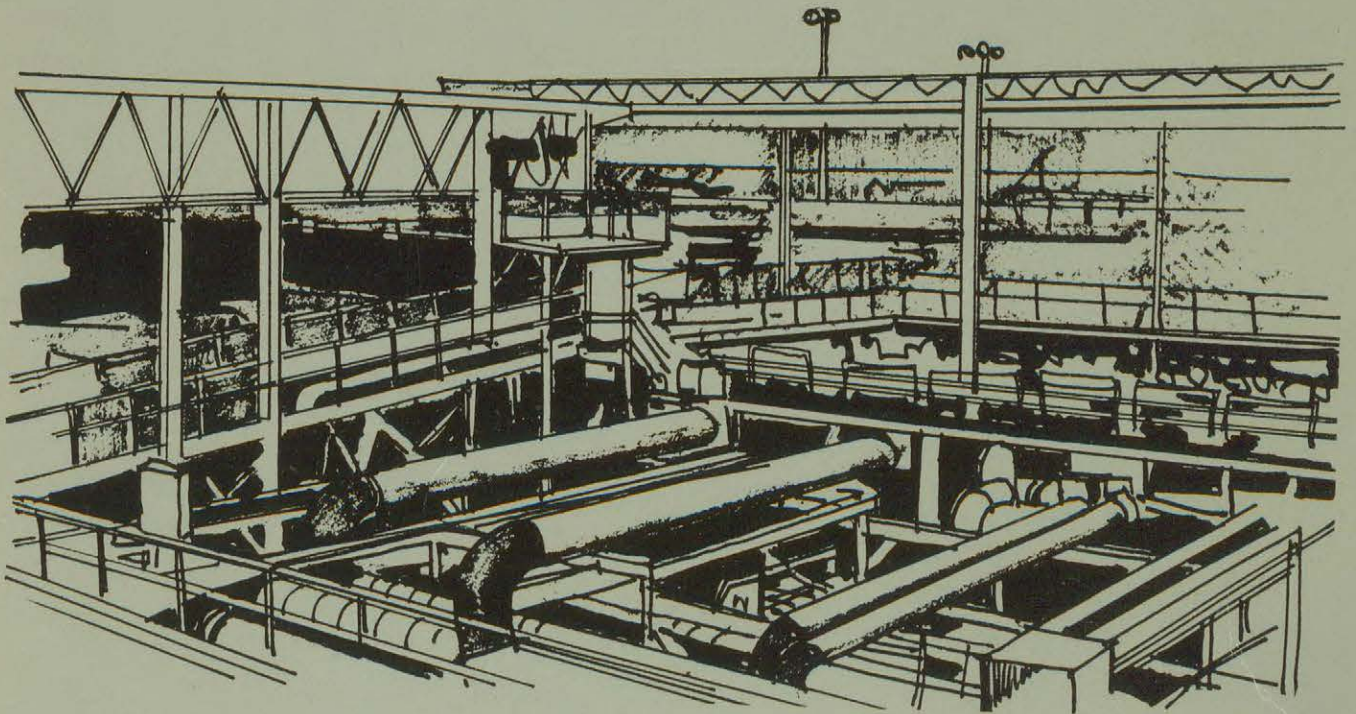


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THE CANADIAN METAL PIPE AND TUBE INDUSTRY



Government
of Canada

Gouvernement
du Canada

Industry, Trade
and Commerce

Industrie
et Commerce

1982 Edition

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THE CANADIAN METAL PIPE

AND TUBE INDUSTRY

Metals and Minerals Group
Resource Industries Branch
Department of Industry,
Trade, and Commerce
235 Queen Street
Ottawa, Ontario, Canada
K1A 0H5

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PREFACE

This report was prepared by the Metals and Minerals Group, Resource Industries Branch, Department of Industry, Trade and Commerce, 235 Queen Street, Ottawa K1A 0H5, in co-operation with other government officials and officials of the member firms listed.

Comments on this report or additional information concerning the capabilities of this industry would be welcome. Inquiries should be directed to the Iron and Steel Division, tel: (613) 992-0025, telex 053-4124.

INTRODUCTION

Canada's metal pipe and tube industry -- a major contributor to the rapid expansion of the nation's manufacturing capabilities and its increasing sophistication as an industrial producer -- has earned worldwide recognition for its many pioneering roles. Because its products are a vital part of almost every industrial activity, the industry has been subjected to many exacting demands. It has met them -- and surpassed them.

For Canada's ever-expanding oil and gas industry for example, it has provided high-volume and quality production. Oil and gas pipeline transportation facilities now span Canada from western oilfields to the eastern markets and to points on the Canada-United States border. The next expansion is to the Arctic.

Worldwide interest in massive desalinization projects for domestic, industrial and agricultural purposes has accelerated in many countries. The Canadian metal pipe and tube industry has demonstrated its capacity and capabilities to be a major supplier in this field.

With exploding urban populations and modernization of rural areas, water distribution facilities of all types will figure prominently in the growth of the industry.

Generally, the industry grows in direct relationship to the rate of construction and the development of the automotive, chemical, food and beverage processing industries and hydro-electric transmission facilities.

Canada's leading role in the development of nuclear power has also brought with it an expertise in microprecision pipe production by highly qualified technical personnel. And Canadian pipe manufacturers are constantly engaged in researching new product development to meet the stringent piping needs of Canada's chemical industry.

Modern fabrication facilities and continuous improvement of process and techniques have equipped the Canadian metal pipe and tube industry to offer a vitally important facility in manufacturing to customer specifications in new and specialized fields. Along with a high capability for volume production, the industry offers traditional Canadian craftsmanship, competitive pricing and firm delivery dates.

This brochure, produced by the Canadian Department of Industry, Trade and Commerce, in co-operation with the companies listed, is designed to assist buyers to locate reliable sources of supply.

STEEL PIPE AND TUBE INDUSTRY

The Canadian steel pipe and tube industry consists of manufacturers which convert primary steel mill products into tubular products. The industry output may be utilized directly as pipe and tube or may provide feed stock for third level manufacturers of a wide range of products. Manufacturing processes involve either forming the tubulars from flat steel strip or plate and welding the seam, or hot forming seamless tubulars from solid steel blooms or billets. Neither cast iron and steel pipe, tubulars cold extruded from flat blanks, nor steel culvert pipe are considered as part of this sector.

There are approximately 60 pipe and tube mills in Canada, operated by more than 40 companies. About three-quarters of the facilities are located in Ontario, the others in the provinces of Quebec, Manitoba, Saskatchewan, Alberta and British Columbia. The industry directly employs about 6,300 people and in 1980 produced more than 1.6 million tons of products valued at approximately \$1 billion and \$286 million in export sales. Pipe and tube mills represent about 10 per cent of the market for the primary steel mill products. Value added by the industry was about \$225 million in 1978 about 50 per cent in wages and salaries. Import penetration is significant, representing about 344,000 tons valued at about \$346 million during 1980, mostly of sizes and types not produced domestically. Net trade deficit in 1980 was \$58 million. The largest import categories were seamless pipe and well casing for which Canadian production capability is limited. The industry has recognized the market opportunities which exist for both import replacement and increased exports, and is investing heavily in new capital expansion.

The Canadian pipe and tube industry is among the most competitive in the world on a cost production basis, due in part to the low cost of Canadian steel mill

products and in part to the efficiency of the relatively modern, productive mills utilized. Overall, the mills operate at relatively high levels of capacity utilization, have a diversified market base, and expected growth rates exceed that of the general economy due to their association with such rapid growth sectors as the oil and gas industry.

Industry Structure

Several of the major steel companies are involved in the production of steel pipe and tube either directly or through associated companies in which they have equity participation. These include Stelco, IPSCO, Dofasco, Algoma, and Sidbec-Dosco. The remaining producers operate independently, purchasing most of their raw material from Canadian steel producers.

The industry is mostly owned and controlled by Canadians as either public corporations or privately held companies. Financial data for the industry is difficult to generate, however, since they tend to be either aggregated into the overall financial statements of public corporations or are confidential in the case of privately held firms.

During the past decade, all sectors of the pipe and tube industry, except for large diameter line pipe producers, have been operating at high levels of effective capacity. Small and medium diameter pipe and tube mills generally serve a diverse market base and are therefore less susceptible to fluctuations in any single market. Additional capacity can be added in relatively small increments as the market demand warrants without seriously disrupting the supply/demand balance. Large diameter line pipe mills tend to service primarily the oil and gas transmission line market which is sporadic and is consequently tied in large part to major pipeline construction projects. Mills tend to be designed to satisfy peak demand periods which requires relatively large incremental

additions of capacity. Production activity in this subsector is historically sporadic, and consequently these mills do not operate as independent companies, but rather as operating divisions of major steel companies (Stelco, IPSCO) which direct in-house produced plate and strip to these mills as the market demands.

Most Canadian steel pipe and tube companies produce pipe from carbon and low alloy grades of steel. There are three firms specializing in the production of specialty steel products, primarily in stainless steel and certain non-steel alloys; with one of the producers concentrating on the production of seamless stainless alloy tube and pipe.

Technology

Canadian pipe and tube making technology is well established. Welded tubulars are produced either by the U and O process which transforms flat steel strip or plate into cylindrical sections and welds the seam in the longitudinal axis of the pipe, or by the spiral weld process which wraps flat strip or plate into spiral cylinders. The latter process has the advantage of allowing for larger diameter pipe production from any width of flat steel product, and is in common usage in the production of large diameter line pipe. Seamless tubing is produced by piercing steel blooms and billets and extruding to size over a mandrel. In the case of nickel alloy and stainless steels, seamless tube is produced from predrilled billets.

Most technological developments have been in the form of incremental improvements to the various mill components and in improved mill layouts which result in increasing mill productivity. New product technology has been primarily centred around the higher technology applications in the energy fields which, for example, have demanded higher grades of

transmission line pipe and oil and gas well tubulars for deep and offshore well drilling. These developments have demanded higher grades of steels which has placed much of the burden of research and development on the primary steel producers rather than on the pipe manufacturers. New pipe coating technology has been required in recent years as well.

Generally, the Canadian pipe and tube manufacturers have kept abreast of the new technology and are capable of producing the high specification material at competitive rates of mill productivity.

Recent Trends

In recent years, the Canadian pipe and tube industry has been operating at fairly high levels of capacity, and has been investing in new plants and equipment to meet the growing demand, particularly in the energy sector. One of the fastest growing sectors is the oil and gas well tubulars, and several companies are increasing capacity in this area.

Canadian producers, traditionally domestic market oriented, are becoming more involved in export markets. Exports increased from about \$51 million in 1970 to nearly \$200 million in 1979, with a corresponding 30 per cent increase in tonnage volume. Much of this increase has been due to increased exports of high valued products such as oil and gas tubulars and specialty steel tubing, but all segments of the industry have experienced growth in export activity. In so doing, the Canadian industry has demonstrated international cost competitiveness. Transportation costs, however, continue to argue against shipping lower valued, high bulk products such as large diameter line pipe outside of this North American market in most cases.

The industry is also working towards import replacement in certain areas. Most of the traditional

imports have been tubular products which are not made in Canada. Imported tubular products are generally items for which the industry has capacity limitations. Seamless well casing and seamless stainless steel pipe have been a significant part of the import market. Algoma's new seamless mill which will be brought on stream by 1984 will increase the tonnage capability for seamless casing and tubing.

The domestic market breakdown is very similar to the total North American market for steel pipe and tube. There are essentially six major end use segments which are described as follows:

<u>Segment</u>	<u>Per cent Usage</u>
(a) Oil and gas	35
(b) Utilities	15
(c) Plumbing	10
(d) Chemical process industry	10
(e) Rural and agricultural	10
(f) Electrical construction	5
(g) Others	15
TOTAL	<u>100</u>

Economic activity in each segment influences the demand for pipe and tube products. The oil and gas segment can be subdivided into two subsegments: production which uses well casing and tubing, and transmission which uses line pipe. The demand for each product is dependent upon activity in the corresponding subsector. The utilities, plumbing, and electrical construction segments are largely tied to activity in the residential and non-residential construction sectors of the economy. The market for tubulars in the chemical process industry parallels capital expenditures in new chemical process plant and equipment, as piping installations generally amount to about 8 per cent of capital expenditures. The trend in the rural and agricultural market parallels trends in rural and farm construction, farm non-residential

construction, farm production, water and land conservation programs and well replacement programs.

In general, the medium-term forecast for the pipe and tube market is for stable, steady growth at a rate outpacing that of the general economy due to its heavy involvement in the energy sector. Transmission line pipe is expected to be particularly healthy due to the current major projects underway, such as the Canadian portion of the Alaska Gas Pipeline, and expected projects such as the Quebec and Maritimes line extensions. The domestic market for production well casing and tubing has experienced an unexpected decline, however, as a result of the significant reduction of drilling activity in response to the Federal Energy Policy. Recovery in this sector is not expected for one or two years, but the longer term outlook is very good. In the interim, Canadian well casing and tubing is finding excellent export demand. The activity in the oil and gas transmission sector will result in increased activity in the utilities sector particularly as Western Canadian natural gas reaches Eastern Canadian urban centres previously unserved, and residential and non-residential conversions from other energy sources take place.

Nickel Alloy and Stainless Steels

Stainless steel pipe and tubing is produced by five companies operating plants in Quebec, Ontario and British Columbia. Until recently the industry has been oriented towards welded tube production utilizing stainless steel strip largely available from Canadian mills. Welded tube producers have capacity sufficient to satisfy domestic demand, and have exported substantial quantities of this material to offshore markets. Despite this fact, substantial quantities of welded stainless steel tubing is imported. A home-based welded tube industry has existed for some time. The build-up of the nuclear market brought demands for

an extension into the seamless field. The mid-1970s saw the creation of a seamless mill for nickel alloy tubing. This product line brought with it a major investment in the technology of pilger mills (or tube reducers) as well as improvements in non-destructive testing and finishing capability. Canadian tube manufacturing capability, through the introduction of these processes, has taken a major step forward such that recognition of capability in the North American and world markets is now assured. Seamless stainless steel tubing production has only been introduced in recent years, and is produced from seamless tube hollows which are currently unavailable from Canadian mills. Production of seamless tubing is expected to increase substantially in the coming years and replace a large portion of the traditional imports. Stainless steel tubing is used in a wide variety of premium applications including heat exchanger and condenser tubing, instrumentation tubing, and for nuclear applications.

NON-FERROUS PIPE AND TUBE INDUSTRY

Copper and Copper Alloy Pipe and Tubing

Seamless copper and copper alloy pipe and tubing is produced by two companies that operate three plants in British Columbia, Ontario and Quebec. The Canadian industry is very mature and the firms have sufficient capacity to supply the entire Canadian market as well as surplus capacity to further develop potential export markets. Product lines include water and drainage tube; refrigeration and air-conditioning tube; heat exchanger and condenser tube; tubing for fuel, hydraulic automotive and general purpose applications; tube for fabrication; and high quality cupro-nickel alloy tube for nuclear applications.

Aluminum Pipe and Tubing

Aluminum pipe and tube is produced by four companies which operate plants in Quebec, Ontario, Manitoba, Alberta and British Columbia. Product lines include pipe and tubing for oil field, gas pipe line, water, irrigation, highway railing and lighting, structural, furniture, cable sheathing, conduit, refrigeration tubing heat exchanger tubing and scaffolding.

CAST IRON PIPE INDUSTRY

The cast iron pipe industry can be broken down into two sub-groups: "pressure" pipe and "waste and vent" pipe. The latter group is also called "soil" pipe. The pressure pipe, made almost exclusively in nodular, (ductile) iron is used primarily for municipal water distribution service. This product is made by two companies operating four plants in Quebec, Ontario and Alberta. The Canadian industry is a very mature industry, capable of supplying the total Canadian market as well as large export contracts. The waste and vent pipe, made up of ASTM Class 20 grey cast iron for the most part, has witnessed a steady decline in its market over the past two decades. It is used for waste disposal conduits in buildings, both liquid and gaseous. Its major competitor is plastic pipe. This product is made by two companies operating four foundries in Quebec, Ontario, Alberta and British Columbia. Both companies are seeking export markets.

CANADIAN METAL PIPE AND TUBE FACILITIES BY PROVINCE

BRITISH COLUMBIA

Ahoy Industrial Corp. Ltd., Richmond
Bundy of Canada Ltd., Port Moody
Ellett Copper and Brass Co. Ltd., Port Coquitlam
Interprovincial Steel and Pipe Corp. Ltd., Port Moody
Standard Tube Canada Inc., Vancouver

ALBERTA

Brooks Tube Ltd. (IPSCO), Brooks
Canron Inc. Pipe Division, Calgary
Interprovincial Steel and Pipe Corp. Ltd., Edmonton (two mills)
Prudential Steel Ltd., Calgary
STELCO, Camrose (two mills)

SASKATCHEWAN

Interprovincial Steel and Pipe Corp. Ltd., Regina (two mills)

MANITOBA

Imperial Steel Products Ltd., Winnipeg
Standard Tube Canada Inc., Winnipeg

ONTARIO

Algoma Steel Corporation Ltd., Sault Ste. Marie
Arc Tube Inc., Sault Ste. Marie
Arvin Industries, Concord
Associated Tube Industries Ltd., Markham
Atlantic Tube, Mississauga
Barton Tubes Ltd., Burlington
Bundy Tube of Canada Ltd., Cambridge, Guelph and Bramalea (two mills)
Canada Tube Co. Ltd., Bolton

ONTARIO (Cont'd)

Canadian Phoenix Steel Products Division of York Russel Inc.,
Toronto

Canron Inc. Pipe Division, Rexdale and Toronto

Delhi Division, General Instruments of Canada Ltd.

EMT Conduit, Rexdale

Gidon Industries Inc., Rexdale

GKL Industries Ltd., Peterborough

Nyby Uddeholm Canada Ltd., Brockville

Gabriel of Canada Ltd., Toronto and Ajax

Goderich Tube and Steel Co., Ajax

Hayes Dana, Thorold

International Parts Mfg., Ltd., Scarborough

Lear Siegler Industries Ltd., Kitchener

Monro Auto Equipment of Canada, Division of Tenneco Canada Corp.,
Owen Sound

Siegfried Krieser Industries Ltd. - MBF Industries Pipe and Conduit
Division, Weston

Sonco Steel Tube Ltd. (a Jannock Co.), Brampton

Standard Tube Canada Inc., Woodstock

Stanton Pipes Ltd., Hamilton

Steel and Stainless Fabricators Ltd., Burlington

STELCO, Welland (two mills)

Toronto Tubing Limited

Tubular Steel Products Division of Chatcan Inc., Toronto

Walker Exhausts Ltd., Galt

Welded Tube of Canada Ltd., Concord

ONTARIO (Cont'd)

Wilco Canada Inc., London and Glencoe (two mills)

Windsor Tube and Metal Inc., Windsor

Wolverine Division, UOP Limited, London

QUEBEC

Canron Inc. Pipe Division, Trois Rivières and Ville d'Anjou

Conduits Condell Ltée, Bromont

Douglas Bros. Division of Robert Mitchell Inc., Montreal

Longtin Conduits, St. Jean

Sidbec-Dosco, Montreal

Standard Tube Canada Inc., Montreal

Steel and Stainless Fabricators Ltd., Montreal

STELCO, Contrecoeur

Tubes Solac Ltée, St. Jerome

REGIONAL DISTRIBUTION OF PIPE AND TUBE MILLS

<u>Province</u>	<u>Number of Mills</u>
British Columbia	5
Alberta	6
Saskatchewan	2
Manitoba	2
Ontario	33
Quebec	<u>8</u>
	57

Product Type Distribution

<u>Product</u>	<u>Number of Mills</u>
Line pipe - over 16" O.D.	5
Pipe - 4½" - 16" O.D.	10
Pipe - under 4½" O.D.	31
Hollow structural sections	6
Seamless pipe and tube	2
Specialty steel grades	4

COMPANIES

Ahoy Industrial Corporation Ltd.

13451-C Vulcan Way
Richmond, British Columbia, Canada
V6V 1K4

Contact: Robert Ahoy, President
Aare Kuusk, Vice-President

Tel: (604) 273-2991
Telex: 04-357728

Company was formed in 1971 as a tube bending facility to serve the local market in H.D. Truck exhaust tube. In 1978 production of 5" x 16 ga. tube started. Now exporting to United States and Australia in finished tube and custom bent exhaust pipe.

TYPES OF PRODUCT

Currently manufacture only 5" x 16 ga. or 14 ga. in cold rolled, cold rolled aluminum killed or cold rolled killed aluminized inside and out. Other thin wall tube from 3" up made to order. Bending and chrome plating facilities also available on premises.

COMPOSITION AND MANUFACTURING SPECIFICATIONS

Cold roll aluminum killed made to ASTM A620-75 aluminized cold roll aluminum killed made to A463-77 TI-4Q.

MANUFACTURING PROCESSES

All tube rolled in custom made mill utilizing high frequency fusion welding techniques.

SIZE RANGE

Current size is 14 or 16 ga. x 5" (127mm) diameter. Other sizes from 3" and up on request.

SPECIAL FACILITIES AND SERVICES

Tight radius mandrel tube bending, general fabrication of medium run production parts. Chrome plating.

Alcan Canada Products Limited

P.O. Box 269
Toronto-Dominion Centre
Toronto, Ontario, Canada
M5K 1K1

Contact: R.L. Grassby,
National Manager
Marketing and Sales
Rolled Products Division

Lionel Smith,
Director of Marketing and
Sales, Extrusion Division

Tel: (416) 366-7211
Telex: 06-22641
Cable: ALCAN TORONTO

Alcan has had some 40 year's experience in extrusion, processing and tubing manufacture. Equipment includes 14 extrusion presses, draw benches, and seam welding equipment operating in seven locations across Canada. Aluminum tubing products are produced for commercial, electrical and industrial applications. Service is supported by strong research and technical groups offering expert assistance to the customer in design, corrosion and fabricating information.

TYPES OF PRODUCTS

Pipe and tubing for oil field, gas pipeline systems, industrial, water, irrigation, highway railing and lighting, structural, furniture tubing, cable sheathing, conduit, tubular bus, refrigerator tubing, scaffolding, heat exchanger and other clad tubing.

Alcan has sales outlets from coast to coast, and seven regional plants.

SALES OFFICES

Moncton, New Brunswick
Tel: (506) 855-0492
Laval, Quebec
Tel: (514) 667-8330
Aurora, Ontario
Tel: (416) 727-4235
Winnipeg, Manitoba
Tel: (204) 667-6185

Calgary, Alberta
Tel: (403) 262-6106
Vernon, British Columbia
Tel: (604) 545-2265
Vancouver, British Columbia
Tel: (604) 689-3314

PLANT LOCATIONS

Alcan Canada Products Limited:
Laval, Quebec; Kingston and Aurora,
Ontario; Winnipeg, Manitoba;
Calgary, Alberta; Vancouver and
Vernon, British Columbia.

INTERNATIONAL SALES AFFILIATES

Alcan has worldwide sales affiliates to give speedy service in all markets. You are invited to enquire at the Toronto address given above or at your nearest Alcan trading unit.

Alcan Aluminum Corporation
P.O. Box 6619
Cleveland, OH 44101, U.S.A.
Tel: (216) 523-6803
Telex: 0098-5324

Alcan Alumino America Latina S.A.
P.O. Box 33.015
Rio de Janeiro ZC72
R.J. Brazil
Tel: 294-4859
Telex: 021-21591 REAL BR

Alcan Aluminium (U.K.) Limited
Alcan House, 30 Berkeley Square
London, England W1X 6DP
Tel: 01-493-1618
Telex: 261911

Alcan S.A.
Case postale
CH-8022 Zurich, Switzerland
Tel: 01/47 87 00
Telex: 52295 a alca ch

Alcan Metall GmbH
Bockenheimer Landstrasse 10
D-6000 Frankfurt am Main 1
West Germany
Tel: Frank (0611) 72 03 31
Telex: 414294 alcan d

Alcan Asia Limited
G.P.O. Box 2121, Hong Kong
Tel: 5-223001
Telex: 73260 ALCAN HX

**The Algoma Steel Corporation,
Limited
Tube Division**
Sault Ste. Marie, Ontario, Canada
P6A 5P2

Contact: R.M. McCracken
General Manager
Tubular and Special
Product Sales

Tel: (705) 945-3495
Telex: 067-77168

The Tube Division of Algoma Steel is Canada's largest producer of seamless oil country goods. Located at the hub of the Great Lakes, Algoma's Tube Division transports its product to North American and world markets by rail, truck and vessel. As a division of a fully integrated steelworks, with production capability of some four million tons of raw steel annually, the tube manufacturing facility receives specially prepared tube rounds for the production of seamless products. Operating since 1956, this division has a rated capacity of 250,000 tons of finished pipe.

Construction is now underway on a second seamless tube mill which is to be on-stream in 1984. This new mill will feature the latest advances in world seamless manufacturing technology and will produce an expanded product line which will include seamless tubing, drill pipe and casing from 1.9 to 7 inches in diameter. Initially the new mill will produce 200,000 tons a year which will increase to 300,000 tons a year when the mill is in full operation.

Seamless products include casing, line and standard pipe and mechanical tubing. Specially developed, heat-treated grades of casing include Modified N-80 and S00-125, S00-140 and S00-155 casing grades have also been developed.

PLANT LOCATION
Sault Ste. Marie, Ontario

TYPES OF PRODUCTS

Seamless oil well casing, line and standard pipe, mechanical tubing.

COMPOSITION

Carbon and alloy steels to AISI specifications - all steels fully killed and made to fine grained practice.

MANUFACTURING PROCESS

Hot rolled, hot finished by the Mannesmann rotary piercing process.

SIZE RANGE

4- $\frac{1}{2}$ " to 12- $\frac{3}{4}$ " OD, 0.200" to 1.600" wall thickness, 48' maximum length.

MANUFACTURING SPECIFICATIONS

API; AISI; ASTM; ASME; CSA; SAE; government and military standards.

SPECIAL FACILITIES

Hydrostatic testing to 13,000 psi; stress relieving; normalizing; quench and tempering.

TESTING FACILITIES

Magnetic particle, electro-magnetic and ultrasonic inspection; hardness; impact; physical testing and metallurgical laboratory facilities.

DISTRICT SALES OFFICE

780 Elveden House
717-7th Avenue Southwest
Calgary, Alberta, Canada
T2P 0Z3

Tel: (403) 263-8990
Telex: 038-21603

Royal Bank Plaza
Suite 2850, South Tower
P.O. Box 12
Toronto, Ontario, Canada
M5J 2J1

Tel: (416) 865-0081
Telex: 06-22820

Algoma Tube Corporation
750 Bering Drive, Suite 500
Houston, Texas 77057
U.S.A.

Tel: (713) 526-1337

Associated Tube Industries Ltd.

7455 Woodbine Avenue
Markham, Ontario, Canada
L3R 1A7

Contact: C.D. McRay,
General Manager

Tel: (416) 475-6464 - in effect as
of Feb. 1982.

Telex: 06-986871

Cable: ATICANCO (TORONTO)

Associated Tube Industries Limited (A.T.I.) was founded in 1955. It is located at Markham, Ontario, in a modern plant covering more than 180,000 square feet on a ten-acre site. In the United States, A.T.I.'s interests are also served through its subsidiary, Tube Manufacturing Company, Inc., in Somerville, New Jersey. Associated Tube Industries is the largest Canadian manufacturer of nickel alloy and stainless steel tubing. A substantial portion of its output is exported throughout the world.

TYPES OF PRODUCTS

Welded nickel alloy and stainless steel tubing for electrical heating elements used in domestic ranges and heating devices; normally supplied in random or cut lengths with plain cut, bead or dimple ends. Welded nickel alloy and stainless steel tubing used for food, liquid and beverage equipment; instrumentation tubing for oil and gas industries, automobile tubing, ornamental and mechanical applications. Welded and seamless to meet specifications including ASTM and ASME A249, A269, A213, A270, A312, A450, B163, B407, B514, B515, B516, B517, for heat exchangers piping, condensers, feed-water, pulp and paper, petrochemical, sanitary and general process industries.

Instrumentation for general use in all industries. As-welded tube for food handling, hospital and kitchen, transportation industries; tube furnished in variety of polished finishes. Formed parts made from stainless and nickel alloy tubing for the automotive and appliance industries. Fabricating process including beading, forming, expanding, staking, upsetting, and joining. Typical applications are exhaust gas recirculation, air injection, choke assemblies, and structural elements.

COMPOSITION

Most common alloys are Incoloy 800, 840, AISI T304, 304L, 309, 316, 316L, 321, 409, Inconel 600, and titanium alloys; other grades upon request.

SIZE RANGE

As-welded element and small diameter tubing 3/16" to 3/4" diameter in wall sizes of .018" to .065". the specification, mechanical and ornamental tubing is available in 3/16" to 5" diameter in wall size of .020" to 0.250".

TESTING FACILITES

Corrosion testing to ASTM A262, tensile testing, metallographic investigations, non-destructive and destructive testing as required to meet customer specifications.

Barton Tubes Limited

Burlington, Ontario, Canada
L7R 3Y2

Contact: C.G. Crawford, President

Tel: (416) 637-8261

Telex: 021-738

Cable: BARTONTUBE

Barton Tubes Limited has carried out a continuous expansion and diversification program since it was formed in 1952 and is now one of Canada's largest suppliers of high quality welded steel tubing. Barton has done considerable work in the automotive and industrial fields and is geared to give rapid deliveries of large or small steel tube orders. The plant, located in the centre of Canada's steel producing area, has six tube mills with immediate access to large quantities of steel and can quickly fill large volume orders on short notice.

SPECIAL FACILITIES AND SERVICES

Bending and fabricating

TESTING FACILITIES

Full metallurgical

PLANT LOCATION

Barton Tubes Limited
2170 Queensway Drive
Burlington, Ontario, Canada

TYPES OF PRODUCTS

Mechanical, conduit and agricultural, exhaust pipes and jackposts

COMPOSITION

Steel

MANUFACTURING PROCESS

Welded

SIZE RANGE

$\frac{1}{2}$ " x .028" to 4" x .188"

MANUFACTURING SPECIFICATIONS

ASTM

Canadian Phoenix Steel Products
Division of York Russel Inc.
289 Horner Avenue
Toronto, Ontario, Canada
M8Z 4Y4

Contact: D.B. Lewis
Vice-President and
General Manager

Tel: (416) 259-1113
Telex: 06-967775

Canadian Phoenix Steel Products
Division of York Russel Inc., which
is a 100 per cent Canadian-owned
company, manufactures a wide range
of quality products from its
Toronto-based operation.
Three production lines provide
tremendous versatility enabling
Canadian Phoenix to accommodate a
variety of requirements
simultaneously.

TYPES OF PRODUCTS

Spiral welded steel pipe in
diameters ranging from 6 5/8" OD to
86" OD for pressure transmission
pipelines, foundation piling,
structural members.

MANUFACTURING PROCESS

Double submerged arc

MANUFACTURING SPECIFICATIONS

ASTM A252, grades 1,2, and 3
A139, grades A,B,C,
AWWA C200

Canron Inc., Pipe Division

HEAD OFFICE

101 Queensway West
Mississauga, Ontario, Canada
L5B 2P7
Tel: (416) 276-7311
Telex: 06-961363

Contact: S.C. Eccles,
General Manager

INTERNATIONAL OFFICE

10,350, boulevard Roy Lawson
Montréal (Québec) Canada
H1J 1M2
Contact: Steve Kostaniuk
Tel: (514) 352-6600
Telex: 05-828553

Canron Inc., a Canadian-owned and managed corporation, has grown from what was basically an iron pipe and foundry operation to an international manufacturer of iron, concrete and plastic pipe, foundry products, machinery for heavy industry and railway track maintenance equipment. The company is also a fabricator and erector of structural steel.

SALES OFFICES

P.O. Box 13145
Station "A"
St. John's, Newfoundland, Canada
A1B 4A4
Tel: (709) 364-3898-9
Telex: 016-4709

1000 Windmill Road
Dartmouth, Nova Scotia, Canada
B3B 1L7
Tel: (902) 469-8181
Telex: 019-31434

900 d'Youville
Suite 605
Québec (Québec) Canada
G1R 3P7
Tel: (418) 694-9495
Telex: 051-3030

10,350 boulevard Roy Lawson
Ville d'Anjou (Québec) Canada
H1J 1M2
Tel: (514) 352-6600
Telex: 05-828553

62 Vulcan Street
Rexdale, Ontario, Canada
M9W 1L2
Tel: (416) 248-0101
Telex: 06-989572

902, 11th Avenue, Southwest
Calgary, Alberta, Canada
T2R 0E7
Tel: (403) 245-6401
Telex: 03-825798

288 Kingsway Garden Mall
Edmonton, Alberta, Canada
T5G 3A6
Tel: (403) 471-3055
Telex: 03-73092

#750-1111 Melville
Vancouver, British Columbia, Canada
V6E 3Y6
Tel: (604) 682-4631
Telex: 04-507576

301-93 Lombard Street East
Winnipeg, Manitoba, Canada
R3B 3B1
Tel: (204) 956-2268
Telex: 07-55367

TYPES OF PRODUCTS

Ductile iron pipe and prestressed concrete pressure pipe for water transmission, fittings, hydrants. Wear-resistant pipe (WR) a highly abrasion-resistant iron alloy for various applications including slurry pipelines transporting fly ash, mine tailings, smelter slag, etc.

SIZE RANGE

Ductile iron - 100mm diameter and up
Concrete - 350mm diameter and up
Wear-resistant - 100mm to 600mm diameter.

MANUFACTURING SPECIFICATIONS

ASTM, AWWA, ANSI, CSA, ISO

Delhi Division
General Instrument of Canada Ltd.
65 Waverly Street
Delhi, Ontario, Canada
N4B 1E8

Contact: D.A. Skinner

Tel: (519) 582-0710

Telex: 061-81174

Nearly 20 years of experience has put Delhi Division first in the manufacture of induction-welded pre-galvanized steel tubing. PRE-GALV tubing is used for fence posts, top rails, gate frames, portable garages, sump pump columns, traffic markers, playground equipment and tent poles, etc. PRE-GALV has proven reliability and perfected quality which can come only after years of development and workmanship.

The company takes pride in giving its world-wide customers first-class service. The plant, covering more than 100,000 square feet of land, is conveniently located on Highway 3 at Delhi in southern Ontario, near the Hamilton and Nanticoke steel mills. Care is taken in packaging; dependable trucking facilities give rapid, on-time delivery. A completely equipped tool and die shop and an efficient maintenance department ensure reliable production.

By specializing in pregalvanized products Delhi is able to offer fast deliveries at competitive prices.

TYPES OF PRODUCTS

Pregalvanized high frequency induction welded tube, squares and rectangles. Thickness from 20 gauge to 13 gauge. Rounds are available

from 1" to 2 3/8" O.D. Square sizes are from 13/16" x 13/16" to 1 1/2" x 1 1/2". Rectangles of 5/8" x 1"; 1/2" x 1 1/4"; 1 1/2" x 1 1/2"; 3/4" x 1 1/2"; 3/4 x 1 3/4"; and 1" x 2" are available.

COMPOSITION

Galvanized steel alloys

MANUFACTURING PROCESS

Large coils of high-quality galvanized steel are precision slit into narrow coils, fitted to high speed rolling mills, and fed into a looper, which allows welding the end of one coil to the next without interruption. Through a series of rolls, our mills form the slit sheet into perfectly round tube which is high-frequency induction-welded. This excellent method of welding produces a perfect joint with a minimum of burn-back at the seam.

After precision scarfing, the seam is virtually weather-proof. Further protection from corrosion is provided by spraying a coating of molten zinc over the weld. After sizing and straightening through a series of rolls, the tube is cut while moving by a "flying cut-off" machine to a tolerance of $\pm 3/64$ " per length.

SIZE RANGE

20 gauge - 13 gauge

1" - 2 3/8" Tubing

Some squares and rectangles

SPECIAL FACILITIES AND SERVICES

The tubing is protected inside and out with heavy zinc galvanized finish.

Accurate cut-off equipment available.

Swaged ends can be provided.

Douglas Bros.
A Division of Robert Mitchell Inc.
350, boulevard Décarie
Montréal (Québec) Canada
H4L 4W5

Contact: P.E. Dostie

Tel: (514) 747-2471
Telex: 05-825854

Founded in 1875, Douglas Bros., a division of Robert Mitchell Inc., was one of the pioneers in introducing stainless steel pipe and fittings for use in the pulp and paper industry.

A complete line of metal working facilities in its Canadian and United States plants permits production of pipe of standard or other sizes and wall thicknesses to satisfy the special needs of the following sectors: pulp and paper, the chemical and petrochemical industries, the food industry, nuclear energy, water filtration plants, pollution control and others.

More than 300,000 square feet of manufacturing area is available, served by overhead cranes.

PLANT, SALES AND WAREHOUSE LOCATIONS
Riverside Industrial Park
Portland, Maine 04104, U.S.A.

Tel: (207) 797-6771
Telex: 0094-4412

2906 Marlean Avenue
Cornwall, Ontario, Canada

Tel: (613) 937-0603

5350 Maingate Drive
Mississauga, Ontario, Canada
L4W 1R8

Tel: (416) 625-8334
Telex: 06-961416

245 Fell Avenue
North Vancouver
British Columbia, Canada
V7P 2K1

Tel: (604) 986-4613
Telex: 04-354676

114 Miles Street East
Thunder Bay, Ontario, Canada
P7V 1J4

Tel: (807) 623-0441
Telex: NESCO 07-34529

TYPES OF PRODUCTS

Pipe and fittings manufactured in ID, OD and IPS sizes and assembled to customer drawings and specifications.

MANUFACTURING PROCESS

Pipes, tubes and fittings are formed within standard commercial tolerances. Longitudinal seams are welded with automatic equipment designed for such welding processes as plasma (PAW), gas tungsten electrode (GTAW) and consumable electrode gas-metal (GMAW) arc welding.

SIZE RANGE

1½" diameter and up

SPECIAL FACILITIES AND SERVICES

The quality of Douglas Bros., products and technical services is the outcome of many years of experience and constant improvements.

In addition to standard pipes and fittings, Douglas Bros. is able to manufacture other such items in specific diameters and thicknesses to customer requirements.

Douglas Bros. offers its customers competent and organized personnel for successfully carrying out piping projects of any size.

Ellett Copper & Brass Co. Ltd.

1575 Kingsway Avenue
Port Coquitlam, British Columbia, Canada
V3C 4E5

Contact: D.G. Thomas, Vice-President
Tel: (604) 941-8211
Telex: 04-353557

Ellett was founded in 1921 as a manufacturer of process equipment in corrosion resistant metal. In 1968, it established facilities to manufacture stainless steel tubing, primarily for heat exchangers. It has complete facilities including a metallurgical laboratory to guarantee a quality product.

STAINLESS STEEL TUBING TO ASTM A-249

Chemistry: Types 304, 304L, 316, 316L, 317 and 317L.

Consult factory for other alloys available.

Sizes: 1/2" OD to 3" OD

Wall thickness: .035" to .109"

Length: Normally available in straight lengths to 36 feet.

Ellett tubing is used extensively in heat exchangers, condensers and evaporators in tube pulp and paper, chemical and other process industries where there is a need for the corrosion-resistant properties of stainless steel.

MANUFACTURING PROCESS

Ellett stainless steel exchanger tubing is manufactured in modern facilities utilizing the latest technology and equipment. Accurately slit stainless steel stock is fed from coils into a tube mill. It is then progressively roll-formed into hollow rounds and welded without the addition of filler metal. The mill operator continually monitors the forming and welding to ensure quality fabrication. The welded rounds are then cold-drawn (up to 35 per cent cold reduction) so that the optimum corrosion-resistant and strength properties will develop

during the subsequent heat treatment. During the drawing stage the OD and wall tolerances are precisely controlled to comply with ASTM A-450. Final heat treatment is carried out in a continuous furnace where the tubes are fully annealed at approximately 3,000°F, followed by a water quench to ensure all carbides are held in solution. Tubes are pickled and passivated in a nitric-hydrofluoric acid solution to remove all oxides and enhance the corrosion resistance of the material.

QUALITY CONTROL

To assure quality, Ellett tubes are carefully processed in small batches. All material is positively identified from start to finish and detailed records are scrupulously maintained during manufacture and testing. Each complete tube is identified with the ASTM specification, grade, size, heat and batch. Production samples from each batch are continually subjected to mechanical testing and examined under magnification for weld integrity and correct micro-structure to ensure maximum hardness and tensile tests to conform to ASTM A-450 and A-249. In addition, each tube is given an eddy-current test along its full length to guarantee that it is free from defects and will give a leak-free performance.

MILL TEST REPORTS

All necessary certification of chemical analysis, mechanical and nondestructive tests is provided with each shipment of Ellett stainless steel tubing.

GKL Industries Limited
P.O. Box 1807
Peterborough, Ontario, Canada
K9J 7X6

Contact: G.J. Adams
President

Tel: (705) 743-5841

GKL has been manufacturing welded aluminum tube for six years for its customers in both the United States and Canada. The company has continuously improved its capabilities to service customer needs and is now one of Canada's largest suppliers of small diameter, light wall tubing.

In May 1980 the company moved into a large new plant and added a 2½" steel tube mill line to its facilities. A second steel line is now being manufactured and is expected to be installed by the summer of 1982. These two steel tube line mills give GKL Industries the same capacity in steel tube as it has in the aluminum tube area.

PLANT LOCATION

435 Pido Road
Peterborough, Ontario, Canada

TYPES OF PRODUCTS

Small diameter steel tube for furniture trade, automotive, etc.

COMPOSITION

Steel and aluminum

MANUFACTURING PROCESS

Welded

SIZE RANGE

1/2" x .028 / 22 G
TO
2½" x .083 / 14 G

Interprovincial Steel and Pipe Corporation Ltd.

P.O. Box 1670
Regina, Saskatchewan
S4P 3C7

Contact: Larry Welch
Vice-President, Sales

Tel: (306) 949-3530
Telex: 071-2269
Cable: IPSCO

Interprovincial Steel and Pipe Corporation Ltd. (IPSCO) was incorporated in 1956 and is an integrated steel and pipe manufacturer. For the past 20 years it has provided pipe primarily to the Canadian oil and gas industry, with a growing percentage of sales of tubular products to export markets. IPSCO offers the widest range of line pipe sizes in Canada, from 12.70 mm to 2032.0 mm diameter for use in high-pressure pipeline applications, produced to CSA and API specifications. In addition to line pipe, IPSCO produces oil and gas well casing and tubing. IPSCO is prepared to serve customers worldwide.

PLANT LOCATIONS

Regina, Saskatchewan; Brooks, Calgary and Edmonton Alberta; Port Moody, British Columbia

TYPES OF PRODUCTS

Steel line pipe; oil, gas and water well casing and tubing, pressure tubing, water line pipe; structural tubing; large diameter spiral weld pipe; hollow structural squares and rectangles; conduit.

COMPOSITION

IPSCO can supply steel pipe to all recognized specifications within size and gauge ranges produced and

has developed steels to meet specifications designed for Arctic pipeline construction. A complete list of specifications will be supplied on request.

MANUFACTURING PROCESSES

Electric furnace steel; hot rolled skelp; continuous cold forming and electric resistance welding; spiral weld large diameter double submerged arc

SIZE RANGE

12.70 mm-406.40 mm OD (ERW); spiral weld
406.4 mm-2032.0 mm OD double submerged arc.

MANUFACTURING SPECIFICATIONS

API; ASTM; AWWA; CSA

SPECIAL FACILITIES AND SERVICES

Normalizing and ultrasonic inspection of weld and surface area; and a new Research and Development Laboratory

TESTING FACILITIES

Tensile; impact; hardness; photometric; ultrasonic; complete chemical testing

Noranda Metal Industries Ltd.

C.P. 1158, Succursale "A"
Montréal (Québec) Canada
H3C 2Y4

Contact: J. Vander Kuyp, Manager,
International Marketing and Sales

Tel: (514) 645-8741 Ext. 274
Telex: 05-828776
Cable: NORMILLS

Noranda Metal Industries Ltd., a wholly-owned subsidiary of Noranda Mines, Limited, forms the final link in the mine-to-market chain of the Noranda group of companies. This completely integrated operation consists of plants in Montreal, Quebec, and New Westminster, British Columbia. Quality control from mine through smelter, refinery and mill has benefited tube buyers throughout the world. Established in 1963, the Noranda Research Centre at Pointe Claire, near Montreal, provides fundamental and applied research facilities for the Noranda group of companies. Metallurgy is the underlying theme in much of the work carried out at the centre.

PLANT LOCATIONS

Noranda Metal Industries Ltd.
Rues Durocher et Sherbrooke
Montréal (Québec) Canada
Tel: (514) 645-8741
Telex: 05-828776

Noranda Metal Industries Ltd.
Annacis Island
920 Derwent Way
New Westminster, British Columbia,
Canada
Tel: (604) 526-3661
Teletype: NMINWE

TYPES OF PRODUCTS

Copper water and drainage tube; refrigeration and air-conditioning, condenser and heat exchanger tube; fuel, automotive and general purpose tubing; tube for fabrication; bus pipe, etc.

COMPOSITION

Copper and copper base alloys

MANUFACTURING PROCESSES

Billet-casting, extrusion, seamless cold drawn

SIZE RANGE

$\frac{1}{4}$ " to 4 1/8" OD

MANUFACTURING SPECIFICATIONS

ASTM; BSS; DIN; Canadian government and customers' specifications

TESTING FACILITIES

Complete physical and chemical facilities for in-process control and final tests

Nor-Sand Metals Inc.

425 McCartney Street
Arnprior, Ontario, Canada
K7S 3H6

Contact: R.A. White, President

Tel: (613) 623-6501
Telex: 053-4576

A joint venture of Noranda Metal Industries Limited and Sandvik Canada, the Nor-Sand manufacturing facility in Arnprior, Ontario, has over the past five years, produced large volumes of high quality Inconel and Incoloy tubing to the exacting requirements of the Canadian and United States nuclear industries. Current plans are for the expansion of this product line to include stainless steels of the austenitic variety as well as the duplex (ferritic-austenitic) type. In addition, Nor-Sand will be producing composite tubing - a unique product specifically designed for use in the complex corrosive environments of recovery boilers.

PLANT LOCATION

Nor-Sand Metals Inc.
425 McCartney Street
Arnprior, Ontario, Canada
K7S 3H6

TYPES OF PRODUCTS

Seamless nickel alloy and stainless steel pipe and tubing for both nuclear and commercial uses. Supplied in either exact or random straight lengths, the material will meet all normal nuclear and commercial specifications. Steam generator tubing supplied in exact quantities to enable manufacturers to proceed with fabrication of these demanding heat exchangers.

SALES OFFICE

Sandvik Canada Inc.
6835 Century Avenue
Mississauga, Ontario, Canada
L5N 2L2

Contact: Bill Boyd
Assistant Division Manager
Marketing

Tel: (416) 826-8900

BRANCHES, WAREHOUSES

Vaudreuil, P.Q. Tel: (514) 455-5631
Montreal, P.Q. Tel: (514) 735-6171
Winnipeg, Man. Tel: (204) 633-5922
Edmonton, Alta. Tel: (403) 462-4335
Richmond, B.C. Tel: (604) 270-8851

COMPOSITION

Inconel 600, Incoloy 800, St. 304, 304L, 316, 3162, 321, 347. Other special grades for use in highly corrosive conditions are available on request

MANUFACTURING PROCESS

Extruded hollows are tube reduced on Cold Pilger mills. Hydrogen furnace annealing, O.D. polishing, non-destructive and hydrostatic testing.

SIZE RANGE

Seamless tubing in sizes from 9.5 mm (3/8") to 88.9 mm (3.5") O.D. with wall thickness from 0.9 (.035") to 7.6 mm (.300") and pipe sizes in the popular schedules from 1/2" Schedule 10 to 3" Schedule 80. Sizes of special alloys on request.

TESTING FACILITIES

Ultrasonics and Eddy Current facilities; hydrostatic capability; mechanical and corrosive testing, metallographic and analytical chemical facility to provide a complete testing/laboratory complex as required to meet customer specifications.

**Nyby Uddeholm Division
of Uddeholm Ltd.**

P.O. Box 756
150 California Avenue
Brockville, Ontario, Canada
K6V 5W1

Contact: Clem McEvoy, Sales Manager

Tel: (613) 342-8471
Tele: 066-36539
NYBY BRKVL

Situated in Brockville, Ontario, Nyby Uddeholm has one of the most modern pipe mills of its kind in North America for the manufacture of "AS WELDED" and ASTM A312/A358 stainless steel pipe. Since opening in 1970, NYBY UDDEHOLM has provided pipe and fittings for the rapidly growing pulp and paper industry and was one of the first in Canada to manufacture A312 pipe for use in the petrochemical industry. NYBY UDDEHOLM currently exports to the United States and is looking forward to expanding its market to customers around the world.

PLANT LOCATION

NYBY UDDEHOLM DIV OF UDDEHOLM LTD.
150 California Avenue
Brockville, Ontario, Canada
K6V 5W1
Tel.: (613) 342-8471

TYPES OF PRODUCTS

Stainless steel pipe, fittings and spooling.

MANUFACTURING PROCESSES

Sheared, cold formed, straight seam welded, annealed, pickled and passivated.

SIZE RANGE

"As Welded"
3" to 72", OD, ID, IPS.
Wall Range -- .078" to .312"

A312/A358
3" to 12", Sch 5, Sch 10 and Sch 20
3" to 8", Sch 40
Larger Sizes to 24" available in A358 or A409.

MANUFACTURING SPECIFICATIONS

ASTM--A312/A358
TAPPI, CAPP--"As Welded"

TESTING FACILITIES

Hydrostatic, tensile, reverse bends and flattening, hardness

New Spooling Shop, designed to service the pulp and paper mills with fabricated pipe and fittings for their modernization and expansion programs.

Prudential Steel Ltd.

P.O. Box 1510
Calgary, Alberta, Canada
T2P 2L6

Contact: J.D. Wilson
Vice-President, Sales

Tel: (403) 263-7820
Telex: 03-825556

Prudential Steel Ltd. began operations in December 1966 in a plant which is ranked among the world's most modern pipemaking, structural steel and fabricating facilities. The 70-acre complex supplies steel pipe and tube used extensively in the oil industry. Backed by highly qualified staff and by specialized production techniques, the firm is a leading manufacturer of pipe, oil country tubular products and hollow structural sections.

SALES AND ADMINISTRATION OFFICES

Prudential Steel Ltd.
P.O. Box 1510
444 - Fifth Avenue Southwest
1900 Daon Building
Calgary, Alberta, Canada
T2A 2L6
Tel: (403) 263-7820
Telex: 03-825556

PLANT LOCATION

Prudential Steel Ltd.
8919 Barlow Trail Southeast
Calgary, Alberta, Canada

TYPES OF PRODUCTS

Plain or bevelled-end line pipe; standard, refinery and structural pipe; pipe for transmission of gases, fluids, or solids, and for use with corrosives, oil country tubular products, hollow structural steel squares and rectangles for the manufacturing and building

industries. Extensive fabrication facilities, utilizing company products, permit undertaking of light to medium fabrication projects

COMPOSITION

Carbon and alloy steels including HSLA

MANUFACTURING PROCESSES

High frequency resistance weld using a VT 280 Thermatool Welder; post-weld heat treated

SIZE RANGE

Pipe: 2 3/8"-10 1/4" x .083"-.500"
HSS: 2" x 2"-8" x 8" squares and corresponding rectangles
Casing: 4 1/2"-9 5/8"
Tubing: 2 3/8"-3 1/2"

MANUFACTURING SPECIFICATIONS

API; CSA; ASTM; AWWA; ROPS

SPECIAL FACILITIES AND SERVICES

External pipe coating, upsetting, threading

TESTING FACILITIES

Complete physical and chemical testing; ultrasonic; ring-gauging; flattening; hydrostatic; optical

Reynolds Extrusion Company Limited

500 Edward Avenue
Richmond Hill, Ontario, Canada
L4C 4Y9

Tel: (416) 884-9161
Cable: REXALUMIN

Contact: R.C.M. Beresford
General Sales Manager

Reynolds Extrusion Company Limited is a member of an international organization, the third largest in the world, engaged in the production and fabrication of aluminum and aluminum alloys. The company was formed in 1962 with the amalgamation of three well-established Canadian aluminum fabrication companies producing aluminum alloy tube and other extrusions. With two plants, one in Ontario and the other in Quebec, it is in an excellent position to serve all export markets.

PLANT LOCATIONS

Reynolds Extrusion Company
Limited
Richmond Hill, Ontario, Canada
Tel: (416) 884-9161

Reynolds Extrusion Company
Limited
Sainte-Thérèse (Québec) Canada
Tel: (514) 435-6551

TYPES OF PRODUCTS

Extruded tube and pipe; drawn tube for mechanical and water applications; conduit, architectural and refrigeration tubing

COMPOSITION

Aluminum alloys

MANUFACTURING PROCESSES

Extrusion - hot pressure welded, tube drawing, electrostatic painting

SIZE RANGE

Extruded tube $\frac{1}{4}$ "-6" OD; drawn tube, 3/8" -2" OD

MANUFACTURING SPECIFICATIONS

CSA; ASTM; Lloyd's Register;
Canadian Government

SPECIAL FACILITIES AND SERVICES

Stretching, bending, heat treat, polishing, painting and fabrication

TESTING FACILITIES

Spectrographic analysis, tensile and hardness, electrical conductivity

Sidbec-Dosco Limited

C.P. 249
Montréal (Québec) Canada
H3C 2H6

Contact: R. Senecal

Tel: (514) 392-7755

Sidbec-Dosco Limited has been manufacturing steel pipe since 1910 and is one of Canada's leading suppliers to the oil and gas, plumbing and heating, industrial construction and electrical conduit industries. The firm is represented across the country. An integrated steel organization, Sidbec-Dosco is a major producer of pipe products. Using the continuous weld process, installed in 1960, Sidbec-Dosco has earned a high reputation throughout the world for the excellence of its products.

PLANT LOCATION

Sidbec-Dosco Limited
Montreal Works
5870, rue Saint-Patrick
Montréal (Québec) Canada

TYPES OF PRODUCTS

Standard, water, agricultural, conduit, line and structural pipe

COMPOSITION

Steel

MANUFACTURING PROCESS

Continuous butt weld

SIZE RANGE

$\frac{1}{2}$ "-4" IPS, standard weight, schedule 40; $\frac{1}{2}$ "-3" IPS, extra strong, schedule 80

MANUFACTURING SPECIFICATIONS

ASTM--A120, A53; CSA--B63

TESTING FACILITIES

Hydrostatic, all pipe tested to 1,3000 psi

**Siegfried Krieser Industries
Limited**

38 Fenmar Drive
Weston, Ontario, Canada
M9L 1M1

Contact: Leonard J. Stephens
Sales Manager

Tel: (416) 749-2141
Telex: 6527218

BRANCH OFFICES

39 Fenmar Drive
Weston (Toronto), Ontario, Canada

175 Fenmar Drive
Weston (Toronto), Ontario, Canada

60 Signet Drive
Weston (Toronto), Ontario, Canada

TYPE OF SERVICES OFFERED

Hydrostatic pressure testing - $\frac{1}{2}$ " to
4" pipe x 22 feet, to 2400 P.S.I.
End finishing for light wall tubular
products
And schedule 10 & 40
Threading, bending, swadging and
roll out on light material

TYPE OF PIPE/TUBING HANDLED

Manufacture pipe: sizes $\frac{1}{2}$ " to 4"
schedule 10 and 40
O.C.T.G. 2 3/8" O.D. x .190 wall to
4 $\frac{1}{2}$ " O.D. .190 wall
Electrical conduit, EMT, rigid
conduit
Galvanized fence
Sprinkler pipe, schedule 10 light
wall and schedule 40
Mechanical tubing: sizes $\frac{3}{4}$ " O.D. to
4 $\frac{1}{2}$ " O.D., gauges 8-22
CR, pregalvanized, H.R.P. & O.
steel.

TRANSPORTATION FACILITIES

Truck and rail

NUMBER OF EMPLOYEES

Over 100

MANUFACTURING PROCESSES

Electric-resistance welded carbon
steel, made from hot or cold rolled
steel.

Sonco Steel Tube Limited
A Jannock Company
14 Holtby Avenue
Brampton, Ontario, Canada
16X 2M1

Contact: J.G. MacKay, President
R.G. Stewart, Sales and
Marketing Manager

Tel: (416) 451-2400
Telex: 06-97542

Sonco Steel Tube Limited manufactures mechanical steel tubing, hollow structural sections, standard pipe, and oil country casing and tubing. The firm sells its products across Canada and has established a growing export market. Sonco operates from two plants in Brampton with 300,000 square feet of combined space.

TYPES OF PRODUCTS

Mechanical: 3/8" O.D. to 3" O.D., Bright, cold-rolled, and galvanized steel. Rounds, squares, and rectangles. Mill cutting or further processing of the end are both available. Manufacturing specification is ASTM A-513.

Hollow Structurals: 1" square x .125 wall to 12" square by .625 wall, and corresponding rectangles and rounds. Standard grade is 50-W but Sonco also produces HSLA, ROPS and other special grades. Manufacturing specification is G40.20 or on request, ASTM A-500 grade B. Heat treating for stress relieving to class "H" is available.

Pipe and Casing: 2-3/8" O.D. to 7" O.D. Plain end beveled. Manufacturing specifications are: Standard Pipe ASTM A-53; water well casing ASTM 589; oil country tubing and casing API 5A Grade H and J. Pipe products are hydro-tested, non-destructively and destructively tested, and analyzed chemically and metallographically. Weld seam is normalized.

MANUFACTURING PROCESS AND FACILITIES

Sonco has nine mills; four mechanical, four structural, and one pipe. All mills but the smallest mechanical mill use high frequency electric welding. All mills are equipped with strip accumulators for continuous production.

QUALITY CONTROL

Sonco manufactures a very good quality product consistently. Attention to detail and constant testing are central to the production process. All finished goods are checked for dimensional accuracy. All structurals and pipe are tensile tested each heat of steel. All pipe is electro-magnetically tested full-body and pressure tested. Hardness and product chemistries are available on request.

CUSTOMER SERVICE

Sonco welcomes inquiries on tubular applications, special grades or types of steel or anything else related to tubular goods production. We attempt at all times to provide professional, responsive service to our customers.

TECHNICAL ASSOCIATIONS

Sonco belongs to the Welded Steel Tube Institute (WSTI) and the International Committee for the Development and Study of Tubular Construction (CIDECT). Our engineering staff belong to the American Society for Metals (ASM) and the Canadian Institute of Mining and Metallurgy (CIM).

Standard Tube Canada Inc.

P.O. Box 430
Woodstock, Ontario, Canada
N4S 7Y6

Contact: T.J. Corrigan

Tel: (519) 537-6671

Telex: 064-74115

Standard Tube Canada Inc. is a producer of welded mechanical and pressure carbon steel tubing. Founded in 1905, the company employs 1,050. Fourteen welded tube mills and ancillary equipment are operated, backed by warehouses in Toronto, Windsor, Ontario; Saskatoon, Saskatchewan and Edmonton, Alberta.

PLANT LOCATIONS

193 Givins Street
Woodstock, Ontario, Canada
N4S 7Y6

Tel: (519) 537-6671

5700, rue Pare
Montréal (Québec) Canada
H4P 2M2
Tel: (514) 731-3451
Telex: 055-60799

47 Milner Street
Winnipeg, Manitoba, Canada
R2X 2P7
Tel: (204) 633-2510
Telex: 07-57834

8240 Manitoba Street
Vancouver, British Columbia, Canada
V5X 3A3
Tel: (604) 321-6661
Telex: 04-51189

TYPES OF PRODUCTS

Welded mechanical tubing for all purposes; welded pressure tubing - boiler and condenser A178, etc.; hollow structural tubing, round, square, rectangular; ROPS quality

tubing to customer specifications; DOM steel tubing for hydraulic cylinders, etc.

COMPOSITION

Steels to customer specifications, includes carbon, alloy and some grades of stainless

MANUFACTURING PROCESS

Electric resistance and high frequency welding

MANUFACTURING SPECIFICATIONS

API, ASTM, Military, etc.

SPECIAL FACILITIES AND SERVICES

Four drawbenches, two continuous normalizing furnaces, press and mandrel benders with full fabricating facilities.

TESTING FACILITIES

Ultrasonic and eddy current non-destructive testing
Mechanical and impact testing
Chemical and metallurgical laboratory

SIZE RANGE

$\frac{1}{2}$ " OD x .028" wall to 8- $\frac{1}{4}$ " OD x .400" wall rounds
Shapes currently to 24" periphery (6" x 6" sq.) up to .375" thick
Pipe sizes from 1" IPS to 8" IPS

Stanton Pipes Limited
P.O. Box 849
Hamilton, Ontario, Canada
L8N 3N9

Contact: J.H. Miller,
Vice-President, Sales

Tel: (416) 547-3251
Telex: 061-8654
Cable: SPUNPIPE

Stanton Pipes Limited opened its spun iron plant in 1961 and three years later installed a spiral weld pipe machine. The firm now supplies ductile spun iron pipe to major Canadian municipalities, contractors and overseas markets. The company's convenient location in Hamilton, Ontario--heart of the Canadian iron and steel industry--assures ready availability of raw materials. Excellent transportation facilities provide speedy service to overseas markets.

PLANT LOCATION

Stanton Pipes Limited
Kenilworth Avenue North
Hamilton, Ontario, Canada
Tel: (416) 547-3251

TYPES OF PRODUCTS

Ductile spun iron pipe and grey cast iron fittings for watermain and sewer force mains with tyton, mechanical or flanged joints; spiral weld steel pipe for piling and general construction purposes, glass-lined cast iron pipe and fittings and glass-lined steel pipe and fittings, custom ductile iron pipe for treatment plants

COMPOSITION

Ductile iron; steel

MANUFACTURING PROCESS

DeLavaud ductile spun iron pipe;
submerged arc spiral welding

SIZE RANGE

Ductile spun iron pipe 4"-24" ID;
spiral weld steel pipe 10 $\frac{1}{4}$ "-40" OD x
.188"-.50"

MANUFACTURING SPECIFICATIONS

ANSI; ASTM; ISO; CSA

TESTING FACILITIES

Full physical and chemical
facilities for testing to above
specifications

Stelco Inc.

100 King Street West
Hamilton, Ontario, Canada
L8N 3T1

Contact: Canada and United States
Inquiries
H. Plumb, Sales Manager
Oil and Gas Industry

Tel: (416) 528-2511 Ext. 3103
Telex: 061-8626
Cable: Stelco Hamilton

Established in 1910, Stelco is Canada's leading steel manufacturer producing about one-third of the country's steel. (Steel shipments in 1980 were 4.5 million tons with sales of \$2.2 billion). Production has just started at Stelco's Lake Erie Works which is by far the biggest single venture in the history of Canadian steelmaking. Built on a 2,670 ha (6,600 acre) site, the first phase of the new plant increases Stelco's overall steelmaking capacity by another 1.17 million tons. Facilities in Eastern, Central and Western Canada have recently also been expanded. Apart from pipe products, Stelco manufactures steel plate and sheet, bars, rod, wire, sucker rods and accessories, and finishing mill items such as fasteners, nails, chain link and farm fence, barbed wire and others. Stelco products are exported to over 50 countries. In Burlington, Ontario, Stelco operates one of the world's most modern steel research centres, actually a steelworks in miniature, with pilot steel manufacturing and rolling facilities.

PIPE PLANT LOCATIONS

Contrecoeur, Quebec
Welland, Ontario
Camrose, Alberta

Export Inquiries

Stelco Inc.
Export Sales Department
100 King Street West
Hamilton, Ontario, Canada
Telex: 061-8510

TYPES OF TUBULAR PRODUCTS

Oil country tubular goods, water and process pipe. API and CSA line pipe, mechanical tubing, electrical conduit, boiler and pressure tubing, piling pipe, hollow structural section.

COMPOSITION

Steel

MANUFACTURING PROCESSES

Continuous weld, electric resistance weld, submerged arc weld (U & O and spiral) seamless.

SIZE RANGE

1/8" nom. to 60" OD

MANUFACTURING SPECIFICATIONS

API, ASTM, AWWA, BSS, CSA

SPECIAL FACILITIES AND SERVICES

Hydraulic expansion, fabrication, heat treating, cold drawing

TESTING FACILITIES

Full chemical and metallurgical.

Note: For technical literature on steel pipe for commercial, industrial, process or line applications, contact Stelco Inc., 100 King Street West, Hamilton, Ontario, Canada, L8N 3T1.

Toronto Tubing Limited
44 Woodbine Downs Boulevard
Rexdale, Ontario, Canada
M9W 5T2

Tel: (416) 675-1845

Toronto Tubing Limited produces quality A-K tubular product. Made from primary special steel, this straight tubing is of the highest quality and is used especially for exhaust systems installations.

AVAILABILITY

<u>O/D</u>	<u>Gauge</u>	<u>Wall Thickness</u>	<u>Length</u>
2"	16	065	7'0" 10'0" 10'6"
2¼"	16	065	7'0 10'0" 10'6"
2½"	16	065	7'0 10'0" 10'6"

The above gauges and lengths may be changed to suit customer requirements.

Wolverine Division UOP Limited

P.O. Box 6515, Station "D"
London, Ontario, Canada
N5V 3E6

Contact: R.W. Price

Tel: (519) 455-0770

Telex: 064-5880

Cable: WOLCAN LONDON

Wolverine Division, UOP Limited, was established in 1958 as a primary copper and brass seamless tube mill. Using the most modern tubemaking equipment available, the mill produces several million pounds of tubing a month, most of which is from high quality Canadian electrolytic cathode copper. Electric casting furnaces and a 3,000-ton extrusion press are used for converting copper and alloys into seamless tube. High-speed finishing equipment, electronic testing and modern laboratory equipment guarantee an excellent quality product. Shipments are worldwide and finished goods are stocked in Toronto, Ontario and Vancouver, British Columbia, as well as at the plant.

PLANT LOCATION

Wolverine Division
1920 Cheapside Street
London, Ontario, Canada
Tel: (519) 455-0770

TYPES OF PRODUCTS

Copper water tube and drainage tube in types K, L, M and DWV; commercial copper tubing for air conditioning, baseboard heating, plumbing, electrical and automotive applications and condenser tubing to ASTM specifications for heat exchangers.

COMPOSITION

Copper and copper base alloys

MANUFACTURING PROCESSES

Casting in electric furnaces; extrusion of copper billets into a seamless tube; cold drawing on straight chain drawbenches and high-speed drawbacks with floating plugs.

SIZE RANGE

4½" OD down to less than 1/8",
capillary tubing down to .062"

SPECIAL FACILITIES AND SERVICES

Standard seamless tubing in straight lengths and coils; specialized fabrication; experimental contracts in special extrusions.

TESTING FACILITIES

Full modern non-ferrous laboratory facilities, including direct emission spectrometer.

TYPE OF PIPE AND TUBE PRODUCED

	Centrifugal Casting	Brazed	Welded	Seamless
IRON AND STEEL				
CAST IRON				
CANRON Limited -- Pipe Division	x			
Stanton Pipes Limited	x			
STEEL				
Ahoy Industrial Corp. Ltd.			x	
The Algoma Steel Corporation, Limited				x
Barton Tubes Limited			x	
Canadian Phoenix Steel Products Division of York Russel Inc.			x	
Interprovincial Steel and Pipe Corporation Ltd.			x	
Prudential Steel Ltd.			x	
Sidbec-Dosco Limited			x	
Sonco Steel Tube Limited			x	
Standard Tube Canada Inc.			x	
Stanton Pipes Limited			x	
Stelco Inc.			x	
STAINLESS STEEL			x	
Associated Tube Industries Limited			x	
Douglas Bros., A Division of Robert Mitchell Inc.			x	
Granges Nyby Canada Limited			x	
Nor-Sand Metals Inc.				x

NON-FERROUS

Seamless

Cold Worked	Extruded or Pierced	Drawn	Welded
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ALUMINUM

Alcan Canada Products Limited -

Mill Products Division

x

x

Reynolds Extrusion Company Limited

x

x

COPPER AND COPPER BASE ALLOYS

Noranda Metal Industries Ltd.

x

x

Wolverine Division -- UOP

x

x

Limited

INCONEL

Associated Tube Industries Limited

x

Nor-Sand Metals Inc.

x

INCOLOY

Associated Tube Industries Limited

x

Nor-Sand Metal Inc.

x

MONEL

Inco Metals Company

x

x

Nor-Sand Metals Inc.

x

MAGNESIUM

Alcan Canada Products Limited --

Mill Products Division

x

CANADIAN PIPE AND TUBE FACILITIES

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Ahoy Industrial Corp. Ltd. Richmond British Columbia	Aluminized, cold rolled, or aluminum killed tube primarily produced for the H.D. truck exhaust systems. Current production running at approximately 250 T/yr. with capability to 700+.	Currently producing 5" (127mm) x .065 and .083 tube but capable of 3" dia. and up to 6" dia. Exporting to United States and Australia.
Algoma Steel Corp. Limited Sault Ste. Marie Ontario	Seamless oil well casing, line and standard pipe, mechanical tubing 250,000 tons (expansion underway)	4 1/2" to 12 3/4" diameter, 0.200" to 1.600" wall thickness 48' maximum length. Exporting worldwide.
Arc Tube Inc. Sault Ste. Marie Ontario	Small diameter tubing for auto and refrigeration industry 5,000 tons ERW tubing (expansion underway).	1/4" - 3/8" Exporting to United States
Arvin Industries Concord, Ontario	Mechanical tubing 4,500 tons	1 3/4" - 2 1/2"
Associated Tube Industries Ltd. Markham, Ontario	Welded nickel alloy and stainless steel tubing 10,000 tons (additional expansion underway). Mechanical and pressure tubing.	3/16" to 2 5/8" diameter; .010" to .150". Exporting worldwide.
Atlantic Tube Mississauga, Ontario	Mechanical tubing for automotive industry 10,000 tons.	1 1/2" to 2 1/2" OD Exporting to United States
Barton Tubes Ltd. Burlington, Ontario	Mechanical tubing EMT conduit. 40,000 tons pressure-tested tubing, for use in automotive, furniture agriculture and construction industries.	1/2" x .028" to 4" to .188" Exporting to United States

*Note: Capability indicates average output from facilities during normal operations.

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Bundy of Canada Ltd. Cambridge, Ontario Guelph, Ontario Bramalea, Ontario	Copper plated steel tubing for auto and refrigeration industry, 5,000 tons plus 2000 tons of basic cold rolled.	3/16" - 3/8" copper plated 1/4" - 5/16" - 3/8" basic cold rolled.
Canada Tube Co. Ltd. Bolton, Ontario	Welded steel tubing mechanical and pressure-tested tubing ERW for agricultural, structural, automotive and furniture industries 24,000 tons	1" - 3 1/2" Exporting to United States.
Canadian Phoenix Steel Products Division of York Russel Inc. Toronto, Ontario	Spiral welded steel pipe for pressure transmission pipelines, foundation piling 50,000 tons standard pipe	6 5/8" to 86" Exporting worldwide.
Canron Inc. Pipe Division Montreal, Quebec	Ductile iron pipe Ductile iron pipe Pre-stressed concrete pipe	4" - 24" 100 mm - 600 mm 14" - 108"
Tubular Steel Products Division of Chatcan Inc. Toronto, Ontario	ERW mechanical tubing 24,000 tons	3/8" - 3"
Conduits Condell Ltée Bromont, Quebec	Electric welded steel tubing and HSS pipe 2,000 tons	5/8" - 3 1/2" 1 x 1 to 3 1/2"
Delhi Division - General Instruments of Canada Ltd. Delhi, Ontario	Pre-galvanized welded steel tubing 18,000 tons for fencing market, TV towers, scaffolding and other structural applications	5/8" to 3" O.D. Wall thickness .028" to .134" Exporting to United States.

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Douglas Bros. Division of Robert Mitchell Inc. Montreal, Quebec	Stainless steel tubing and alloy tubing for pulp and paper, chemical, atomic energy, water treatment and food industries 3,600 tons	1 1/2" to 36" .078" to .250" Exporting worldwide. Also manufactures fittings. Smoothflow elbows up to 24" with maximum wall thickness of 3/8".
Ellett Copper and Brass Co. Ltd. Port Coquitlam British Columbia	Stainless steel pressure tube and lightwall stainless steel pipe for pulp and paper industry	2 1/2" to 14" wall thickness .044" to .1875" Also spiral welded.
EMT Conduit Rexdale, Ontario	Mechanical and structural tubing for construction and agricultural industries 10,000 tons	1 1/4" - 4 1/2"; exporting to United States.
Gabriel of Canada Limited Toronto, Ontario Ajax, Ontario	Mechanical and pressure tested tubing ERW 3,000 tons for shock absorbers and tail pipes.	1 3/8" - 3"
Gidon Industries Inc. Rexdale, Ontario	Mechanical and pressure tested tubing ERW for automotive and furniture industries 75,000 tons.	1/2" - 2 1/2"
GKL Industries Limited Peterborough, Ontario	ERW aluminum tube. Bright finish for furniture manufacturing, lawn sprinklers, swimming pool equipment, etc., 2,500 ton.	1/2" to 2 1/2" round and square; exporting directly and through brokers to United States and overseas.
	ERW Steel. Mechanical plating quality for furniture manufactur- ing trade and others. 7,000 ton.	1/2" to 2 1/2" and 5/8" to 1 1/4" From .028 / 22 G to .083 / 14 G Exporting directly and indirectly to United States and overseas.
Hayes Dana Thorold, Ontario	Truck shaft tubing 5,000 tons for automotive parts.	2" - 4 1/2"; exporting to United States

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Imperial Steel Products Ltd. Winnipeg, Manitoba	ERW mechanical and pressure-tested tubing 22,000 tons for auto parts.	1 1/2" - 2 1/2"
International Parts Mfg. Ltd. Scarborough, Ontario	Tubing for exhaust and tail pipe systems 22,000 tons	1 1/4" - 2 1/2"
Interprovincial Steel and Pipe Corp Ltd. (IPSCO)	Total 725,000 tons	Exporting worldwide 3/4" - 2 3/8" 2 3/8" - 16" 16" - 80" 4 1/2" - 16" 16" - 80" 1/2" - 4 1/2"
Brooks, Alberta	10,000 tons: Spiral weld	
Brooks, Alberta	10,000 tons: ERW	
Regina, Saskatchewan	175,000 tons: ERW	
Regina, Saskatchewan	150,000 tons: Spiral weld	
Edmonton, Alberta	180,000 tons: ERW	
Edmonton, Alberta	150,000 tons: Spiral weld	
Port Moody British Columbia	60,000 tons: ERW	
Lear Siegler Industries Limited Kitchener, Ontario	ERW mechanical and pressure-tested tubing 7,000 tons for auto parts.	1" - 1 1/4" Exporting to United States as finished auto parts for original equipment.
Longtin Conduits St-Jean, Québec	ERW conduits 10,000 tons (expansion underway).	1/2" - 2"
Monro Auto Equipment of Canada Division of Tenne Co. Canada Corporation Owen Sound, Ontario	ERW tubing for shock absorbers 1,200 tons	1.115" - 2.375" Exporting to United States finished products.
Nyby Uddeholm Brockville, Ontario	Stainless steel pipe and fittings 1,800 tons	3" to 50" Exporting to United States. Also manufactures fittings.

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Pipe and Piling Supply St. Hubert, Quebec	Spiral weld pipe 20,000 tons for piling	4 1/2" - 24" Exporting to United States.
Prudential Steel Ltd. Calgary, Alberta	ERW line pipe for oil and gas; tubing and casing (1983 - 200,000 metric tons)	2 3/8" - 8 5/8" .064" - .500" lengths to 60 ft. Exporting to United States.
Siegfried Krieser Industries Ltd. - MBF Industries Pipe and Conduit Division Weston, Ontario	Electrical tubing, zinc plated conduit, rigid zinc plated electrical conduit, rigid hot dipped galvanized electrical conduits furniture tubing (round, square and oval) HSS, railing quality pipe, mechanical pipe, water pipe, gas pipe, sprinkler pipe, schedule 45,000 tons.	.706" - 5"
Sidbec-Dosco Montreal, Quebec	Standard water agricultural conduit line and structural pipe 55,000 tons	1/2" - 4" Exporting worldwide.
Sonco Steel Tube Ltd. (A Jannock Co.) Brampton, Ontario	300,000 tons total 40,000 tons mechanical 225,000 tons HSS 60,000 tons pipe, production tubing and casing API 5A	Exporting to United States. 3/8" x 3" 2" x 2" to 12" x 12" and equivalent rounds or rectangles .125 to .625 wall 2 3/8" to 7"

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Standard Tube Canada Inc., Subsidiary of Tube Investments Ltd. London, England		
Vancouver	138,000 tons (total)	Exporting to United States.
British Columbia	HSS tubing 10,000 tons	1/2" - 3"
Montreal, Quebec	HSS & EIW tubing 100,000 tons	1/2" - 8 3/4"
Winnipeg, Manitoba	HSS ERW & EIW tubing 18,000 tons	5/8" - 2 1/2"
	HSS tubing 10,000 tons	1/2" - 3"
Woodstock, Ontario	Dom tubing Pressure tubing	Up to 5" OD x 3/8" wall, (Canada's only producer.)
Stanton Pipes Ltd. Subsidiary of British Steel Corporation of London, England Located in Hamilton, Ontario	Ductile spun iron pipe 45,000 tons Pressure sewer pipe 15,000 tons	4" - 24" 10 3/4" - 40" - .188" - .50" Exporting worldwide.
Steel and Stainless Fabricators Ltd. Montreal, Quebec	Mechanical and pressure tubing and line pipe for oil and gas industry and pulp and paper industry 40,000 tons.	2" - 60" on average and up. Interested in exporting worldwide.
Steco Inc. Camrose, Alberta Contrecoeur, Quebec Lake Erie, Ontario Welland, Ontario	1,731,500 tons (total) 180,000 tons line 130,000 Standard, line oil and country 116,000 Standard, line, mechanical pressure, structural and hollow structural sections 200,000 Line and structural 600,000 Line & structural spiralweld (a) 125,000 Standard, line, oil country, (b) 55,000 mechanical, pressure, (c) 43,500 structural (d) 282,000 Line standard and structural	Exporting worldwide. 20" - 42" 4 1/2" - 16" 1/8" - 4" 20" - 36" 36" - 60" (a) 1/8 to 4" (b) 1/8 to 4 1/2" (c) 1/2 to 4" (d) 2 3/8 to 16"

<u>FIRM</u>	<u>PRODUCT LINE AND CAPABILITY*</u>	<u>SIZE RANGE AND REMARKS</u>
Tubes Solac Ltée St. Jerome, Quebec	HSS mechanical and ERW tubing 8,000 tons (to be expanded to 16,000 tons).	1/2" - 2" and 3/4" 7/8" 1" square 1/2" x 1" x 1/2" x 1 1/2" rec.
Walker Exhausts Ltd. Galt, Ontario	Mechanical pressure-tested tubing 12,000 tons	1 1/2" - 2 1/2"
Welded Tube of Canada Ltd. Concord, Ontario	Mechanical and structural 75,000 tons (HSS)	1/2" - 7 5/8" round 3/8" - 6" square Exporting to United States.
Wilco Canada Inc. London, Ontario Glencoe, Ontario	Small diameter single wall seamless welded steel tubing 10,000 tons double wall copper brazed hydraulic refrigeration and automotive grade tubing.	1/4" - 5/16" - 3/8" 7/10" 1/2" .028 - .035 - .042 3/10" - 1/4" - .028 Exporting to United States.
Windsor Tube and Metal Inc. Windsor, Ontario	ERW mechanical tubing and structural tubing 250,000 tons.	1" - 5" - 16 guage

