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# MARKET INTELLIGENCE

IMPORT ANALYSIS

HEAT EXCHANGERS

JANUARY TO DECEMBER 1987

Pub. No.: 88019-RR

July 1989



Industry, Science and  
Technology Canada

Industrie, Sciences et  
Technologie Canada

Canada

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EXPLANATORY NOTES

Method

The data shown in this analysis are extracted from Revenue Canada Customs documents. These documents provide a description of the products, names of importers, exporters, quantities, dollar values, unit prices, countries of origin, provinces of entry, tariff applications and rates of exchange.

The information presented in this report is more detailed than that generally available from Statistics Canada or other publications. Data which might reveal information about individual importers are aggregated.

Valuation

Dollar values shown in this report are based on selling price F.O.B. plant, in Canadian dollars. This selling price represents the value paid by the importer, excluding all freight, packing and insurance costs when specified. All trade discounts, when applicable, are also deducted from the selling price.

Rounding

Figures may not add due to rounding.

REFERENCE SOURCES

Industry, Science and Technology Canada  
Statistics Canada  
Revenue Canada

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Machinery Branch  
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## IMPORT ANALYSIS

### HEAT EXCHANGERS

#### I. INTRODUCTION AND SCOPE

This Import Analysis is one of a series prepared in order to assist businesses and other organizations in their market research of specific products. The detailed import information provided in these reports supports studies by organizations seeking to expand existing production lines, change individual product characteristics or engage in new manufacturing investment in Canada. The coverage of an import analysis is developed in close consultation with the client, and is tailored to meet those specific requirements. It is important to emphasize that this report does not attempt any assessment as to the feasibility of competing in a particular market.

This analysis of imports of heat exchangers is based on a detailed examination of Revenue Canada Customs import documents for the period January to December, 1987. The following Canadian International Trade Classification (C.I.T.C.) import commodity codes were analyzed:

509-40-15	Heat exchanger, shell & tube type, industrial;
509-40-20	Heat exchanger, plate type, industrial;
509-40-25	Heat exchanger, jacketed type, industrial;
509-40-30	Heat exchanger, finned tube type, industrial;
509-40-35	Heat exchanger, regenerative type, industrial;
509-40-40	Heat exchanger, recuperative type, industrial;
509-40-45	Heat exchanger, air pre-heat type, industrial;
509-40-50	Heat exchanger, for cryogenic service, industrial;
509-40-55	Coolers, oil, industrial type;
509-40-90	Heat exchanger, industrial, n.e.s.

Due to the large volume of documents classified to the import commodity code 509-40-90 "Heat exchanger, industrial, not elsewhere specified", only those shipments having a value of \$10 000 and over were examined for this category.

Total figures in this report do not correspond to those published by Statistics Canada. The differences are explained in Appendix I.

II. ANALYSIS OF IMPORTS

Imports of heat exchangers included in this analysis for the period January to December 1987, amounted to \$17.7 million. (Note difference from figure published by Statistics Canada as explained in Appendix I.)

Of the total imports, seventy-four per cent of the value was divided among three types of heat exchangers. Finned tube type accounted for \$8.3 million or forty-seven per cent, followed by the shell and tube type with \$2.9 million (seventeen per cent) and the plate type exchangers with \$1.7 million (10 per cent).

Although the oil coolers totalled 2 470 units or fifty-two per cent of the total quantity, they represented only four per cent of the total value. Further details by type and price range are shown in Appendix A.

SUMMARY OF IMPORTS - BY TYPE - 1987

<u>Exchanger Type</u>	<u>Quantity (No.)</u>	<u>Value (\$000)</u>
Finned Tube	549	8 321
Shell and Tube	76	2 936
Plate	152	1 746
Coolers, Oil	2 470	738
Air Pre-Heat	10	737
Regenerative & Recuperative	10	643
For Cryogenic Service	53	560
Spiral	24	385
Heat Wheels	25	239
Scraped-Surface	10	231
Not Further Identified	<u>1 346</u>	<u>1 166</u>
TOTAL	<u>4 725</u>	<u>17 701</u>

By end user types, imports of heat exchangers to manufacturing industries accounted for \$8.2 million or forty-six per cent. These were followed by imports to the mining industry with \$2.9 million, or sixteen per cent and to wholesale trade with \$2.6 million or 15 per cent.

Within these end use categories, imports of heat exchangers were particularly high for: the crude petroleum and natural gas mining industries; in the manufacturing industries for oil field machinery and equipment, air and gas compressors; as well as for industrial machinery and equipment wholesale trade industries. Further details on industries purchasing heat exchangers are shown in Appendix B.

SUMMARY OF IMPORTS BY END USE INDUSTRY - 1987

<u>End Use Industry</u>	<u>Value (\$000)</u>	<u>% of Total Value</u>
Mining	2 867	16
Construction	1 692	10
Manufacturing	8 196	46
Transportation, Communication and Other Public Utilities	439	2
Wholesale Trade	2 608	15
Services	271	2
Not Further Identified	<u>1 628</u>	<u>9</u>
TOTAL	<u>17 701</u>	<u>100</u>

II. ANALYSIS OF IMPORTS (CONT'D)

SUMMARY OF IMPORTS - HEAT EXCHANGER

BY MAJOR TYPE AND END USE INDUSTRY, 1987

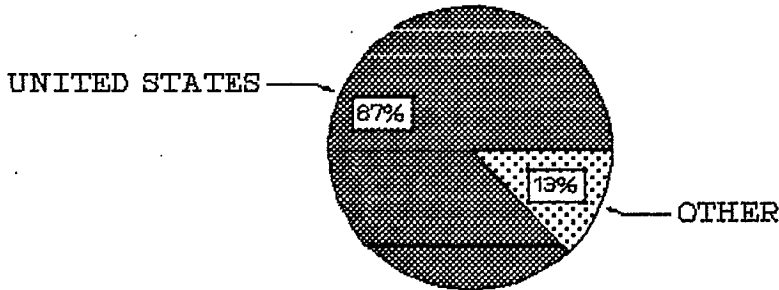
<u>Type</u>	<u>Total</u>		<u>Mining</u>		<u>Construction</u>		<u>Manufacturing</u>		<u>Wholesale Trade</u>		<u>Other</u>		<u>Not Further Identified</u>	
	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>	<u>Qty</u>	<u>Value</u>
	(No)	(\$000)	(No)	(\$000)	(No)	(\$000)	(No)	(\$000)	(No)	(\$000)	(No)	(\$000)	(No)	(\$000)
Shell and Tube	76	2 936	8	1 076	-	-	26	951	24	301	10	391	8	217
Plate	152	1 746	4	59	14	200	88	923	23	336	5	87	18	141
Finned Tube	549	8 321	26	1 208	20	1 010	263	4 483	52	1 342	3	74	185	205
Other*	2 602	3 532	10	503	22	397	2 002	1 162	513	543	4	40	51	886
Not Further Identified	<u>1 346</u>	<u>1 166</u>	<u>6</u>	<u>21</u>	<u>59</u>	<u>84</u>	<u>1 040</u>	<u>677</u>	<u>48</u>	<u>86</u>	<u>113</u>	<u>118</u>	<u>80</u>	<u>179</u>
<b>Total:</b>	<b>4 725</b>	<b>17 701</b>	<b>54</b>	<b>2 867</b>	<b>115</b>	<b>1 692</b>	<b>3 419</b>	<b>8 196</b>	<b>660</b>	<b>2 608</b>	<b>135</b>	<b>710</b>	<b>342</b>	<b>1 628</b>

\*Other includes Regenerative and Recuperative, Air Pre-Heat, For Cryogenic Service, Scraped-Surface, Spiral, Heat Wheels and Oil Coolers.

II. ANALYSIS OF IMPORTS (CONT'D)

IMPORTS OF HEAT EXCHANGERS, 1987

COUNTRY OF ORIGIN

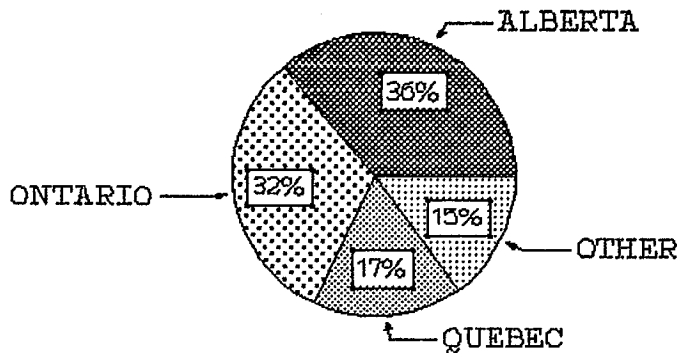


100% = \$17.7 MILLION

The United States was the dominant source of imports of heat exchangers during the calendar year 1987, accounting for eighty-seven per cent of the total import value. Other countries exporting to Canada include the following in order of value: Japan, Italy, Federal Republic of Germany, Sweden, The United Kingdom, France, Belgium and Zaïre. A detailed list of major foreign exporters to Canada, in descending order of value, is shown in Appendix F.

IMPORTS OF HEAT EXCHANGERS - 1987

PROVINCE OF CONSIGNEE



100% = \$17.7 MILLION

Alberta was the major province of consignee, accounting for \$6.4 million or thirty-six per cent of the total import value, followed closely by Ontario with thirty-two per cent. Québec accounted for seventeen per cent. (See imports by province of consignee, Appendix D.)



II. Analysis of Imports (Cont'd)

IMPORT MARKET CONCENTRATION-1987

During the calendar year 1987 there were 240 known consignees/importers of heat exchangers as reported in this analysis. Eight importers of heat exchangers had imports of at least \$500 thousand during that period. The principal fifty consignees/importers accounted for \$14 million or seventy-nine per cent of the total dollar value of imports. All consignees/importers are listed in alphabetical order in Appendix E.

<u>Principal Consignees/Importers (By Value)</u>	<u>Cumulative Value (\$000)</u>	<u>% of Total Value</u>
3	2 942	17
6	4 856	27
10	6 835	39
20	9 620	54
50	<u>4 037</u>	<u>79</u>
All Consignees/ Importers (240)	<u>17 701</u>	<u>100</u>

III. CANADIAN PRODUCTION

Although heat exchangers are made in Canada, Statistics Canada does not provide data on shipments by Canadian manufacturers.

#### IV. MARKET SUMMARY

This study of the 1987 imports of heat exchangers encompasses a broad range of thermal devices, some of which are: shell and tube heat exchangers, plate and frame, finned tube, regenerative and recuperative heat exchangers, air pre-heaters, cryogenic service heat exchangers, spiral heat exchangers, scraped-surface heat exchangers, heat wheels, industrial oil coolers and various heat exchangers not specifically identified. Heat exchangers are used in numerous commercial and industrial applications to transfer thermal energy or to recover heat for energy saving purposes.

In 1987 the apparent Canadian market for heat exchangers was in the order of \$115 million. Total domestic production of \$110 million, consisted of approximately \$91 million worth of domestic shipments and \$19 million of exports. Imports for 1987 are estimated to be \$24 million. (See reconciliation, Appendix I.)

There are approximately 100 Canadian manufacturers of heat exchangers, employing approximately 3 500 people. In 1982, Statistics Canada reported that shipments reached \$156.7 million, but since 1982 the industry has undergone considerable downsizing (reduction in market size and employment levels), and has endured several years of depressed profit margins. Plant utilization is estimated to be 67% of full capacity.

Although the percentage of imports does not exceed 25% of the domestic market, there are a number of trends which indicate an opportunity for import replacement. These opportunities are: (1) brazed aluminum finned tube heat exchangers; (2) plates for plate and frame heat exchangers; (3) thick walled, high pressure, shell and tube heat exchangers; and (4) finned tube heat exchangers for the oil and gas industry. In most instances, a domestic manufacturing capability exists but this capability could be significantly improved through investment in new machinery and technology, or through joint ventures and licensing agreements with compatible foreign manufacturers.

IMPORTS OF HEAT EXCHANGERS, INDUSTRIAL - BY TYPE - 1987

<u>Type</u>	<u>Price Range</u> ( <u>\$</u> )	<u>Quantity</u> ( <u>No.</u> )	<u>Value</u> ( <u>\$</u> )
<u>Shell and Tube:</u>	5 000 to 25 000	48	500 486
	25 001 to 100 000	17	670 757
	Over 100 000	11	1 765 157
<b>TOTAL, Shell and Tube</b>		<u>76</u>	<u>2 936 400</u>
<u>Plate:</u>	1 001 to 25 000	134	86 534
	25 001 to 50 000	10	328 445
	Over 50 000	8	630 712
<b>TOTAL, Plate</b>		<u>152</u>	<u>1 745 691</u>
<u>Finned Tube:</u>	Under 10 000	329	408 493
	10 001 to 25 000	96	1 626 557
	25 001 to 50 000	90	3 221 330
	50 001 to 100 000	27	1 743 280
	Over 100 000	7	1 321 467
<b>TOTAL, Finned Tube</b>		<u>549</u>	<u>8 321 127</u>
<u>Regenerative/Recuperative*:</u> TOTAL	-	10	642 929
<u>Air Pre-Heat:</u> TOTAL	-	10	736 883
<u>For Cryogenic Service:</u>	Under 12 000	41	130 737
	12 001 to 50 000	8	150 478
	Over 50 000	4	278 645
<b>TOTAL, Cryogenic Service</b>		<u>53</u>	<u>559 860</u>
<u>Scraped Surface:</u> TOTAL	-	10	231 290
<u>Spiral:</u>	Under 20 000	18	162 089
	Over 20 000	6	222 539
<b>TOTAL, Spiral</b>		<u>24</u>	<u>384 628</u>
<u>Heat Wheel:</u> TOTAL	-	25	238 524
<u>Coolers, Oil:</u>	Under 50 139	2 280	222 139
	501 to 1 000	102	76 404
	1 001 to 5 000	67	165 763
	Over 5 000	21	273 570
<b>TOTAL, Coolers, Oil</b>		<u>2 470</u>	<u>737 876</u>
<u>Heat Exchangers, Not Further Identified:</u>	Under 5 000	1 326	875 446
	5 001 to 10 000	10	73 660
	Over 10 000	10	216 623
<b>TOTAL, NFI</b>		<u>1 346</u>	<u>1 165 729</u>

\* Combined to preserve confidentiality of Canadian importers.

IMPORTS OF HEAT EXCHANGERS, BY END USE INDUSTRY-1987

APPENDIX B

	<u>Value</u> ( <u>\$</u> )
<u>Mining</u>	
Copper ores	205 781
Gold ores	653 356
Ferroalloy ores except vanadium	36 300
Uranium - radium - vanadium ores	11 270
Crude petroleum and natural gas	1 846 436
Oil and gas field exploration services	42 666
Oil and gas field services, n.e.c.*	2 961
Potash, soda and borate minerals	25 341
Chemical and fertilizer mineral mining, n.e.c.*	43 254
<b>TOTAL</b>	<b><u>2 867 365</u></b>
<u>Construction</u>	
General contractors - single family houses	1 319
General contractors - residential buildings, other than single family	34 614
Plumbing, heating and air conditioning	914 053
Electric work	88 481
Roofing and sheet metal work	51 632
Installation or erection of building equipment, n.e.c.*	601 602
<b>TOTAL</b>	<b><u>1 691 701</u></b>
<u>Manufacturing</u>	
Cheese, natural and processed	58 473
Pickled fruits and vegetable sauces and seasoning and salad dressings	2 519
Shortening, table oils, margarine and other edible fats and oils, n.e.c.*	19 964
Roasted coffee	13 396
Automotive trimmings, apparel findings, and related products	11 236
Logging camps and logging contractors	31 137
Sawmills and planing mills, general	8 360
Hardwood veneer and plywood	2 152
Pulp mills	28 628
Paper mills, except building paper mills	67 500
Pressed and molded pulp goods	196 940
Corrugated and solid fiber boxes	34 009
Industrial gases	225 139
Inorganic pigments	33 092
Industrial inorganic chemicals, n.e.c.*	206 455
Plastics materials, synthetic resins, and non vulcanizable elastomers	19 489
Pharmaceutical preparations	17 606
Perfumes, cosmetics, and other toilet preparations	1 775
Industrial organic chemicals, n.e.c.*	75 420
Nitrogenous fertilizers	6 069
Pesticides and agricultural chemicals, n.e.c.*	205 585
Carbon black	47 136
Chemicals and chemical preparations, n.e.c.*	55 049

\*n.e.c.: not elsewhere classified.

IMPORTS OF HEAT EXCHANGERS, BY END USE INDUSTRY-1987 (CONT'D)

	<u>Value</u> <u>(\$)</u>
<u>Manufacturing (Cont'd)</u>	
Petroleum refining	546 869
Tires and inner tubes	2 338
Fabricated rubber products, n.e.c.*	65 281
Miscellaneous plastics products	12 764
Vitreous china table and kitchen articles	16 078
Blast furnaces (including coke ovens), steel works and rolling mills	193 688
Steel foundries, n.e.c.*	72 096
Heating equipment, except electric and warm air furnaces	73 523
Fabricated plate work (boiler shop)	118 417
Sheet metal work	87 452
Screw machine products	14 956
Steel springs, except wire	16 517
Miscellaneous fabricated wire products	12 247
Steam, gas and hydraulic turbines and turbine generator set units	208 298
Farm machinery	34 867
Construction machinery and equipment	16 951
Oil field machinery and equipment	2 023 947
Conveyors and conveying equipment	17 902
Machine tools, metal cutting types	14 372
Machine tools, metal forming types	22 681
Food products machinery	496 652
Woodworking machinery	4 570
Air and gas compressors	1 614 245
Industrial process furnaces and ovens	23 022
General industrial machinery and equipment, n.e.c.*	356 907
Air conditioning and warm air heating equipment and commercial and industrial refrigeration equipment	52 049
Service industry machines, n.e.c.*	12 501
Machinery, except electrical, n.e.c.*	32 088
Carbon and graphite products	23 167
Current carrying wiring devices	22 149
Electronic components, n.e.c.*	201 906
Motor vehicles and passenger car bodies	79 561
Motor vehicle parts and accessories	78 584
Aircraft	32 551
Shipbuilding and repairing	202 813
Boat building and repairing	22 647
Engineering	1 967
<b>TOTAL</b>	<b><u>8 195 806</u></b>

Transportation, Communication and Other Public Utilities

Terminal and joint maintenance facilities for motor freight transportation	2 539
Water transportation services, n.e.c.*	1 957
Airports and flying fields	263 572
Freight forwarding	91 235
Telephone communication (wire or radio)	1 346
Refuse systems	78 022
<b>TOTAL</b>	<b><u>438 671</u></b>

\* n.e.c.: not elsewhere classified

APPENDIX B

IMPORTS OF HEAT EXCHANGERS, BY END USE INDUSTRY-1987 (CONT'D)

	<u>Value</u> <u>(\$)</u>
<u>Wholesale Trade</u>	
Automotive parts and supplies	28 699
Tires and tubes	45 353
Construction materials, n.e.c.*	3 174
Electrical apparatus and equipment, supplies and construction material	31 818
Plumbing and heating equipment and supplies (hydronics)	6 813
Warm air heating and air conditioning equipment and supplies	36 239
Refrigeration equipment and supplies	227 888
Construction and mining machinery and equipment	24 979
Industrial machinery and equipment	1 866 900
Industrial supplies	102 407
Professional equipment and supplies	59 254
Transportation equipment and supplies	3 245
Chemicals and allied products	74 692
Farm supplies	36 555
Nondurable goods, n.e.c.*	60 279
TOTAL	<u>2 608 295</u>
<u>Services</u>	
Hotels, motels and tourist courts	31 812
Data processing services	38 582
Research and development laboratories	113 245
Health and allied services, n.e.c.*	13 814
Engineering, architectural and surveying services	73 639
TOTAL	<u>271 092</u>
<u>Industry not reported</u>	<u>1 628 007</u>
GRAND TOTAL	<u>17 700 937</u>

\* n.e.c.: not elsewhere classified.

APPENDIX C

IMPORTS OF HEAT EXCHANGERS, BY COUNTRY OF ORIGIN - 1987

<u>Country of Origin</u>	<u>Value (\$000)</u>	<u>% of Total Value</u>
United States	15 326	87
Japan	851	5
Sweden	255	1
United Kingdom	192	1
Italy )		
Federal Republic of Germany )	1 064 <sup>(1)</sup>	6
France )		
Belgium )	13 <sup>(1)</sup>	*
Zaire )		
<b>Total, All Countries</b>	<b><u>17 701</u></b>	<b><u>100</u></b>

(1) = Aggregated for reasons of confidentiality

\* = Less than one per cent

APPENDIX D

IMPORTS OF HEAT EXCHANGERS, BY PROVINCE OF CONSIGNEE - 1987

<u>Province</u>	<u>Value (\$000)</u>	<u>% of Total Value</u>
Alberta	6 400	36
Ontario	5 576	32
Québec	3 086	17
British Columbia	975	6
New Brunswick	576	3
Saskatchewan	554	3
Newfoundland	261	1
Prince Edward Island	(1)	*
Nova Scotia	75	*
Manitoba	67	*
Yukon Territories	(1)	
<b>TOTAL, All Provinces</b>	<b><u>17 701</u></b>	<b><u>100</u></b>

(1) The total value for these two provinces was \$131 thousand.

\* Less than one per cent

CANADIAN IMPORTERS

Importers of heat exchangers during the period January to December 1987, as indicated in this report, are listed below in alphabetical order. Where the importer is not the same as the consignee, (i.e. the recipient of the goods shipped), the name of the consignee rather than that of the importer is listed. The importer or consignee is not necessarily the end-user of the product.

NOTE: This list includes all importers except individuals.

<u>Name</u>	<u>Address</u>
A.R. Wright Plbg & Htg	Calgary, Alta.
ADM Agri Industries Ltd.	Windsor, Ont.
AO Wilson Process Equipment Ltd.	Boltön, Ont.
APV Crepaco Ltd.	Montréal, Qué.
Argonal Inc.	Contre Coeur, Qué.
Abitibi Price Inc.	Beaupré, Qué.
Accupress Mfg. Ltd.	Richmond, B.C.
Adams Brands Manuf., Div. Warner Lambert Inc.	Scarborough, Ont.
Affiliated Eng. Equipment	Lachine, Qué.
	Mississauga, Ont.
	Scarborough, Ont.
Alberta Environmental Centre	Vegreville, Alta.
Alco Gas & Oil Production Ltd.	Edmonton, Alta.
Alfa Laval Ltd.	Scarborough, Ont.
	Toronto, Ont.
Algoma Steel Corp.	Sault Ste. Marie, Ont.
Alpine Machine Works Ltd.	Calgary, Alta.
American Motors (Canada) Inc.	Brampton, Ont.
Amfac/Rucker Products Ltd.	St-Laurent, Qué.
	Richmond, B.C.
Atlas Copco Canada Inc.	Baie D'Urfé, Qué.
	Lachine, Qué.
	Woodbridge, Ont.
Atomic Energy of Canada Ltd.	Penawa, Man.
B.C. Pottery (Crane Canada Inc.)	Coquitlam, B.C.
Baltimore Aircoil Co. Inc.	Georgetown, Ont.
Barber Industries Ltd.	Calgary, Alta.
Bartek Chemical Co. Ltd.	Stoney Creek, Ont.
	Burlington, Ont.
Bearspaw - Custom Steel Fab. Ltd.	Calgary, Alta.
Becker Contractors Ltd.	St-John's, Nfld.
Bendix Electronics Ltd.	Chatham, Ont.
Bennett & Emmott Ltd.	Edmonton, Alta.
Best Energy Systems Inc.	Oakville, Ont.
Bimac Industries Ltd.	Calgary, Alta.



CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Black & McDonnell Contractors Ltd.	Dartmouth, N.S.
Blaiklock Inc.	Agincourt, Ont.
	Fort Erie, Ont.
Bothwell Co-op Dairy Ltd.	New Bothwell, Man.
Boudreau Sheet Metal Works	Dieppe, N.B.
Bramet Industries Ltd.	Edmonton, Alta.
Budd Canada Inc.	Kitchener, Ont.
C-I-L Inc.	Courtright, Ont.
CAE Electronics Ltd.	Montréal, Qué.
Canadair Ltd.	Montréal, Qué.
Canadian Air Compressors Ltd.	Toronto, Ont.
Canadian Hunter Karr Gas Plant	Grand Prairie, Alta.
Canadian International Paper Co.	Gatineau, Qué.
Canadian Liquid Air Ltd.	Edmonton, Alta.
	Hamilton, Ont.
Canterra Engineering Ltd.	Calgary, Alta.
Carbonne Lorraine Corp.	Dorion, Qué.
Ceco Sales Ltd.	Delta, B.C.
Ceeco Machinery Mfg. Ltd.	Concord, Ont.
Champion Forest Products Ltd.	Hinton, Alta.
Champion Road Machinery Ltd.	Goderich, Ont.
Chapman Industries	Delta, B.C.
Chatterton Petry Chemical Corp.	Delta, B.C.
Chem Security Ltd.	Swan Hills, Alta.
Cherco Compressors Ltd.	Calgary, Alta.
Chevron Canada Ltd.	Slave Lake, Alta.
Clairol Co. of Canada	Knowlton, Qué.
Cole Motion Inc.	Windsor, Ont.
Colloids Canada Inc.	St. Catharines, Ont.
Columbian Chemicals Co.	Hamilton, Ont.
Comptech Circuits Inc.	Scarborough, Ont.
Computing Devices Co.	Ottawa, Ont.
Consumers Co-Operative Refinery Ltd.	Regina, Sask.
Cooper Industries (Canada) Inc.	Calgary, Alta.
Cyanamid Canada Ltd.	Niagara Falls, Ont.
Cypress Equipment Co. Ltd.	Delta, B.C.
Davis Wire Industries Ltd.	New Westminster, B.C.
Dectron Inc.	Montréal, Qué.
Del Schneider Hydraulics Ltd.	Prince George, B.C.
Delmar Chemicals Inc.	Lasalle, Qué.
Delta Hydraulic Power Ltd.	Richmond, B.C.
Denison Mines Ltd.	Elliott Lake, Ont.
Domtar Inc.	Windsor, Qué.
	Lachine, Qué.
Dow Chemical Canada Inc.	Varenes, Qué.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Drennan Refrigeration Inc.	London, Ont.
Dresser-Rand Canada Inc.	Airdrie, Alta.
	Calgary, Alta.
DuPont of Canada Ltd.	Maitland, Ont.
Dugas Equipment Ltd.	Caraquet, N.B.
Dyer Equipment Inc.	Calgary, Alta.
ES Fox Ltd.	Niagara Falls, Ont.
Enerflex Systems Ltd.	Calgary, Alta.
Energy Prod. of Canada Inc.	Montréal, Qué.
Energy Technology Products Ltd.	Calgary, Alta.
Enersol Inc.	Sherbrooke, Qué.
Esso Chemicals Ltd.	Sarnia, Ont.
Falco Stainless Steel Equipment Ltd.	Lachine, Qué.
Fiberglass Canada Inc.	Guelph, Ont.
Fibreco Export Inc.	Taylor, B.C.
Fleck Brothers Inc.	Vancouver, B.C.
Flo-Crest Equipment	Calgary, Alta.
Ford Motor Co. of Canada Ltd.	Oakville, Ont.
Fromages Saputo Ltée	St-Hyacinthe, Qué.
Gaco Systems Ltd.	Brantford, Ont.
General Motors of Canada Ltd.	Oshawa, Ont.
General Woods and Veneers Ltd.	Longueuil, Qué.
Georgetown Shipyard Inc.	Georgetown, P.E.I.
Glovertown Shipyards	Glovertown, Nfld.
Goodyear Canada Inc.	Valleyfield, Qué.
Halifax Sheraton Associates	Halifax, N.S.
Hanson Inc.	Toronto, Ont.
Harper Detroit Diesel Ltd.	Toronto, Ont.
Hatch & Associates Inc.	Sorel, Qué.
Hendrickson Mfg. Canada Ltd.	Stratford, Ont.
Howard Martin Ltd.	Pickering, Ont.
Hudson Bay Mining & Smelting Co.	Leaf Rapids, Man.
Hudson Northern Industries Inc.	Edmonton, Alta.
Humber Wastewater Treatment Plant	Toronto, Ont.
Hydraulic Service Specialties Ltd.	Mt. Pearl, Nfld.
Hydrogenal Inc.	Bécancour, Qué.
ITT Standard	Bramalea, Ont.
Improheat Ind. Ltd.	Vancouver, B.C.
Inco Ltd.	Creighton, Ont.
	Copper Cliff, Ont.
Industries SITEL (S.L.) Ltée	Chicoutimi, Qué.
Ingersoll Fasteners Co.	Ingersoll, Ont.
Ingersoll-Rand Canada Inc.	Airdrie, Alta.
	Calgary, Alta.
Inland Kenworth Ltd.	Nanaimo, B.C.
Inland Machinery Mfg.	Langley, B.C.
Inno Coat Ltd.	Bolton, Ont.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Inno-Coat Canada Ltd.	Bolton, Ont.
International Wafer Ltd.	Agincourt, Ont.
Isko Heat Exchanger Ltd.	St-Laurent, Qué.
Jacobs Suchard Canada Inc.	Burnaby, B.C.
	Kidd Creek Mines Ltd.
	Timmins, Ont.
Kilborn Fluor Construction Ltd.	Regina, Sask.
La Compagne Canadienne D'Oxgene Ltée	St-Léonard, Qué.
Lawrenco Engineered Products	Burlington, Ont.
Lenco Welding Accessories Ltd.	Windsor, Ont.
Les Industries OSIT Inc.	Ville Mont-Royal, Qué.
Liquid Air Eng. Corp.	Montréal, Qué.
Liquid Carbonics Inc.	St-Laurent, Qué.
	Scarborough, Ont.
	Dartmouth, N.S.
Lock J.H. and Sons Ltd.	Calgary, Alta.
Long Mfg. Div. Borg Warner Ltd.	Oakville, Ont.
Lucas Fluid Power Ltd.	Richmond, B.C.
Lummus/Colt Joint Venture	Calgary, Alta.
MNM Machinery Ltd., Div. of Newalta Corp.	Calgary, Alta.
MacMillan Bathurst Inc.	Calgary, Alta.
MacMillan Bloedel Ltd.	Port Alberni, B.C.
Mallet A.C. Management Ltd.	Cambellton, N.B.
Maxtemp Thermo Control Inc.	Tracy, Qué.
Metco Canada Div.	Rexdale, Ont.
Michael Stuart Co. Ltd.	Markham, Ont.
Michelin Tires Canada Ltd.	Bridgewater, N.S.
Milne and Craighead	Regina, Sask.
Mines Noranda Ltée	Murdochville, Qué.
Mohawk Oil Co. Ltd.	Minnedosa, Man.
Mt. St-Louis Ski Resort	Coldwater, Ont.
NL Chem Canada Inc.	Varenes, Qué.
Nalley's Canada Ltd.	Vancouver, B.C.
New Brunswick Electric Power Commission	Saint-John, N.B.
Newfoundland Processing Refinery	Come By Chance, Nfld.
Niagara Mechanical Inc.	Scarborough, Ont.
Nissho Iwai Canada Ltd.	Calgary, Alta.
Nitro Chem Inc.	Maitland, Ont.
Novacor Chemicals	Red Deer, Alta.
Ocelot Ammonia Corp.	Kitimat, B.C.
Ontario Hydro Corp.	Mississauga, Ont.
Orocon Inc. Skyline Project	Richmond, B.C.
Orocon Ketz Project	New Ross River, Yukon Territory
Oxychem Canada Inc.	Bécancour, Qué.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
PLC-Fischback/Natkin Ltd.	Cambridge, Ont.
Pamco Ltd.	Calgary, Alta.
PanCanadian Petroleum Ltd.	Rycroft, Alta.
Peacock Inc.	Calgary, Alta.
Pebra Inc.	Kitchener, Ont.
Petro Canada Exploration Inc.	Nisku, Alta.
Petromont Inc.	Varennes, Qué.
Piapot Compressor Station	Piapot, Sask.
Pisciculture de Tadoussac	Tadoussac, Qué.
Pneutech Ltd.	Montréal, Qué.
Polysar Ltd.	Corunna, Ont.
Potash Co. of America Ltd.	Penobscuis, N.B.
Power Application & Mfg. Co. Ltd.	Calgary, Alta.
Price & Markle Ltd.	Kelowna, B.C.
Prime Mechanical Ltd.	Calgary, Alta.
Propak Systems Ltd.	Airdrie, Alta.
Quantex Chemical Services	Kitchener, Ont.
R. Angus of Alberta Ltd.	Calgary, Alta.
Robitaille & Fils Inc.	Farnham, Qué.
Rotair Ind. Ltd.	Burnaby, B.C.
Rucker Products Ltd.	Richmond, B.C.
Saint John Shipbuilding Ltd.	Saint John, N.B.
Sansom Equipment Ltd.	Truro, N.S.
Schenker of Canada Ltd.	Vancouver, B.C.
Schewman M.F. Co. Ltd.	Charlottetown, P.E.I.
Schneider Del Hydraulics Ltd.	Prince George, B.C.
Semco Pneumatic Systems Ltd.	Mississauga, Ont.
Shawn Williams Inc.	New Westminster, B.C.
Shell Canada Ltd.	Scotford, Alta.
Sherrit Gordon Mines Ltd.	Montréal, Qué.
	Lynn Lake, Man.
	Leaf Rapids, Man.
Sidbec Dosco Inc.	Contre Coeur, Qué.
Simpson Power Prod.	Port Coquitlam, B.C.
Sofame Inc.	Montréal, Qué.
Soucy FF Inc.	Rivière-Du-Loup, Qué.
Spartec Industrial Equipment	Burlington, Ont.
Squamish Health Center	Squamish, B.C.
Steen Contractors Ltd.	Charlottetown, P.E.I.
Steep Rock Calcite Ltd.	Perth, Ont.
Stelco Inc.	Contre Coeur, Qué.
	Hamilton, Ont.
Stephens Adamson Div. Allis Chalmers	Belleville, Ont.
Stevens Equipment Inc.	Montréal, Qué.
Sunstrip Int'l Inc.	Boucherville, Qué.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Superior Emergency Equipment	Red Deer, Alta.
Syncrude Canada Ltd.	Fort McMurray, Alta.
Taikisha Canada Inc.	Rexdale, Ont.
Ted Dige1 Sales Agency Ltd.	Ottawa, Ont.
Temprite Industries Ltd.	Orangeville, Ont.
Texaco Canada Resources	Calgary, Alta.
	Nanticoke, Ont.
Thermo Design Engineering Ltd.	Edmonton, Alta.
Thomas Equipment Ltd.	Centreville, N.B.
Thomas Meadows Co. Ltd.	Oakville, Ont.
Thomson Gordon Ltd.	Burlington, Ont.
Torcan Chemical Ltd.	Aurora, Ont.
Total Trades Mart	Toronto, Ont.
Tranter Canada Ltd.	Rexdale, Ont.
Truetec Industries Inc.	Mississauga, Ont.
Union Carbide Canada Ltd.	Oakville, Ont.
United Terminals Ltd.	Burnaby, B.C.
University of Western Ontario	London, Ont.
University of Windsor	Windsor, Ont.
Unocol Canada Ltd.	Calgary, Alta.
VME Equipment of Canada Ltd.	Guelph, Ont.
Valley Process Specialties Ltd.	Sarnia, Ont.
Vickers Inc.	Rexdale, Ont.
	Etobicoke, Ont.
Vollmer & Associates Contractors	Windsor, Ont.
W.H.E. Process Systems Ltd.	Weston, Ont.
Walter Kootow Ltd.	Scarborough, Ont.
Webster Air Equipment Ltd.	London, Ont.
Western Hydraulics Ltd.	Barrie, Ont.
Westinghouse Nuclear Products Inc.	Hamilton, Ont.
Westmin Resources Ltd.	Calgary, Alta.
Weyerhaeuser Canada Ltd.	Prince Albert, Sask.
Wickes Mfg. Co. Ltd.	Windsor, Ont.

FOREIGN EXPORTERS TO CANADA

Major exporters to Canada of heat exchangers with total shipments of \$100 000 and over are listed below in descending order of dollar value. Names are as shown on the shipping documents. These exporters accounted for eighty-eight per cent of the total analysed value of \$17 700 937.

<u>Name</u>	<u>Address</u>	1987 <u>Value of Imports</u> (\$000)
Air-X-Changers	Tulsa, OK, USA	4 306
Altec International Inc.	La Crosse, WI, USA	1 628
Tranter Inc., Texas Div.	Whichita Fall, TX, -USA	1 066
Nissho Iwai Corp.	Tokyo, Japan )	
Air Cooled Exchangers Inc.	Broken Arrow, OK, USA )*	1 222
Air Products & Chemicals Inc.	Allentown, PA, USA )	
Kablitz GmbH & Co.	Lauda, West Germany )*	1 538
Southwestern Engineering Co.	Berlin, WI, USA )	
Thermax Inc.	Dorchester, MA, USA	473
ITT Standard	Cheektowaga, NY, USA	424
Nuova Pignone	Florence, Italy )	
Thermal Transfer Products Ltd.	Racine, WI, USA )*	710
Alfa-Laval Inc.	Poughkeepsie, NY, USA	324
Cargocaire Eng. Corp.	Woburn, MA, USA	304
Air Fin Inc.	Garland, TX, USA	260
Edwards Engineering Corp.	Pompton Plains, NJ, USA )	
Yuba Heat Transfer Div.	Tulsa, OK, USA )*	738
Sohio Oil Co.	Cleveland, OH, USA )	
Contherm Div. Alfa Laval Inc.	Newburyport, MA, USA	231
Taikisha Ltd.	Nagoya, Japan )	
Excellon Industries,	Torrance, CA, USA )	
Auto. Div. Esterline Corp.	)*	605
Aeorofin Corp.	Lynchburg, VA, USA )	
Hudson Products Corp.	Houston, TX, USA )	
Candia Anidride Carbonica	Di Vittorio, Italy )*	366

\*Aggregated to preserve confidentiality of Canadian importers.

FOREIGN EXPORTERS TO CANADA (CONT'D)

<u>Name</u>	<u>Address</u>	<u>1987 Value of Imports (\$000)</u>
Denver Equip. Div. Joy Mfg Co.	Colorado Springs, CO, USA )	
Metaullics Systems (The Pfaudler Co.)	Solon, OH, USA )*	323
Louisana Chemical Equip. Co.	Laporte, TX, USA )	
Stratco Inc.	Kansas City, MO, USA )*	289
Paul Mueller Co.	Springfield, MO, USA	134
Alfa Laval Thermal Ab	Lund, Sweden )	
Serck Heat Transfer	Birmingham, United Kingdom)*	245
Engineers and Fabricators Co.	Houston, TX, USA )	
United Electric Co.	Wichita Falls, TX, USA )*	213
Basco Div., American Precision Industries Inc.	Buffalo, NY, USA	104

\* Aggregated to preserve confidentiality of Canadian importers.

CANADIAN SUPPLIERS

The following lists are taken from two sources: a) the Business Opportunities Sourcing System (BOSS), a computerized data bank established by the federal department of Industry, Science and Technology Canada (ISTC); and b) the Canadian Trade Index, published by the Canadian Manufacturers' Association (CMA). These lists may not include all suppliers of the products in question, as companies must themselves register in BOSS or the Canadian Trade Index. In both cases, information on Canadian products supplied is as given by the companies.

BOSS

Canadian companies are arranged in alphabetical order within the following Canadian International Trade Classification (C.I.T.C.) commodity codes.

509-40-15 Heat Exchanger, Shell and Tube Type, Industrial

<u>Name</u>	<u>Address</u>
Allied Engineering Company	North Vancouver, B.C.
Altex Heat Exchanger Ltd.	Edmonton, Alta.
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
*Arjay Industries Ltd.	Surrey, B.C.
Best Energy Systems Inc.	Oakville, Ont.
Brown Boveri Howden Inc.	Scarborough, Ont.
Canadian Pipe & Steel Fabricators Ltd.	Scarborough, Ont.
*Chemetics International Company	Vancouver, B.C.
Cimco Div. of Toromont Industries Ltd.	Toronto, Ont.
Darling Duro Ltée/Ltd.	Montréal, Qué.
Dominion Bridge-Quebec	Lachine, Qué.
*Ellett Group Div. of Elwood Properties	Port Coquitlam, B.C.
*Enermax Fabricators Ltd.	North Vancouver, B.C.
Exchanger Industries Limited	Calgary, Alta.
*Festival City Fabricators Ltd.	Stratford, Ont.
Henlex Inc.	Ville St-Laurent, Qué.
Industrial Combustion & Equipment Ltd.	Dorval, Qué.
*Isko Heat Exchangers Ltd.	St-Laurent, Qué.
ITT Fluid Products - Guelph, Div. of ITT Ind.	Guelph, Ont.
*ITT Industries of Canada Limited	Toronto, Ont.
*ITT Standard Div. of ITT Ind. of Cda Ltd.	Mississauga, Ont.
J. & R. Weir Ltd.	Montréal, Qué.
*J.H. Lock and Sons Ltd.	Toronto, Ont.
Johnstone Boiler & Tank Ltd.	Vancouver, B.C.
*Keeprite Inc.	Brantford, Ont.
*Koch Engineering Co. Ltd.	Agincourt, Ont.
*Les Echangeurs de Chaleur Universel Inc.	Verdun, Qué.
Liberty Boilers (1982) Ltd.	Lethbridge, Alta.
M.I.L. Vickers Inc.	Montréal, Qué.
*McCarthy Robinson Inc.	Scarborough, Ont.
Patterson Industries (Canada) Limited	Scarborough, Ont.

\*Company engaged in export trade.



CANADIAN SUPPLIERS (CONT'D)

509-40-15 Heat Exchanger, Shell and Tube Type, Industrial (Cont'd)

<u>Name</u>	<u>Address</u>
*S.A. Armstrong Limited	Toronto, Ont.
Saskatoon Boiler Mfg. Co. Ltd.	Saskatoon, Sask.
Stork Werkspoor Canada Ltd.	Candiac, Qué.
Taco (Canada) Ltd.	Mississauga, Ont.
*TCI-Superior Div. of Mueller Canada Inc.	Mississauga, Ont.
*Temprite Industries Limited	Mississauga, Ont.
Thermofire Boilers Inc.	Weston, Ont.
Thermogenics Inc.	Aurora, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
TIW Western Div. of Canadian Erectors	Calgary, Alta.
Victoria Machinery Depot (1986) Co. Ltd.	Victoria, B.C.

509-40-20 Heat Exchanger, Plate Type, Industrial

<u>Name</u>	<u>Address</u>
*Aero Heat Exchanger Inc.	Richmond, B.C.
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
E.C.P. Industries Limited	Brampton, Ont.
Falco Equipements D'Acier Inoxydable	Lachine, Qué.
*Frigo-Tec Inc.	Lasalle, Qué.
ITT Fluid Products-Guelph, Div. of ITT Ind.	Guelph, Ont.
*ITT Industries of Canada Limited	Toronto, Ont.
ITT Standard Div. of ITT Ind. of Cda Ltd.	Mississauga, Ont.
*Koch Engineering Co. Ltd.	Agincourt, Ont.
M.I.L. Vickers Inc.	Montréal, Qué.
Nixon Vicarb Inc.	Newmarket, Ont.
*North Atlantic Technologies Canada Inc.	Calgary, Alta.
Produits D'Acier Berlie Ltée	La Prairie, Qué.
*Proenco Systems Limited	Brampton, Ont.
Taco (Canada) Ltd.	Mississauga, Ont.
*Temprite Industries Limited	Mississauga, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.

509-40-25 Heat Exchanger, Jacketed Type, Industrial

<u>Name</u>	<u>Address</u>
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
*Bedarco McGruer Inc.	Montréal, Qué.
M.I.L. Vickers Inc.	Montréal, Qué.
Patterson Industries (Canada) Limited	Scarborough, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.

\*Company engaged in export trade.

CANADIAN SUPPLIERS (CONT'D)

509-40-30 Heat Exchanger, Finned Tube Type, Industrial

<u>Name</u>	<u>Address</u>
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
Biraghi Canada Société Div. Fintube Inc.	Bécancour, Qué.
*Glacem Inc.	Brossard, Qué.
*Les Echangeurs de Chaleur Universe1 Inc.	Verdun, Qué.
M.I.L. Vickers Inc.	Montréal, Qué.
*P & S Water Industries Inc.	London, Ont.
*Thermogenics Inc.	Aurora, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
*Unifin International Div. of Keeprite Inc.	London, Ont.

509-40-35 Heat Exchanger, Regenerative Type, Industrial

<u>Name</u>	<u>Address</u>
Babcock & Wilcox Cda, Div. of Babcock	Cambridge, Ont.
*Blackhawk Industries Inc.	Regina, Sask.
Enermax Fabricators Ltd.	Vancouver, B.C.
KDH Environmental Ltd.	Concord, Ont.
M.I.L. Vickers Inc.	Montréal, Qué.
*McCarthy Robinson Inc.	Scarborough, Ont.
Process-Aire Corporation Ltée	Montréal, Qué.
Reparations de Tankers Montréal Inc.	Montréal, Qué.
Thermofire Boilers Inc.	Weston, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
Western Combustion Sales & Services Ltd.	Calgary, Alta.

509-40-40 Heat Exchanger, Recuperative Type, Industrial

<u>Name</u>	<u>Address</u>
Aero Heat Exchanger Inc.	Richmond, B.C.
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
Axelsen Industries (1984) Ltd.	Edmonton, Alta.
Babcock & Wilcox Cda., Div. of Babcock	Cambridge, Ont.
*Conservation Energy Systems Inc.	Saskatoon, Sask.
Enairtech Enr. Div. of Isotemp Ltée	Québec, Qué.
*Enermax Fabricators Ltd.	Vancouver, B.C.
Henlex Inc.	Ville St-Laurent, Qué.
KDH Environmental Ltd.	Concord, Ont.
*Keeprite Inc.	Brantford, Ont.
*McCarthy Robinson Inc.	Scarborough, Ont.
Process-Aire Corporation Ltée	Montréal, Qué.
Steelfabco Inc.	Ayr, Ont.
*Temprite Industries Limited	Mississauga, Ont.
Thermofire Boilers Inc.	Weston, Ont.
*Thermogenics Inc.	Aurora, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
Vardet Inc.	St-Hubert, Qué.
Western Combustion Sales & Services Ltd.	Calgary, Alta.

\*Company engaged in export trade.

CANADIAN SUPPLIERS (CONT'D)

509-40-45 Heat Exchanger, Air Pre-Heat Type, Industrial

<u>Name</u>	<u>Address</u>
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
*Brown Boveri Howden Inc.	Scarborough, Ont.
C&J Jones Limited	Winnipeg, Man.
M.I.L. Vickers Inc.	Montréal, Qué.
*P&S Water Industries Inc.	London, Ont.
Produits D'Acier Berlie Ltée	Laprairie, Qué.
Thermotech Manufacturing Ltd.	Calgary, Alta.

509-40-50 Heat Exchanger, For Cryogenic Service, Industrial

<u>Name</u>	<u>Address</u>
Mec-Fab Inc.	Boucherville, Qué.
Thermotech Manufacturing Ltd.	Calgary, Alta.

509-40-55 Coolers, Oil, Industrial Type

<u>Name</u>	<u>Address</u>
Altex Heat Exchanger Ltd.	Edmonton, Alta.
Caron & Fils Radiateurs Enrg.	Coaticook, Qué.
*Cimco-Thermo Design Div. of Toromont	Edmonton, Alta.
Durametallinc-Canada Inc.	St. Thomas, Ont.
*Keeprite Inc.	Brantford, Ont.
*L&M Radiator Ltd.	Winnipeg, Man.
*Les Echangeurs de Chaleur Universe1 Inc.	Verdun, Qué.
*Long Manufacturing Ltd.	Oakville, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
Valco Manufacturing Div. of Valiant Mach	Windsor, Ont.

509-40-90 Heat Exchanger, Industrial, NES

<u>Name</u>	<u>Address</u>
Acme Engineering Products Ltd.	Montréal, Qué.
Acme Welding & Supply ('77) Ltd.	Winnipeg, Man.
*Apex Radiator Mfg. Ltd.	Calgary, Alta.
Arjay Industries Ltd.	Surrey, B.C.
Axelsen Industries (1984) Ltd.	Edmonton, Alta.
*Bedarco McGruer Inc.	Montréal, Qué.
Best Energy Systems Inc.	Oakville, Ont.
Birachi Canada Société Div. Fintube Inc.	Bécancour, Qué.
Braud Manufacturing Inc.	Burlington, Ont.

\*Company engaged in export trade.

CANADIAN SUPPLIERS (CONT'D)

509-40-90 Heat Exchanger, Industrial, NES (Cont'd)

<u>Name</u>	<u>Address</u>
Caloritech Div. Chauffage Casah Inc.	St-Laurent, Qué.
Caron & Fils Radiateurs Enrg.	Coaticook, Qué.
Cascade Technologies Inc.	St-Léonard, Qué.
CFM Air Equip., Div. Western Air Equip	Calgary, Alta.
*Cimco-Thermo Design Div. of Toromont	Edmonton, Alta.
City Sheet Metal (1976) Ltd.	Vancouver, B.C.
Corporation des Outils du Québec (La)	St-Laurent, Qué.
*Danhart Energy Systems Limited	Richmond Hill, Ont.
*Del-Air Systems Limited	Humboldt, Sask.
Dorcal Industries Inc.	Calgary, Alta.
Durametallic Canada Inc.	St. Thomas, Ont.
*E.S. Fox Ltd.	Niagara Falls, Ont.
Ebco Industries Ltd.	Richmond, B.C.
Engineered Air Div. of Airtex Industries	Calgary, Alta.
Exchanger Industries Limited	Calgary, Alta.
Fabrication Canaque Inc.	Boucherville, Qué.
Fabspec Inc.	Sorel, Qué.
Foster Wheeler Ltd.	St. Catharines, Ont.
Georgetown Shipyard Inc.	Georgetown, P.E.I.
Industries de Metaux MacFin Inc.	St-Léonard, Qué.
Industries Gomar Inc. (Les)	Duburger, Qué.
ITT Fluid Products-Guelph, Div. of ITT Ind.	Guelph, Ont.
*ITT Industries of Canada Limited	Toronto, Ont.
*Keeprite Inc.	Brantford, Ont.
Kingsleigh Industrial Co. Limited	Milton, Ont.
*Koch Engineering Co. Ltd.	Agincourt, Ont.
*Nixon Vicarb Inc.	Newmarket, Ont.
Northern Steel Inc.	Calgary, Alta.
*Norward Energy Services Ltd.	Calgary, Alta.
*P.M. Wright Ltd.	St-Laurent, Qué.
*Pacific Pool Water Products Ltd.	Langley, B.C.
Patterson Industries (Canada) Limited	Scarborough, Ont.
Pillard Combustion Canada Inc.	Montréal, Qué.
Process-Aire Corporation Ltée	Montréal, Qué.
Reparations de Tankers Montréal Inc.	Montréal, Qué.
Robert Mitchell Inc. Douglas Bros. Div.	Montréal, Qué.
*Romeo Machine Shop & Manufacturing Ltd.	Windsor, Ont.
*Ruffneck Heaters Div. of Starozik Ind.	Calgary, Alta.
*S.A. Armstrong Limited	Toronto, Ont.
Sheldons Engineering	Cambridge, Ont.
Steelfabco Inc.	Ayr, Ont.
*TCI-Superior Div. of Mueller Canada Inc.	Mississauga, Ont.

\*Company engaged in export trade.

CANADIAN SUPPLIERS (CONT'D)

509-40-90 Heat Exchanger, Industrial, NES (Cont'd)

<u>Name</u>	<u>Address</u>
*Temprite Industries Limited	Mississauga, Ont.
Thermotech Manufacturing Ltd.	Calgary, Alta.
TIW Western Div. of Canadian Erectors	Calgary, Alta.
Uni-Melt Ltd.	Calgary, Alta.
*Vac-Aero International Inc.	Oakville, Ont.
Western Combustion Sales & Services Ltd.	Calgary, Alta.

\*Company engaged in export trade.

Any enquiries and/or comments regarding the BOSS list should be directed to:

Business Opportunities Sourcing System (ABOS)  
Industry, Science and Technology Canada  
235 Queen Street  
Ottawa, Ontario K1A 0H5  
Tel: (613) 954-5031 - Telex: 053-4123

CANADIAN TRADE INDEX: HEAT EXCHANGERS

(Canadian companies are arranged in alphabetical order.)

<u>Name</u>	<u>Address</u>
A.C. Radiator Manufacturing Co. Ltd.	Vancouver, B.C.
AMCA International Ltd.	Rexdale, Ont.
APV Crepaco of Canada Ltd.	Weston, Ont.
*A&R Metal Industries Ltd.	Richmond, B.C.
*Acme Engineering Products Ltd.	Montréal, Qué.
Advanced Combustion Inc.	Weston, Ont.
Aerofin Canada	Cambridge, Ont.
*Air Changer Marketing	Cambridge, Ont.
Alfa-Laval Ltd.	Scarborough, Ont.
*Algoods, An Alcan Group Co.	Toronto, Ont.
Allied Engineering Co.	North Vancouver, B.C.
All-Weld Co. Ltd.	Scarborough, Ont.
Armstrong-Hunt Inc.	Granby, Qué.
*Armstrong, S.A., Ltd.	Toronto, Ont.
Baltimore Aircoil of Canada Div. of Baltimore	
Aircoil Inter American Corp.	Georgetown, Ont.
Beaverton Industrial Div.	Scarborough, Ont.
*Bedarco McGruer Inc.	Montréal, Qué.

\* Indicates firms engaged in export trade.

CANADIAN TRADE INDEX: HEAT EXCHANGERS (CONT'D)

<u>Name</u>	<u>Address</u>
Biraghi Canada Société Division Fintube Inc. Boilersmith Ltd.	Bécancour, Qué. Seaforth, Ont.
*Borsig Hartmann Valve Ltd.	Calgary, Alta.
Brown Boveri Howden Inc.	Scarborough, Ont.
Brown Fintube Engineering	Agincourt, Ont.
Canadian Pipe and Steel Fabricators	Agincourt, Ont.
Carbonne Lorraine Corporation	Dorion, Qué.
Cascade Technologies Inc.	St. Léonard, Qué.
*Chemical Valley Fabricating Co. Ltd.	Sarnia, Ont.
Chil-Con Products Ltd.	Brantford, Ont.
Cimco, Div. of Toromont Industries Ltd.	Toronto, Ont.
City Sheet Metal (1976) Ltd.	Vancouver, B.C.
*Coiltube Thermal Industrial Services Ltd.	Ajax, Ont.
*Conservation Energy Systems Inc.	Saskatoon, Sask.
DWS Energy Ltd.	Hanley, Sask.
Danhart Energy Systems Ltd.	Richmond Hill, Ont.
*Darling Duro Ltd.	Montréal, Qué.
*Del-Air Systems Ltd.	Humboldt, Sask.
Denver Equip. Div. Joy Mfg. Co. Canada Ltd.	Kitchener, Ont.
Docal Ltd.	Montréal, Qué.
Dorcal Industries Inc.	Calgary, Alta.
Douglas Brothers Div. of Robert Mitchell Inc.	St-Laurent, Qué.
Ebco Industries Ltd.	Richmond, B.C.
Ecano Ltd.	Guelph, Ont.
Ellett Copper & Brass Co. Ltd.	Port Coquitlam, B.C.
Ergon Thermal Inc.	Mississauga, Ont.
Exchanger Industries Ltd.	Calgary, Alta.
Falco Stainless Steel Equip. Ltd.	Lachine, Qué.
Festival City Fabricators Ltd.	Stratford, Ont.
*Flakt Canada Ltd.	Ottawa, Ont.
*Foster Wheeler Ltd.	Niagara-on-the-Lake, Ont.
Fromson Heat Transfer, A Business Unit of C-I-L Inc.	Don Mills, Ont.
Future Energy Products Ltd.	Windsor, Ont.
Germain & Frère Ltée	Trois Rivières, Qué.
Great Lakes Fabricating, Div. of Glascar Ltd.	Sarnia, Ont.
Hamilton Thermal Ltd.	Stoney Creek, Ont.
Henlex Inc.	Montréal, Qué.
Hooper Welding Enterprises Ltd.	Toronto, Ont.
Horton CBI Ltd.	Fort Erie, Ont.
ITT Fluid Products Canada, Div. of ITT Industries of Canada Ltd.	Guelph, Ont.
ITT Standard	Mississauga, Ont.
*Industrial Combustion and Equipment Ltd.	Dorval, Qué.
Industries Couture Ltée	Chicoutimi, Qué.
*Interfab Steel Ltd.	Georgetown, Ont.
*Isko Heat Exchangers Ltd.	St-Laurent, Qué.
Johnstone Boiler & Tank Ltd.	Vancouver, B.C.
*KDH Industries Ltd.	Concord, Ont.
Keeprite Inc.	Brantford, Ont.
*Koch Engineering Co. Ltd.	Agincourt, Ont.
Koenders Mfg. Co. Ltd.	Englefield, Sask.

\* Indicates firms engaged in export trade.

CANADIAN TRADE INDEX: HEAT EXCHANGERS (CONT'D)

<u>Name</u>	<u>Address</u>
*Leitch, Arthur S., Co. Ltd., The	Midland, Ont.
Les Radiateurs Universel Inc.	Verdun, Qué.
Liberty Boilers (1982) Ltd.	Lethbridge, Alta.
Liquid Air Engineering Corp.	Montréal, Qué.
Lloyd & Westwood Machinery Co.	Toronto, Ont.
Lock, J.H. & Sons Ltd.	Toronto, Ont.
Long Manufacturing Ltd.	Oakville, Ont.
MIL Davie Inc.	Lauzon, Qué.
MIL Vickers Inc.	Montréal, Qué.
Malnar Industries Ltd.	Montréal, Qué.
McCarthy Robinson Inc.	Scarborough, Ont.
N.O.W. & Associates Inc.	Concord, Ont.
Nixon Vicarb Inc.	Gormley, Ont.
*Noranda Metal Industries Ltd.	Montréal, Qué.
Patterson Boiler Works Ltd.	West Vancouver, B.C.
*Patterson Industries (Canada) Ltd.	Scarborough, Ont.
Presson Mfg. Ltd.	Calgary, Alta.
*Pumps & Softeners Ltd.	London, Ont.
Romeo Machine Shop & Mfg. Ltd.	Windsor, Ont.
Radiateurs Roy Ltée	Ste-Foy, Qué.
Sandford Heat Exchangers Ltd.	Vancouver, B.C.
Saskatoon Boiler Mfg. Co. Ltd.	Saskatoon, Sask.
*Soltrac International Inc.	Vaucluse, Qué.
Stone Boilers Canada (Div. of Thermogenicsinc)	Concord, Ont.
*TCI-Superior	Mississauga, Ont.
*TIW Division of Canadian Erectors Ltd.	Toronto, Ont.
TIW Western, Division of Canadian Erectors Ltd.	Calgary, Alta.
Taco (Canada) Limited	Mississauga, Ont.
Titanium Ltd.	St-Laurent, Qué.
*Trane Canada	Toronto, Ont.
Trecan Combustion Ltd.	Mississauga, Ont.
Turnbull and Sons Limited	Waterloo, Qué.
*Unifin International, Div. Keeprite Inc.	London, Ont.
Unitech Division Ecodyne Ltd.	Oakville, Ont.
Uraken Canada Ltd.	St. Eustache, Qué.
Valco Manufacturing, Div. of Valiant Machine & Tool Inc.	Windsor, Ont.
Vapor Canada Inc.	Montréal, Qué.
*Victoria Machinery Depot (1986) Co. Ltd.	Victoria, B.C.
Waystaff Heat Exchangers Ltd.	Vancouver, B.C.
Weir, J & R Ltd.	Montréal, Qué.
Westfalia Industries Inc.	Concord, Ont.
Wright P.M. Ltd.	Montréal, Qué.
Z-Air Fabrication	St-Damien, Brandon, Qué.

Any enquiries and/or comments regarding the Canadian Trade Index list should be directed to:

The Canadian Manufacturers' Association  
 One Yonge Street  
 Toronto, Ontario M5E 1J9  
 Tel: (416) 363-7261 - Telex: 065-24693

Pub. No.: 88019-RR

CANADIAN AND FOREIGN TARIFFS

Heat exchangers included in this analysis were dutiable under the following most commonly applied tariff items.

Tariff Item	Description	Tariff Treatment - 1987				
		British Preferential Tariff %	Most Favoured Nation Tariff %	General Tariff %	General Preferential Tariff %	U.K. and Ireland %
42700-1	Machines, n.o.p., and accessories, attachments, control equipment and tools for use therewith; parts of the foregoing:	2.5 pc	9.2 pc	35 pc	2.5 pc	9.2 pc
44603-1	Manufacturers, articles or wares of iron or steel or of which iron or steel or both are the component materials of chief value, n.o.p.:	10.0 pc	10.2 pc	35 pc	6.5 pc	10.2 pc
35400-1	Manufactures of aluminum, n.o.p.	10.3 pc	10.3 pc	30 pc	6.5 pc	10.3 pc

N.o.p. - Not otherwise provided for

Tariff Arrangements and Foreign Countries of Export:

Exporting countries which qualify for the Most Favoured Nation tariff treatment: Belgium, France, Italy, Japan, Federal Republic of Germany, Sweden, United States and Zaïre

Exporting countries which qualify for the Most Favoured Nation tariff treatment or U.K. and Ireland tariff treatment: United Kingdom

Enquiries concerning tariffs should be directed to the nearest Customs and Excise office or to:

TARIFF PROGRAMS  
REVENUE CANADA  
CUSTOMS AND EXCISE  
OTTAWA, ONTARIO  
K1A 0L5  
TEL: (613) 954-6878

Foreign Countries

Enquiries concerning tariffs and other government trade regulations in foreign countries should be directed to:

INFO EXPORT  
EXTERNAL AFFAIRS  
OTTAWA, ONTARIO  
K1A 0G2  
TEL: (613) 993-6435 OR 1-800-267-8376



RECONCILIATION

The value reported in this import analysis does not correspond to official Statistics Canada figures for various reasons. Imports of heat exchangers during the calendar year 1987, as reported on documents analysed in this report, amounted to \$17 700 937. Reconciliation of the two total figures is as follows:

<u>Values Accounted For</u>	<u>Value</u> <u>(\$000)</u>
Documents referring to products which should have been classified elsewhere	3 326
Values reported by Statistics Canada but not included in this report (e.g., missing documents)	966
Documents not included in this analysis:	
° Individual shipments valued at less than \$10 000 (CITC code 509-40-90 <u>only</u> )	2 264
Total values reported in this import analysis	<u>17 701</u>
Total values accounted for as above	24 257
Total values published by Statistics Canada	24 257