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# INDUSTRY PROFILE

Industry, Science and Technology Canada
Industrie, Sciences et Technologie Canada

# Wire and Wire Products

Canada

# INDUSTRY PROFILE

# WIRE AND WIRE PRODUCTS

1988

## FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to survival and growth. This Industry Profile is one of a series of papers which assess, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological and other key factors, and changes anticipated under the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the papers.

The series is being published as steps are being taken to create the new Department of Industry, Science and Technology from the consolidation of the Department of Regional Industrial Expansion and the Ministry of State for Science and Technology. It is my intention that the series will be updated on a regular basis and continue to be a product of the new department. I sincerely hope that these profiles will be informative to those interested in Canadian industrial development and serve as a basis for discussion of industrial trends, prospects and strategic directions.

Robert de Cotret

**Minister**

## 1. Structure and Performance

**Structure**

The wire and wire products industry includes establishments primarily engaged in drawing wire from rods and in manufacturing nails, spikes, staples, bolts, nuts, rivets, screws, washers, wire fencing, screening, wire cloth, barbed wire, welding wire, coil chain, uninsulated wire rope and cable, kitchen wire goods and other wire products. The principal raw material is steel, although there is minor use of brass, copper, gold and other metals. Electrical wire and cable are discussed in another profile. Wire-related products are important to the control and transmission of physical force between objects, the assembly of components, the reinforcement of concrete, and the control of access to property, among other functions.

The wire industry consists of 314 establishments with approximately 15 000 employees. Shipments are valued at $1.7 billion, approximately 26 percent ($448 million) of which were exported, mainly to the United States. Imports worth $667 million, which supply approximately 34 percent of the Canadian market, come mainly from the United States, but increasingly originate from newly industrialized countries (NICs) and less developed countries (LDCs). Manufacturing is distributed across all provinces except Prince Edward Island and Saskatchewan. Ontario accounts for 61 percent of shipments and 61 percent of employment, while Quebec accounts for 28 percent of shipments and 29 percent of employment.

The majority of manufacturing plants are small. Those with fewer than 100 employees represent 87 percent of establishments and one-third of shipments, while plants with 100 to 1000 employees represent 13 percent of establishments and two-thirds of shipments. Plants tend to specialize — there are often as few as two or three manufacturers of any given product.

Three companies account for more than 40 percent of all manufacturing in this industry. Stelco Inc., Sidbec-Dosco Inc. and Ivaco Inc. are primary steel producers that make both wire rod and wire products. The relationship with rod suppliers is the important backward linkage in this industry. While these three companies supply most other non-integrated producers with raw inputs of wire rod and wire itself, imported wire rod is also an important factor in the Canadian market.

The industry is 80 percent Canadian controlled and, apart from the Sidbec-Dosco operations owned by the province of Quebec, it is privately owned or publicly traded.

Wire and wire-related products have links to all other manufacturing, construction and resource industries, so that activity in the wire industry has tended to mirror overall economic growth. Early in the 20th century, sales to the agricultural industry were a significant factor in the demand for wire products, but now less than three percent of shipments are agriculture-related. Today, the production of wire and wire products is closely tied to the demand for consumer durables, such as appliances and automobiles, and to the level of activity in the construction industry.

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*Imports, Exports and Domestic Shipments 1986*

Wire and wire-based products are made by almost all countries with a primary steel industry. Rod rolling and wire drawing are normal first steps in the forward integration of a newly developing steel industry. As a consequence, the rapid post-war growth of the Japanese steel industry was accompanied by vigorous export marketing of such standard wire products as industrial fasteners, common configurations of wire rope and the most widely used grades of wire. The burgeoning steel industries of the Republic of Korea, Brazil and the People's Republic of China have followed the same export strategies, competing for a share of the world market for conventional wire products. At the same time, some countries which urgently need hard currencies are encouraging the export of common wire items. For example, Polish nails and barbed wire have had a depressing effect on prices for these products in North America.

**Performance**

Canadian manufacturers are generally not capable of competing profitably against offshore producers of mass-produced wire products such as common fasteners. In recent years, employment has decreased at establishments producing wire rope, nails, wire shelving and trays, chain, chain-link fence and reinforcing wire mesh. As a result of these competitive forces, Canadian firms are tending to specialize in the production of low-volume, technically complex, high-value products.

Over the past 15 years, imports, as a percentage of the Canadian market, have increased at an average annual rate of 1.2 percent, while exports, as a percentage of Canadian shipments, have increased at an average annual rate of 1.3 percent. These statistics reflect the changes in product mix which Canadian producers have made to remain competitive.

Not much information is available by which to measure the financial health of individual companies, since none of the major Canadian firms report separate financial information on wire and wire products operations. Over the 10 years ending in 1984, annual after-tax profit has averaged 4.8 percent of revenue, with a high of 12.9 percent in 1978 and a low of 1.3 percent in 1982. By comparison, the average annual after-tax profit for all metal fabricating industries over the same period was 4.2 percent.

Although shipments have more than doubled in dollar value in the 1973-86 period, capital investment has not grown at the same rate. The lagging pace of investment has been due principally to the fact that the three integrated producers have preferred to place new investment in other areas of their businesses.

## 2. Strengths and Weaknesses

**Structural Factors**

Wire and wire products are generally commodity items. As such, their competitiveness is strongly influenced by labour and raw material costs and the scale of the production process. While the price of Canadian-produced steel is generally lower than that of suppliers in other countries of the Organization for Economic Co-operation and Development (OECD), particularly when freight and duty are included, it tends to be higher than that of the LDC suppliers. Canadian labour costs are substantially higher than those in the LDCs and the small, dispersed Canadian market does not support economies of scale which could overcome this disadvantage.

Although Canadian producers generally remain competitive with U.S. manufacturers, the North American market is being increasingly penetrated by products from countries with significantly lower labour costs. Certain of these LDC products (such as fasteners) enter Canada largely from U.S. distributors. As a result, import statistics do not accurately reflect the country of origin.

To the purchasers of low-volume, technically complex, high-value products, quality, prompt and dependable delivery, and customer service are often as important as price. The ability to provide these requirements is a major strength of the Canadian industry. North American automotive manufacturers, for example, insist on a level of service which has not been provided by offshore fastener producers. Special custom-designed industrial fasteners are another case in point.

Overall, however, the market share of Canadian suppliers is being increasingly challenged by lower-cost products from offshore countries.

**Trade-related Factors**

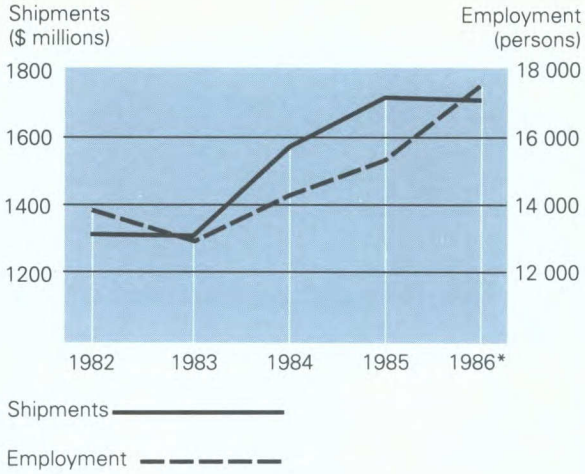
At present, there is a wide range of tariffs applicable to wire products. Current Canadian tariff rates range from zero to 10 percent, with most goods bearing about five percent. Although the U.S. tariffs also range from zero to 10 percent, most goods bear only one to two percent. American tariffs in general are lower than those in Canada. Duties in Japan and the European Community (E.C.) are similar, ranging from zero to 10 percent. Canada's General Preferential Tariff (GPT) rates are zero on all raw wire and on most wire products, with the exception of fasteners (typically seven percent), and a few classes covering some chain and wire rope products (typically six to eight percent).

The Canada-U.S. Automotive Products Trade Agreement (APTA) has played an important part in bilateral wire-related trade. Other U.S. agreements, specifications and regulations also act in Canada's favour regarding offshore suppliers. These include the Canada-U.S. Defence Production Sharing Arrangement, which has encouraged Canadian wire-related companies to compete for U.S. defence supply contracts, and the U.S. Retention of Critical Domestic Manufacturing Capability Program (Canada is considered "domestic"), which maintains the supply capability for products considered strategic.

Contingency protection measures and non-tariff barriers (NTBs) have rarely been encountered by Canadian wire products entering other countries because most of Canadian exports are to the United States. However, there are three major NTBs or contingency protection measures in the U.S. market. They are:

• The use by American companies of import relief measures. More than 96 percent of Canadian wire and wire product exports go to the United States — consequently, the trade environment there is important. During the past 10 years, the U.S. wire industry has been affected by increasing import competition from many parts of the world. Thus it has sought shelter under the wide variety of American statutory provisions related to import relief.

Section 201 of the U.S. *Trade Act* of 1974 was used successfully by American manufacturers in 1978 to impose a three-year additional tariff of 15 percent against industrial (non-automotive) fasteners. More recent attempts to invoke other import relief measures have forced Canadian exporters to take expensive legal countermeasures and have created disruptive uncertainty among U.S. importers and distributors.




*Total Shipments and Employment*

** ISTC estimate*

• "Buy America" provisions of the U.S. *Surface Transportation Act* and various state "Buy America" practices affect wire rope and strand, and heavy construction bolts for highway applications.

• Country-of-origin markings are required for wire rope and for boxes of nails.

Under the Canada-U.S. Free Trade Agreement (FTA), tariffs in this industry will be phased out over a 10-year period. The dispute-settlement mechanism and the revised rules of origin under the FTA will also have an impact.

**Technological Factors**

New technology in wire drawing and wire product manufacture usually originates with the machine builders who design and supply equipment to manufacturing firms. As a result, the latest technology is readily available to a wire product manufacturer through the purchase of the appropriate machinery and equipment. However, changes in technology rarely occur suddenly, and the machines used in the industry tend to last a long time, so that equipment turnover is relatively slow.

There is a significant amount of proprietary technology now in such functions as quality assurance, inventory control, order processing and similar management-related activities. Canadian producers, like their competitors worldwide, have adopted new technologies to varying degrees and most Canadian facilities are as technically advanced as any others in their field.

**Other Factors**

The value of the Canadian dollar in relation to its U.S. counterpart has played a larger role than tariffs in the industry's competitiveness. Canadian producers would certainly be hurt by a rapid, major increase in the value of the Canadian dollar, since it would immediately encourage imports from the United States and discourage Canadian exports to that market.

## 3. Evolving Environment

The demand for wire products is expected to increase rapidly in developing countries, and only marginally in North America. The long-term outlook for the North American wire market is for slower growth than the economy as a whole.

There will continue to be a gradual worldwide shift in production as the NICs gain an increasing share of the world trade in such simple wire products as nails and standard industrial fasteners. No significant new opportunities are expected to arise in offshore markets for Canadian wire producers.

Tariff elimination, as a result of the FTA, is expected to encourage some industry rationalization over the next few years. Some companies, which are largely domestically oriented, may be affected negatively. However, tariffs are not the major impediment to increased exports to the United States, since they are already low. Proximity to major U.S. markets provides the Canadian industry with a competitive edge over offshore suppliers, since customer service and prompt delivery are highly important factors.

While the dispute-settlement mechanism in the FTA will not exempt Canadian companies from the U.S. practice of using contingency import relief measures, it will reduce the "sideswiping" of Canadian firms when the main target is another foreign country. If the FTA had been in effect during the 1978 action under section 201 of the U.S. *Trade Act*, Canadian producers would have been exempt since they supplied less than five percent of the market. It is noteworthy that, when the United States took this action in 1978, U.S. producers supplied 54 percent of the Canadian non-automotive fastener market.

Some Canadian wire drawers are sure to be negatively affected by the country-of-origin requirements of the FTA, since they will no longer be able to acquire duty drawback or duty remission on imported wire rod. Nor will they benefit from duty-free entry into the United States for wire exports.

## 4. Competitiveness Assessment

The competitiveness of the more mature wire products made in Canada has been undermined by the growing presence of imports from newly industrialized Pacific Rim countries. Canadian and U.S. producers will continue to have difficulty competing against offshore-produced, low-technology, mass-demand products such as nails, common screws, barbed wire and the lower grades of wire rope and chain.

The Canadian wire industry will remain competitive in the North American market for specialized, high-quality products. Its competitive edge will continue to be based on the close relationship between supplier and user, coupled with the ability of Canadian producers to provide fast, reliable delivery of custom-designed items.

The benefits to the Canadian wire and wire products industry from the FTA are expected chiefly from the implementation of the review panel to address the use of contingency protection by the United States.

For further information concerning the subject matter contained in this profile, contact:

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## PRINCIPAL STATISTICS

SIC(s) COVERED: 305 (1980)

| | 1973 | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|
| Establishments | 273 | 307 | 309 | 303 | 314 | N/A |
| Employment | 18 900 | 13 969 | 13 493 | 14 212 | 15 364 | 17 500[e] |
| Shipments ($ millions) | 691 | 1 327 | 1 336 | 1 581 | 1 722 | 1 709[e] |
| Gross domestic product (constant 1981 $ millions) | 586 | 528 | 582 | 608 | 604 | 632 |
| Investment ($ millions) | 52 | 72 | 81 | 85 | 101 | 107 |
| Profits after tax | | | | | | |
| ($ millions) | 31.4 | 13.7 | 34.3 | 36.5 | N/A | N/A |
| (% of total income) | 6.5 | 1.3 | 3.1 | 2.8 | N/A | N/A |

## TRADE STATISTICS

| | 1973 | 1982 | 1983 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|
| Exports ($ millions) | 88 | 277 | 328 | 413 | 448 | 511 |
| Domestic shipments ($ millions) | 603 | 1 050 | 1 008 | 1 168 | 1 274 | 1 198 |
| Imports ($ millions) | 175 | 391 | 442 | 609 | 667 | 694 |
| Canadian market ($ millions) | 778 | 1 441 | 1 450 | 1 777 | 1 941 | 1 892 |
| Exports as % of shipments | 12.7 | 20.9 | 24.6 | 26.1 | 26.0 | 29.9 |
| Imports as % of domestic market | 22.5 | 27.1 | 30.5 | 34.3 | 34.4 | 36.7 |
| Source of imports (% of total value) | | | U.S. | E.C.* | Japan | Others |
| | | 1982 | 77 | 10 | 7 | 6 |
| | | 1983 | 75 | 10 | 7 | 8 |
| | | 1984 | 74 | 10 | 6 | 10 |
| | | 1985 | 74 | 10 | 6 | 10 |
| | | 1986 | 73 | 10 | 5 | 12 |
| Destintion of exports (% of total value) | | | U.S. | E.C.* | Japan | Others |
| | | 1982 | 95 | 1 | – | 4 |
| | | 1983 | 96 | 1 | – | 3 |
| | | 1984 | 96 | – | – | 4 |
| | | 1985 | 96 | – | – | 4 |
| | | 1986 | 96 | 1 | – | 3 |

**(continued)**

## REGIONAL DISTRIBUTION — Average over the last 3 years

| | Atlantic | Quebec | Ontario | Prairies | B.C. |
|---|---|---|---|---|---|
| Establishments – % of total | 3 | 22 | 62 | 6 | 7 |
| Employment – % of total | X | 29 | 61 | X | X |
| Shipments – % of total | X | 28 | 61 | X | X |

## MAJOR FIRMS

| Name | Ownership | Location of Major Plants |
|---|---|---|
| Stelco Inc. | Canadian | Hamilton, Ontario |
| Sidbec-Dosco Inc. | Canadian | Montréal, Quebec, Rexdale, Ontario |
| Ivaco Inc. | Canadian | Marieville, Quebec |

e Estimate
* 1981-85 = E.C.(10), 1986 = E.C.(12).
X Confidential data
N/A Not available

**Note:** Statistics Canada data have been used in preparing this profile.

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