.00	Wire of silico-manganese steel
7229.90.00	Wire of alloy steel, o/t stainless
7312.10.00	Stranded wire, ropes and cables of iron or steel, not electrically insulated
7312.90.00	Plaited bands, slings and the like of iron or steel, not elec insulated
7313.00.00	Wire, barbed, twisted hoop, single flat or twisted double of I or a, for fencing
7314.11.00	Woven products, stainless steel
7314.19.00	Woven products, iron or steel, other than stainless
7314.20.00	Grill, netting, fencing, I or s, welded inter, cross-sect dim $\geq 3\text{mm}$, ms $\geq 100\text{cm}^2$
7314.30.00	Grill, netting, fencing, iron or steel, welded at the intersection, not elsewhere specified
7314.41.00	Cloth, grill, netting, fencing, iron or steel, plated or coated with zinc, not elsewhere specified
7314.42.00	Cloth, grill, netting, fencing, iron or steel, coated with plastics, not elsewhere specified
7314.49.00	Cloth, grill, netting, fencing, iron or steel, not elsewhere specified
7315.12.00	Chain, articulated link, iron or steel, not elsewhere specified
7315.19.00	Chain parts, articulated link, iron or steel
7315.20.00	Chain, skid, iron or steel
7315.81.00	Chain, stud link, iron or steel
7315.89.00	Chain, iron or steel, not elsewhere specified
7315.90.00	Chain parts, iron or steel, not elsewhere specified

HS Code	Description
7317.00.00	Nails, staples & sim art, I or s, excl art of head No 8305 & art w/copper heads
7318.11.00	Screws, coach, iron or steel
7318.12.00	Screws, wood, iron. or steel, not elsewhere specified
7318.13.00	Screw hooks and screw rings of iron or steel
7318.14.00	Screws, self-tapping, iron or steel
7318.15.00	Bolts or screws not elsewhere specified, with or without their nuts or washers, iron or steel
7318.16.00	Nuts, iron or steel, not elsewhere specified
7318.19.00	Threaded articles of iron or steel, not elsewhere specified
7318.21.00	Washers, spring or lock, iron or steel
7318.22.00	Washers, iron or steel, not elsewhere specified
7318.23.00	Rivets, iron or steel
7318.24.00	Cotters and cotter-pins, iron or steel
7318.29.00	Non-threaded articles of iron or steel, not elsewhere specified
7320.20.00	Springs, helical, iron or steel
7320.90.00	Springs, iron or steel, not elsewhere specified
7326.20.00	Articles of wire, iron or steel, not elsewhere specified
7326.90.00	Articles, iron or steel, not elsewhere specified
7414.10.00	Endless bands of copper wire for machinery
7414.90.00	Cloth, grill and netting of copper wire and expanded metal of copper
7415.10.00	Nails, tacks, drawing pins, staples and sim art of copper or I/s w copper heads
7415.21.00	Washers, copper, including spring washers
7415.29.00	Articles of copper, not threaded, not elsewhere specified, similar to those of heading 7415.10 & 21
7415.31.00	Screws, copper, for wood
7415.32.00	Screws, bolts and nuts of copper excluding wood screws
7415.39.00	Articles of copper threaded, not elsewhere specified similar to bolts, nuts and screws
7416.00.00	Springs, copper
7419.10.00	Chain and parts thereof of copper
7508.00.00	Articles of nickel, not elsewhere specified
7616.10.00	Nails, tacks, staples, bolts, nuts & sim art, aluminium (excl staples No 83.05)
8305.20.00	Staples in strips, base metal, not elsewhere specified (e.g. for offices, upholstery or packaging)
8305.90.00	Letter corners, letter or paper clips and similar office art of base metals
8308.20.00	Rivets, tubular or bifurcated, of base metal for clothing/footwear, awnings, etc.
8311.10.00	Electrodes, coated, of base metal, for electric arc welding
8311.20.00	Wire, cored, of base metal, for electric arc welding
8311.30.00	Coated rods and cored wire of base metal for soldering, brazing/w lding by flame
8311.90.00	Electrodes & sim prod of base metal/metalcarb, not elsewhere specified, for welding, brazing, etc.
9114.10.00	Clock or watch springs, including hairsprings
9604.00.00	Hand sieves and hand riddles

Glossary

Many of the following definitions are adapted from Statistics Canada's Census of Manufactures.

Capital Expenditure and Capital Stock

Capital expenditure refers to expenditure on the two components of capital:

- construction
- machinery and equipment

Gross capital stock is the sum over time of annual capital expenditures minus the value of annual discards of worn-out fixed assets.

Net capital stock refers to gross capital stock minus accumulated depreciation. Straight-line depreciation is one of many methods of calculating depreciation. This method assumes that an asset's value decreases linearly over its life; assets are therefore depreciated by equal amounts each year over their life until their net value is zero.

Company

A company is a legal entity. For Census purposes, four types of organization are distinguished: individual ownerships, partnerships, incorporated companies and co-operatives.

Although the company is recognized in Census tabulations when distributing establishments according to their type of legal organization, basis Census tabulations classify each establishment of a company to its own industry, not to the industry most characteristic of the company as a whole. For example, if Company ABC operates establishments manufacturing small electrical appliances and others manufacturing synthetic plastic resins, the output of the two kinds of establishments is included in totals for their respective industries.

Enterprise

An enterprise is a company or family of companies controlled or managed by the same interests as a result of common ownership. In Statistics Canada's Census of Manufactures, enterprises are simply tabulating units; the Census gathers no information from enterprises or about enterprises as such.

Establishment

An establishment is the smallest separate operating entity capable of reporting the following statistics:

- materials and supplies used
- goods purchased for resale
- fuel and power consumed
- number of employees and their wages and salaries
- person-hours worked and paid
- inventories
- shipments or sales

In practice, a manufacturing establishment is usually equivalent to a factory, plant or mill.

Harmonized System (HS)

The HS code is an international system of Commodity Classification which is employed to keep track of imports and exports passing through customs.

Industry

An industry is a group of operating units, such as companies or establishments, that are engaged in the same or a similar kind of economic activity.

Standard Industrial Classification (SIC)

The Standard Industrial Classification (SIC) is a coding system that defines industries in terms of specific groupings of activities. Every industry is assigned a code, and there are two-, three-, and four-digit codes. Two-digit codes represent the broadest industry definition and the broadest range of activities, four-digit codes the most detailed industry definition and the most detailed range of activities. For example, SIC 30 represents the Fabricated Metal Products Industries, SIC 305 the Wire and Wire Products Industries. If at least 50% of an establishment's value added derives from activities associated with a particular SIC code, the establishment is classified in that industry.

Value Added

Value added refers to the value a producing unit adds to the goods and services it purchased from suppliers. Value added is thus a measure of net output — the value of gross output minus the value of purchased inputs used to create the product.

Glossary¹ of Steel Terms

Alloy steels

Alloy steels have enhanced properties due to the presence of 1 or more special elements, or to the presence of larger proportion of elements such as manganese and silicon than are present in carbon steels.

Apparent consumption

Total shipments minus exports plus imports of steel.

Bar

A finished steel product, commonly in flat, square, round or hexagonal shapes. Rolled from billets, bars are produced in two major types, merchant and special.

Basic oxygen steelmaking

The process whereby hot metal and steel scrap are charged into a basic oxygen furnace (BOF). High purity oxygen is then blown into the metal bath, combining with carbon and other elements to reduce the impurities in the molten charge and convert it into steel.

Billet

A piece of semi-finished iron or steel that is nearly square and is longer than a bloom. Bars and rod are made from billets.

Blast furnace

A large cylindrical structure into which iron ore is combined with coke and limestone to produce molten iron.

Bloom

A semi-finished product, large and mostly square in cross-section. Blooms are shaped into girders, beams, and other structural shapes.

Carbon steels

The largest percentage of steel production. Common grades have a carbon content ranging from 0.06% to 1.0%.

Coal

The primary fuel of integrated iron and steel producers.

Coke

A form of carbonized coal burned in blast furnaces to reduce iron ore pellets or other iron-bearing materials to molten iron.

Coke ovens

Ovens where coke is produced. Coal is usually dropped into the ovens through openings in the roof, and heated by gas burning in flues in the walls between ovens within the coke oven battery. After heating about 18 hours, the end doors

¹

This glossary is taken from the Canadian Steel Producers Association's 1994 information binder and from the Environment Canada report, *Emissions from the Canadian Iron and Steel Industry in 1992*.

are removed and a ram pushes the coke into a quenching car for cooling before delivery to the blast furnace.

Coil

A finished steel product such as sheet or strip which has been wound or coiled after rolling.

Cold rolling

The passing of sheet or strip that has previously been hot rolled and pickled through cold rolls, i.e. below the softening temperature of the metal. Cold Rolling makes a product that is thinner, smoother, and stronger than can be made by hot rolling alone.

Continuous casting

A process for solidifying steel in the form of a continuous strand rather than individual ingots. Molten steel is poured into open-bottomed, water-cooled molds. As the molten steel passes through the mold, the outer shell solidifies.

Crude steel

Steel in the first solid state after melting, suitable for further processing or for sale. Synonymous to *raw steel*.

Direct reduction

A family of processes for making iron from ore without exceeding the melting temperature. No blast furnace is needed.

Electrical steels

Specially manufactured cold rolled sheet and strip containing silicon, processed to develop definite magnetic characteristics for use by the electrical industry.

Electric arc furnace

An electric furnace used to melt steel scrap or direct reduced iron.

Flat products

A term referring to a class of products including sheet, strip, and plate that are made from slabs.

Galvanized steel

The product produced when hot or cold rolled sheet or strip is coated with zinc either by the hot-dipping or electrolytic deposition process. Zinc coating applied by the hot dip method is normally heavy enough to resist corrosion without additional protective coating. Materials electrolytically galvanized are not used for corrosion resistant applications without subsequent chemical treatment and painting except in mild corrosive conditions, due to the thin coating of zinc. Galvanize is a pure zinc coating. A special heat-treating process converts the pure zinc coating to a zinc/iron alloy coating, and the product is known as Galvanneal.

Hot metal

Molten iron produced in the blast furnace.

Hot rolling

Rolling semi-finished steel after it has been re-heated.

Integrated steelmaker

A producer that converts iron ore into semi-finished or finished steel products. Traditionally, this required coke ovens, blast furnaces, steelmaking furnaces, and rolling mills. A growing number of integrated mills use the direct reduction

process to produce sponge iron without coke ovens and blast furnaces.

Iron ore

The primary raw material in the manufacture of steel.

Ladle metallurgy

The process whereby conditions (temperature, pressure and chemistry) are controlled within the ladle of the steelmaking furnace to improve productivity in preceeding and subsequent steps and the quality of the final product.

Limestone

Used by the steel industry to remove impurities from the iron made in blast furnaces. Magnesium-containing limestone, called *dolomite*, is also sometimes used in the purifying process.

Line pipe

Used for transportation of gas, oil or water generally in a pipeline or utility distribution system.

Mechanical tubing

Welded or seamless tubing produced in a large number of shapes to closer tolerances than other pipe.

Minimill

A small non-integrated or semi-integrated steel plant, generally based on electric arc furnace steelmaking. Minimills produce rods, bars, small structural shapes and flat rolled products.

Net ton

See ton

Oil country tubular goods (OCTG)

Pipe used in wells in oil and gas industries, consisting of casing, tubing, and drill pipe. Casing is the structural retainer for the walls; tubing is used within casing oil wells to convey oil to ground level; drill pipe is used to transmit power to a rotary drilling tool below ground level.

Open-hearth process

A process for making steel from molten iron and scrap. The open-hearth process has been replaced by the basic oxygen process in most modern facilities.

Pellets

An enriched form of iron ore shaped into small balls.

Pig iron

High carbon iron made by the reduction of iron ore in the blast furnace.

Plate

A flat rolled product rolled from slabs or ingots, of greater thickness than sheet or strip.

Rolling mill

Equipment that reduces and transforms the shape of semi-finished or intermediate steel products by passing the material through a gap between rolls that is smaller than the entering materials.

Semi-finished products

Products such as slabs, billets, and blooms which must be rolled or otherwise processed to create usable steel shapes.

Sheet

A flat rolled product over 12 inches in width and of less thickness than plate.

Sheet piling

Rolled sections with interlocking joints (continuous throughout the entire length of the piece) on each edge to permit being driven edge-to-edge to form continuous walls for retaining earth or water.

Sintering

A process which combines ores too fine for efficient blast furnace use with flux stone. The mixture is heated to form clumps, which allow better draft in the blast furnace.

Slab

A wide semi-finished product made from an ingot or by continuous casting. Flat rolled steel products are made from slabs.

Sponge iron

The product of the direct reduction process. Also known as *direct reduced iron (DRI)*.

Stainless steels

Stainless steels offer a superior corrosion resistance due to the addition of chromium and/or nickel to the molten steel.

Standard pipe

Used for low-pressure conveyance of air, steam, gas, water, oil or other fluids and for mechanical applications. Used primarily in machinery, buildings, sprinkler systems, irrigation systems, and water wells rather than in pipelines or distribution systems.

Strip

A flat rolled product customarily narrower in width than sheet, and often produced to more closely controlled thicknesses.

Structural shapes

Rolled flange sections, sections welded from plates, and special sections with at least one dimension of their cross-section 3 inches or greater. Included are angles, beams, channels, tees and zees.

Structural pipe and tubing

Welded or seamless pipe and tubing generally used for structural or load-bearing purposes above-ground by the construction industry, as well as for structural members in ships, trucks, and farm equipment.

Tin coated steel

Cold rolled sheet, strip, or plate coated with tin or chromium.

Ton

- a) A unit of weight in the U.S. Customary System, an avoirdupois unit equal to 2,240 pounds. Also known as *long ton*.
- b) A unit of weight in the U.S. Customary System, an avoirdupois unit equal to 2,000 pounds. Also known as *short*

ton. Also known as *net ton*.

Tonne

A metric ton, equivalent to 1,000 kilograms.

Wire: drawn and/or rolled

The broad range of products produced by cold reducing hot rolled steel through a die, series of dies, or through rolls to improve surface finish, dimensional accuracy, and physical properties.

For More Information . . .

This document has presented only some of the data available on Canada's wire and wire products industries. More information may be obtained from the following sources.

World Wide Web:

- Canadian Business Map — for information on Canada's information resources (federal, provincial, municipal and international):
 - <http://commercecan.ic.gc.ca/>
- Canadian Industry Statistics — for domestic data by SIC:
 - http://strategis.ic.gc.ca/sc_ecnmy/sio/homepage.html
- Export Source — for trade information resources from across government:
 - <http://exportsource.gc.ca/>
- Industry associations — for information on the activities of Canadian industry associations:
 - <http://www.canadiansteel.ca> (Canadian Steel Producers Association (CSPA))
 - <http://www.industry.net/industrial-fasteners> (Industrial Fasteners Institute (IFI))
 - <http://www.webdirect.ca/info> (Canadian Fence Industry Association (CFIA))
- Industry Canada — for Industry Canada's home page:
 - <http://strategis.ic.gc.ca/>
- Metals and Minerals Processing Branch home page — for a wealth of reference materials on the metals and minerals industries:
 - <http://strategis.ic.gc.ca/metals>
- Natural Resources Canada — for information on minerals and mining in Canada:
 - <http://www.nrcan.gc.ca/ms/efab/mmsd> (links to data from NRCan's Minerals and Mining Statistics Division (MMSD))
- SIC 30 — for detailed data on SIC 30:
 - http://strategis.ic.gc.ca/sc_ecnmy/sio/engdoc/sice930.html (links to pages on SIC 30)
- SIC 3052 — for detailed data on SIC 3052:
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/engdoc/sice146.html (links to pages on SIC 3052, including information on principal activities and products, industry structure, international trade, industry performance, industry size, country of ownership and profit-based tertiles)
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/si_app_eng/si30527e.html (benchmarking tool for comparing the structure of individual establishments with the average establishment in SIC 3052)
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/ef_app_eng/si30528e.html (benchmarking tool for comparing the performance of individual establishments with the average establishment in SIC 3052)
- SIC 3053 — for detailed data on SIC 3053:
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/engdoc/sice147.html (links to pages on SIC 3053, including information on principal activities and products, industry structure, international trade, industry performance, industry size, country of ownership and profit-based tertiles)
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/si_app_eng/si30537e.html (benchmarking tool for comparing the structure of individual establishments with the average establishment in SIC 3053)
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/ef_app_eng/si30538e.html (benchmarking tool for comparing the performance of individual establishments with the average establishment in SIC 3053)
- SIC 3051 and SIC 3059 — for combined data on SIC 3051 and SIC 3059 (SIC 3058):
 - http://strategis.ic.gc.ca:80/sc_ecnmy/sio/engdoc/sice148.html (links to pages on SIC 3058, including

information on principal activities and products, industry structure, international trade, industry performance, industry size, country of ownership and profit-based tertiles)

- http://strategis.ic.gc.ca:80/sc_ecnmy/sio/si_app_eng/si30587e.html (benchmarking tool for comparing the structure of individual establishments with the average establishment in SIC 3058)
- http://strategis.ic.gc.ca:80/sc_ecnmy/sio/ef_app_eng/si30588e.html (benchmarking tool for comparing the performance of individual establishments with the average establishment in SIC 3058)
- Trade Data Online — for data on imports and exports by Harmonized System (HS) or SIC code:
 - http://strategis.ic.gc.ca/sc_mrkti/tdst/engdoc/tr_homep.html
- Canadian Welding Bureau(CWB) — information on ISO 9000 registration, contacts, standards & publications, and related links:
 - <http://www.cwbgroup.com/>

Appendix - Canadian Industry Statistics

SIC-E 3052 - Wire and Wire Rope Industry

Table 1: Structural Indicators
SIC 3052 Wire and Wire Rope Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Number of Establishments	43	44	41	38	40	34	34	37
Total Revenue (\$)	622.55	680.72	596.28	592.03	622.27	650.86	689.11	736.47
Manufacturing Shipments (\$)	580.68	624.9	546.45	555.53	579.55	613.39	652.83	697.71
Constant 1986 \$ Manufacturing Shipments	538.66	549.61	478.09	486.45	505.71	513.73	510.82	503.03
Manufacturing Shipments as a % of All Manufacturing Shipments	0.2	0.2	0.18	0.2	0.2	0.2	0.19	0.18
Apparent Domestic Market (Shipments + Imports - Exports) (\$)	596.07	655.18	577.59	569.63	566.25	593.80	649.24	703.43
Manufacturing Value Added (\$)	199.22	223.31	210.58	172.61	234.84	255.74	250.17	267.37
Total Employment	3311	3668	3168	2885	3019	3159	3143	3280
Total Salaries and Wages (\$)	108.93	126.42	113.88	110.27	114.99	119.3	122.45	131.4
Production Workers as a % of the Total No. of Workers	73.48	73.66	68.5	69.25	71.02	75.12	75.69	79.05
Other Workers as a % of the Total No. of Workers	26.52	26.34	31.5	30.75	28.98	24.88	24.31	21.59
Industrial Product Price Index	107.8	113.7	114.3	114.2	114.6	119.4	127.8	138.7

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 2: Operational Costs, 1994
SIC 3052 Wire and Wire Rope Industry

Operational Costs	\$Value	% of Total
Fuel and Electricity	20.27	3.61
Materials and Supplies	410.22	73.01
Wages and Salaries	131.4	23.39
Total Operational Costs	561.88	100

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 3: Value of Trade, Canada with the U.S. and the Rest of the World
SIC 3052 Wire and Wire Rope Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995	1996
Imports from U.S. (\$)	87.3	86.3	92.5	86.1	108.5	140.5	167.9	200.3	181.6
Exports to U.S. (\$)	187.5	187.4	162.9	156.6	208.3	248.8	277.2	290.6	268.2
Trade Balance with U.S. (\$)	100.1	101.0	70.4	70.4	99.8	108.3	109.2	90.3	86.6
Imports from Rest of World (\$)	120.8	136.8	111.4	89	92.8	102.6	112.9	113.2	114.8
Exports to Rest of World (\$)	5.2	5.5	9.9	4.5	6.3	13.9	7.4	17.3	17.2
Trade Balance with Rest of World (\$)	-115.5	-131.3	-101.6	-84.5	-86.5	-88.7	-105.6	-96.0	-97.7
Trade Balance with All Countries (\$)	-15.4	-30.3	-31.1	-14.1	13.3	19.6	3.6	-5.7	-11.0
Constant 1986 \$ Total Exports	178.7	169.6	151.1	141.0	187.3	220.0	222.7	221.9	n/a
Constant 1986 \$ Total Imports	193.0	196.3	178.4	153.4	175.7	203.6	219.8	226.1	n/a
Exports as a % of Domestic Shipments	33.2	28.3	31.6	29.0	37.03	42.83	43.59	44.12	n/a
Imports as a % of Domestic Market	34.9	37.4	30.75	30.9	35.6	40.9	43.3	44.6	n/a

Note(1): (\$) figures are in millions of current dollars.

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 4: Performance Indicators
SIC 3052 Wire and Wire Rope Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Manufacturing Shipments per Worker (\$000's)	175.4	170.4	172.5	192.6	192	194.2	207.7	212.7
Manufacturing Shipments per Production Worker (\$000's)	238.7	231.3	251.8	278	270.3	258.5	274.4	269.1
Manufacturing Value Added per Production Worker (\$000's)	81.9	82.6	97	86.4	109.5	107.8	105.2	103.1
Total Wages/Total Operational Costs (%)	22	23.3	25.1	22.7	25.3	24.8	23.3	23.4
Energy Costs/Total Operational Costs (%)	3	2.7	3.2	3.3	3.6	3.5	3.6	3.6
Material Costs/Total Operational Costs (%)	74.9	74	71.7	74	71.1	71.7	73.1	73

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

SIC-E 3053 - Industrial Fastener Industry

Table 5: Structural Indicators
SIC 3053 Industrial Fastener Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Number of Establishments	108	104	95	84	79	80	78	81
Total Revenue (\$)	612.12	598.67	569.12	477.63	483.46	550.72	654.57	699.56
Manufacturing Shipments (\$)	574.9	554.83	509.38	429.85	444.16	521.67	626.74	669.82
Constant 1986 \$ Manufacturing Shipments	542.87	506.23	461.4	388.65	401.95	471.67	564.12	598.59
Manufacturing Shipments as a % of All Manufacturing Shipments	0.19	0.18	0.17	0.15	0.16	0.17	0.18	0.17
Apparent Domestic Market (Shipments + Imports - Exports) (\$)	872.08	859.35	800.21	719.6	753.34	869.44	1028.96	1127.5
Manufacturing Value Added (\$)	300.23	271.84	228.5	200.28	219.12	260.09	323.88	346.14
Total Employment	5457	5126	4483	3987	3843	4021	4176	4358
Total Salaries and Wages (\$)	150.47	147.81	139.06	122.86	121.83	130.71	144.83	155.42
Production Workers as a % of the Total No. of Workers	79.66	78.05	74.62	78.18	77.6	78.94	78.5	81.96
Other Workers as a % of the Total No. of Workers	20.34	21.95	25.38	21.82	22.4	21.06	21.5	19.09
Industrial Product Price Index	105.9	109.6	110.4	110.6	110.5	110.6	111.1	111.9

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 6: Operational Costs, 1994
SIC 3053 Industrial Fastener Industry

Operational Costs	\$Value	% of Total
Fuel and Electricity	17.27	3.59
Materials and Supplies	308.15	64.09
Wages and Salaries	155.42	32.32
Total Operational Costs	480.83	100

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 7: Value of Trade, Canada with the U.S. and the Rest of the World
SIC 3053 Industrial Fastener Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995	1996
Imports from U.S. (\$)	435.4	437.6	405.7	372.4	413.9	492.4	572.3	628.1	680.8
Exports to U.S. (\$)	253.2	235.0	211.9	181.8	217.9	281.5	354.5	373.7	368.0
Trade Balance with U.S. (\$)	-182.1	-202.6	-193.9	-190.6	-196.1	-210.9	-217.8	-254.5	-312.8
Imports from Rest of World (\$)	132.4	128	119.2	112.9	124.2	153.9	198.7	221.9	209.0
Exports to Rest of World (\$)	17.4	26.1	22.3	13.8	11.1	17.0	14.3	18.7	19.1
Trade Balance with Rest of World (\$)	-115.0	-101.9	-97.0	-99.1	-113.1	-136.9	-184.4	-203.2	-190.0
Trade Balance with All Countries (\$)	-297.2	-304.5	-290.8	-289.8	-309.2	-347.8	-402.2	-457.7	-502.7
Constant 1986 \$ Total Exports	255.5	238.2	212.1	176.8	207.2	269.9	331.9	350.7	n/a
Constant 1986 \$ Total Imports	536.1	516.0	475.5	438.8	487.0	584.4	693.9	759.7	n/a
Exports as a % of Domestic Shipments	47.1	43.6	46.0	45.5	51.5	57.2	58.8	58.6	n/a
Imports as a % of Domestic Market	65.1	65.8	65.6	67.4	71.4	74.3	74.9	75.4	n/a

Note(1): (\$) figures are in millions of current dollars.

Source: Statistics Canada/Industry Canada Business Integrated Database.

3. SIC-E 3053 - Sector Level Performance

Table 3: Performance Indicators
SIC 3053 Industrial Fastener Industry

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Manufacturing Shipments per Worker (\$000's)	105.4	108.2	113.6	107.8	115.6	129.7	150.1	153.7
Manufacturing Shipments per Production Worker (\$000's)	132.3	138.7	152.3	137.9	148.9	164.4	191.2	187.5
Manufacturing Value Added per Production Worker (\$000's)	69.1	67.9	68.3	64.3	73.5	81.9	98.8	96.9
Total Wages/Total Operational Costs (%)	34.8	34.4	34.3	35.1	35.6	33.3	32.2	32.3
Energy Costs/Total Operational Costs (%)	3	2.8	3	3.4	4	3.8	3.6	3.6
Material Costs/Total Operational Costs (%)	62.2	62.8	62.7	61.4	60.4	62.9	64.2	64.1

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

SIC-E 3058 - Other Wire Products Industries

(SIC 3051 - Upholtery and Coll Spring Industry & SIC 3059 - Other Wire Products Industries combined)

Table 9: Structural Indicators

SIC 3058 Wire and Wire Products Industries

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Number of Establishments	167	177	163	152	145	143	142	147
Total Revenue (\$)	819.63	774.92	638.9	656.63	634.29	585.13	693.19	740.84
Manufacturing Shipments (\$)	734.15	686.1	562.96	564.78	564.44	517.2	608.07	649.87
Constant 1986 \$ Manufacturing Shipments	686.76	615.34	499.52	501.14	496	445.1	500.47	507.71
Manufacturing Shipments as a % of All Manufacturing Shipments	0.25	0.22	0.19	0.2	0.2	0.17	0.17	0.17
Apparent Domestic Market (Shipments + Imports - Exports) (\$)	749.61	721.08	535.05	590.56	585.19	534.19	623.52	671.03
Manufacturing Value Added (\$)	325.85	292.6	253	247.25	258.63	242.26	275.24	294.16
Employment	6386	6283	5314	5497	4718	4634	5067	5288
Total Salaries and Wages (\$)	167.77	167.73	150.63	164.18	146.33	140.85	158.6	170.2
Production Workers as a % of the Total No. of Workers	82.38	83.14	81.26	80.72	77.64	77.88	77.6	81.03
Other Workers as a % of the Total No. of Workers	17.62	16.86	18.74	19.28	22.36	22.12	22.4	19.88
Industrial Product Price Index	106.9	111.5	112.7	112.7	113.8	116.2	121.5	128

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 10: Operational Costs, 1994
SIC 3058 Wire and Wire Products Industries

Operational Costs	\$Value	% of Total
Fuel and Electricity	13.85	2.6
Materials and Supplies	348.41	65.43
Wages and Salaries	170.2	31.96
Total Operational Costs	532.46	100

Source: Statistics Canada/Industry Canada Business Integrated Database.

2. SIC-E 3058 - International Trade

Table 11: Value of Trade, Canada with the U.S. and the Rest of the World
SIC 3058 Wire and Wire Products Industries

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995	1996
Imports from U.S. (\$)	117	127	132.6	136.6	149	171	200.8	226.1	224.6
Exports to U.S. (\$)	172.6	157.4	219.0	161.6	183.1	217.8	270.5	295.6	350.4
Trade Balance with U.S. (\$)	55.5	30.4	86.4	24.9	34.1	46.8	69.7	69.6	125.7
Imports from Rest of World (\$)	79.6	76.3	67.3	56.7	60	76	92.9	104.8	93.8
Exports to Rest of World (\$)	8.6	11.0	8.8	6.0	5.1	12.2	7.7	14.1	16.1
Trade Balance with Rest of World (\$)	-71.0	-65.4	-58.5	-50.7	-54.9	-63.8	-85.1	-90.7	-77.7
Trade Balance with All Countries (\$)	-15.5	-35.0	27.9	-25.8	-20.7	-17.0	-15.5	-21.2	48.1
Constant 1986 \$ Total Exports	169.5	151.0	202.1	148.7	165.3	198.0	229.0	242.0	n/a
Constant 1986 \$ Total Imports	183.9	182.3	177.4	171.5	183.6	212.6	241.7	258.5	n/a
Exports as a % of Domestic Shipments	24.7	24.5	40.5	29.7	33.3	44.5	45.8	47.7	n/a
Imports as a % of Domestic Market	26.2	28.2	37.4	32.7	35.7	46.2	47.1	49.3	n/a

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

3. SIC-E 3058 - Sector Level Performance

Table 12: Performance Indicators
SIC 3058 Wire and Wire Products Industries

Selected Indicators/Years	1988	1989	1990	1991	1992	1993	1994	1995
Manufacturing Shipments per Worker (\$000's)	115	109.2	105.9	102.7	119.6	111.6	120	122.9
Manufacturing Shipments per Production Worker (\$000's)	139.5	131.3	130.4	127.3	154.1	143.3	154.6	151.7
Manufacturing Value Added per Production Worker (\$000's)	61.9	56	58.6	55.7	70.6	67.1	70	68.6
Total Wages/Total Operational Costs (%)	28.6	30	32.7	34.3	32.3	33.9	31.9	32
Energy Costs/Total Operational Costs (%)	2.3	2.2	2.2	2.6	2.6	2.7	2.6	2.6
Material Costs/Total Operational Costs (%)	69.1	67.9	65.1	63.1	65.2	63.4	65.5	65.4

Note(1): (\$) figures are in millions of current dollars.

Note(2): Figures for 1995 are Industry Canada estimates.

Source: Statistics Canada/Industry Canada Business Integrated Database.

Table 13: Investment and Capital Stock**SIC 305: Wire and Wire Products Industries****Current \$ millions**

	1988	1989	1990	1991	1992	1993	1994	1995
Capital Investment	72.7	65.2	59.6	62.9	54.8	65.1	61.2	52.3
Total Gross(undepreciated) Capital Stock	1,011.5	1,041.3	1,049.3	1,035.2	1,008.4	1,023.6	1,042.9	1,044.3
Total Net (depreciated) Capital Stock	460.0	472.8	441.2	459.9	440.3	442.8	444.6	436.0

**Constant \$ millions
(1986=100)**

	1988	1989	1990	1991	1992	1993	1994	1995
Capital Investment	71.3	62.5	57.8	61.7	55.7	64.7	58.6	52.3
Total Gross (undepreciated) Capital Stock	956.8	952.6	946.1	945.4	938.6	938.6	929.4	911.2
Total Net (depreciated) Capital Stock	435.7	433.1	425.6	421.3	410.7	407.5	397.9	382.4

Note (1): Figures for 1995 are Industry Canada estimates

Source: Statistics Canada/Industry Canada Business Integrated Database