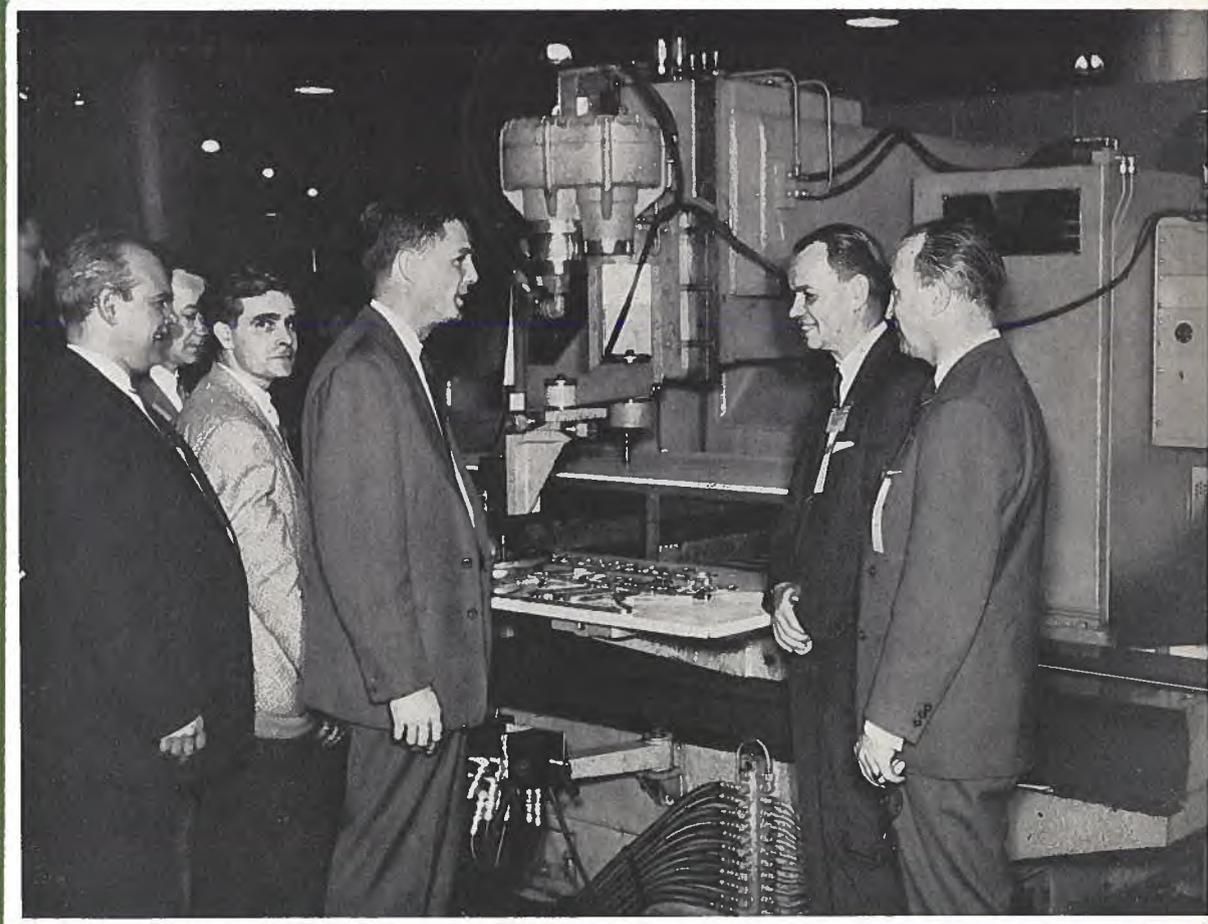


DECEMBER 19, 1959

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foreign trade



CANADIAN ENGINEERING FOR EXPORT (pages 2-20)



foreign trade

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COVER

Co-operation between private industry and government services has helped to promote the export of Canadian engineering equipment and services. Displays at trade fairs abroad, sponsored by the Department of Trade and Commerce, illustrate how this co-operation works. Our cover photo was taken at the National Metal Congress in Chicago; shows (from left to right): J. R. Johnson, Commodity Officer with the Department's Engineering and Equipment Division; two onlookers; L. Magor, president Retor Developments Ltd., standing by the machine his company exhibited; G. A. Newman, Consul General of Canada at Chicago, and H. J. Horne, Canadian Consul and Trade Commissioner, Chicago.



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Canadian Engineering for Export

X equals the engineering industry in its three branches: consulting, construction, manufacturing.

Y equals how and where to sell abroad.

The summation of **X** and **Y** should result in Canadian engineering for export.

This article, and the ones that follow, tell how this formula is working for a number of Canadian engineering firms, how it can work for you, and where you can find opportunities to put it to work.

R. A. FRIGON, *Chief, Engineering and Equipment Division.*

RECENT export successes of Canadian firms provide useful object lessons in the how and why of the export of engineering. They also prove that Canadian engineering for export can be competitive and point the way to further achievements in foreign markets.

Some of the more striking examples are:

Turbo-prop aircraft to the United States	\$100 million
Hydro-electric turbines for the United States	16 million
Consulting engineering on \$20 million paper mills in Sweden	
Gas-separation unit for Yugoslavia	1.6 million
Telecommunications system for Sweden	1.5 million
Aerial survey in Turkey	1 million
Extrusion machine for Spain	500,000
Electrical switchgear for Iran	500,000
Isotope gauge installations for Italy, Brazil, Japan	250,000

What were the reasons for these successes? What were the obstacles encountered and the methods used to surmount them? What special advantages did the Canadian exporter

have? The answers to these questions may be helpful to Canadian companies entering the field for the first time or planning to expand their foreign operations. Several export orders examined in some detail as case studies illustrate clearly the factors that make for success.

Export of Aircraft

A Canadian company made aviation history recently when, in the face of stiff competition, it secured orders for cargo aircraft totalling nearly \$100 million. The company had an aircraft for which it foresaw an important demand as a freight carrier. Through a major sales effort, it was able to place this aircraft with several United States airlines.

These are the facts stated simply. What are the details that provide the useful lessons? The company not only foresaw the market but it did so ahead of competitors who were concentrating all their attention on the more conventional market for passenger aircraft. It had an existing

product that could be modified for another use provided development work was undertaken. Engineering development costing many millions of dollars was decided upon after analysis revealed extensive possibilities for a cargo plane that would make reduced freight rates possible.

Upon offering the aircraft to cargo airlines, the company soon found that it had to make concessions to offer a type of contract that would be acceptable to the buyer and had to discard many preconceived notions. It also discovered that financing was required and that the availability of export credits insurance would facilitate this financing.

This major export accomplishment thus represents the successful combination of a firm's resourcefulness and government services.

Telecommunications Equipment

A Canadian company signed a contract a few months ago for the supply of carrier telephone equipment to Sweden to the value of \$1.5 million. This is a significant accomplishment because Sweden has a reputation of its own in the telephone field. The Canadian-designed equipment was chosen in competition with similar types.

This firm's experience in successful selling abroad was described in *Foreign Trade* of September 27, 1958, in "Selling to the United States Army". It believes that progressive engineering design is as important as price. It keeps continuous personal contact with all levels of the organization to which it sells. It pays scrupulous attention to specifications and to making de-

liveries on time. These factors operated in the sale to Sweden.

Extrusion Machine

An order for a Canadian-made half-million-dollar extrusion machine was secured in the face of competition from other parts of the world, including Europe. Yet the Canadian company's price was high compared with most of the competition. How was the order secured? To begin with, the firm claims that its extrusion machine is hard to beat on specifications. But this is not sufficient; the purchaser must be convinced that it is the best that he can buy. In this instance, the sale seems to have been assured by the seller taking the precaution of making a personal call, even though it meant travelling to Spain. An excellent product combined with a willingness to go and see the customer were the factors that contributed to this sale.

Engineering Paper Mills

Recent awards of consulting engineering contracts to Canadian firms for the design and supervision of construction of paper mills in Sweden continue the current story of Canadian achievements in this field. There are now at least four consulting engineering firms active in exporting their knowledge of pulp and paper engineering. Canada's competitive assets were discussed in a previous issue of *Foreign Trade* in an interview with a Canadian engineer who has been successful in his export endeavours. One is the goodwill towards Canada and Canadians and another the advanced position of Canadian pulp and paper technology. In Canadian plants, labour is used less extensively and more reliance placed upon materials handling equipment to carry out certain operations. Efficient plant layout, so that operations will progress smoothly from one stage to another, receives greater emphasis. Canadian pulp and paper consultants are not counting exclusively on these advantages. They are making personal

contacts in all countries where their services are needed.

Aerial Surveying

The Turkish Government lately awarded to a Canadian aerial survey firm one of the largest geophysical survey contracts ever assigned, valued at \$1 million. It won the contract as the lowest bidder against international competition. This is one of several awards to Canadian firms in this field. The same company has a contract in Liberia for a railroad survey that will make use of automatic computing techniques evolved on a survey of the Cartier Mining Railway.

Canadian aerial survey firms have had considerable experience in aerial photography for mapping and in geophysical surveys for resources inventories. The overseas market for these services furnishes a natural outlet, especially in those areas where the winter climate is favourable for surveying. Canadian firms have built up extensive business abroad based on their special experience and the need to distribute heavy overhead charges for staff and equipment.

Switchgear

Canadian prices on electrical equipment are sometimes considered high. This may be so, but a Canadian firm recently decided that this would not necessarily prevent it from getting the contract for half a million dollars worth of switchgear on the Dez Dam in Iran. It proved to the consulting engineers that the Canadian equipment was worth the extra cost.

Gas-Separation Equipment

A Canadian firm has developed considerable design and fabrication experience on low temperature gas-separation units for the production of hydrogen and other gases. It was recently awarded a contract for the supply of a unit valued at \$1.6 million for a fertilizer plant in Yugoslavia, and also shipped a large unit, standing as high as an eight-storey

building and weighing over 80 tons, to a chemical firm in California. Many other units have been exported from time to time. The firm's competitiveness is based on price, special design and fabrication experience.

Some Problems Raised

These examples illustrate the range and combinations of factors that come into play in securing contracts for engineering work: price, design, delivery, personal contacts, payment terms. Some of the solutions may seem almost beyond the reach of the smaller firm or the newcomer. This raises several questions. How can the smaller engineering firm deal effectively with foreign work? What can the Canadian firm do about long-term financing? Is there an inexpensive way for engineering firms to make foreign contacts?

The consortium, export credits insurance, and trade fairs are possible answers—in that order.

Consortia

Elsewhere in this issue, the consortium is described as useful for the joint undertaking of large-scale engineering works abroad. This group solution can also be used successfully by smaller firms or manufacturers of component equipment to explore overseas markets and to secure orders for equipment or complete plant.

The consortium provides the advantage of a common staff experienced in foreign trade negotiations. In addition, the very existence of an organization known to be interested in and capable of acting on requests will attract to it opportunities that might not otherwise come to its attention. Many contracts are negotiated without calling for tenders or without prospective buyers doing any extensive shopping.

Trade Fairs

Another method of making contacts is through participating in

engineering trade exhibits sponsored at foreign fairs on a co-operative basis by the Department of Trade and Commerce. Firms participating for the first time have often professed amazement at the results. They have found new prospects and have been brought closer to the mainstream of activity in their special fields. An article on page 5 of this issue describes the experience with Canadian engineering exhibits at four trade fairs in the United States—the Western Tool Show in Los Angeles, the AtomFair in Cleveland, the Design Engineering Show in Philadelphia and the Metal Show in Chicago.

Canadian equipment was also displayed this year at the Brno International Trade Fair in Czechoslovakia and at the Pacific International Trade Fair in Lima, Peru.

In 1960, Canadian engineering exhibits will be sponsored at the Atomic Exposition in New York,

the Design Engineering Show in New York, the ASTE Tool Show in Detroit and the Metal Show in Philadelphia. Participation is open to interested Canadian engineering firms for a nominal fee. Canada will also set up a predominantly engineering exhibit in 1960 at the "Union Expo" in Johannesburg, formerly called the Rand Easter Show.

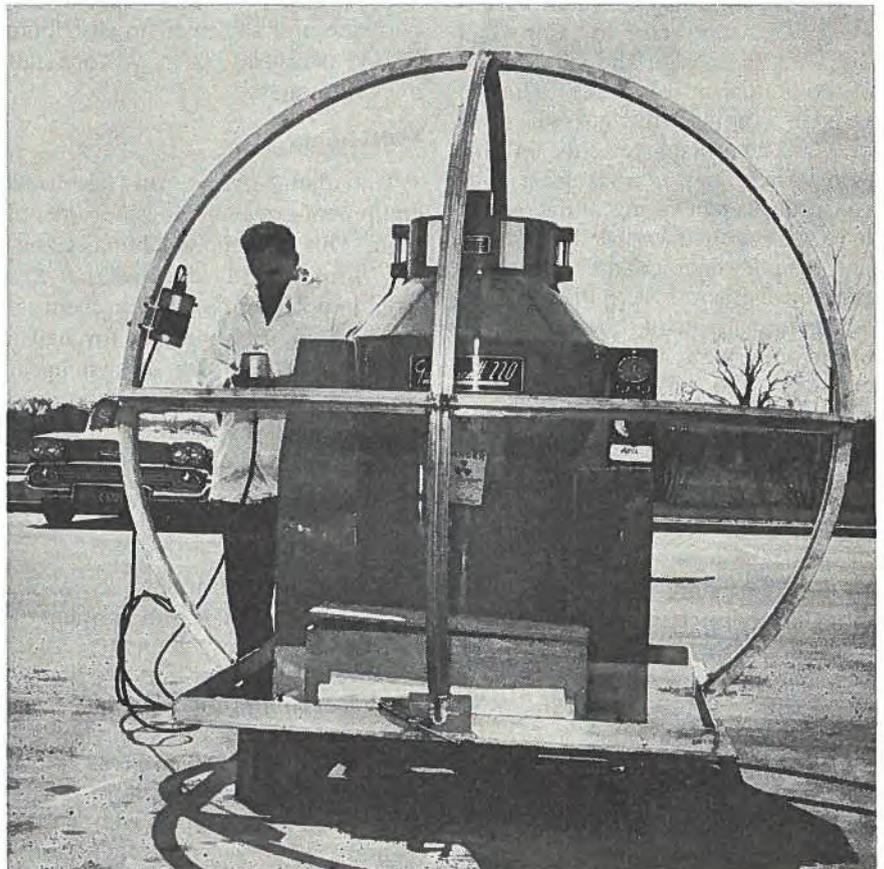
Financing Engineering Exports

Many foreign buyers of capital equipment and sponsors of engineering projects, particularly in underdeveloped countries, request the seller to provide credit over a lengthy period. Canadian firms that encounter this situation might be well advised to apply to the Export Credits Insurance Corporation, a Canadian Government agency, for an insurance policy covering foreign risks of non-payment. With such a policy, many Canadian firms have

found no difficulty in securing funds from Canadian chartered banks. New legislation passed this year enables the granting of guarantees directly to the financing institution extending the credit. A detailed explanation of this new legislation was given in the July 18 issue of *Foreign Trade*.

Canadian firms have products and services that are in demand abroad. It remains for them to make more and more use of methods now at their disposal: more aggressive export practices; group venturing for foreign work; long-term financing through existing facilities; programs of trade promotion, including participation in trade fairs. In expanding their export activities, Canadian firms not only foster their business interests but bring to less industrialized nations the benefits of Canadian engineering services and equipment especially suited to countries undergoing development. ●

The Gammacell 220 (right) is shown as it is being prepared to make radiation field measurements. The rack on which it is mounted serves as a guide for the Jordan Survey Meter during the measurement procedure. The cell has a fixed 1,100-curie cobalt 60 source, in the form of a 'squirrel cage', providing high gamma fields for research irradiations. The chamber containing samples to be irradiated is lowered into the source cage and returned afterwards to a position outside the unit for reloading. Marketed by the Commercial Products Division of Atomic Energy of Canada Limited, the Gammacell has been sold to industry and to research centres in six countries. In the last two years, the unit has been exhibited at nine trade fairs abroad, and a model of the Gammacell displayed at nine other exhibitions in six countries.





Machinery for U.S. Industry

J. R. JOHNSON, *Engineering and Equipment Division.*

Many of the automobiles coming off the production lines in the United States every day are equipped with component parts made from Canadian-built moulds and dies. A Windsor, Ontario, firm expects to export over two million dollars worth of plastic moulds to the United States in 1959 on the strength of quality and workmanship alone. This business has developed over the last four years.

Several years ago a Canadian company designed and patented a small tire-vulcanizing machine. The firm decided to explore sales possibilities in the United States, found the response good, and today sells about 65 per cent of its production to U.S. customers.

When copies of the "New York Times" come off the presses each evening, they are expertly bundled up by a Canadian-made machine. Developed by the "Toronto Star" about 18 months ago, it is used by other big newspapers across the border, including the "Chicago Daily Tribune" and the "Dallas Star".

THESE examples point up the fact that the United States, a highly industrialized country skilled in engineering techniques, has become a good market for engineering equipment and industrial machinery from neighbouring Canada. Recent months have brought orders for a gas-separation plant for California, for mine hoists, for a machine that extracts hydrogen and oxygen from water electrolytically, for oil-refinery equipment, and for many other types of machinery.

Figures tell the same encouraging story. In the first three quarters of 1958, sales of metalworking machinery, n.o.p., to the United States totalled \$684,000; in the first nine months of this year, \$1.3 million. The record is even better in machinery and parts n.o.p.—\$4.7 million this year compared with \$3.5 million last year. Comparable figures for metalworking drilling and boring machines are \$252,000 as

against only \$89,000 in the 1958 period and for ball and roller bearings and parts, \$644,000 compared with only \$220,000.

Canadian Assets

The United States has in fact become our main export market for machinery and machinery products, but this doesn't mean that anything in this line will sell there. Nor is the selling easy. Canadians have succeeded best in marketing light industrial machinery designed to undertake special jobs—the newspaper bundling machine is a good example. Our machinery exports included other types but the specially designed machine with unique features, often custom-tailored to do a specific job, has the edge.

Canadian industry sometimes under-estimates its capacity and knowhow compared with that of its industrially powerful neighbour. This psychological hurdle has to be

overcome before a company can market its product aggressively across the border. Yet Canada possesses certain initial advantages in the competition for markets. Our labour dollar buys more than it does in the United States; our raw material costs compare favourably. We have first class technical brains at work. The United States recognizes these facts; one proof is the business placed here by U.S. prime contractors engaged on overseas projects. Recently a Canadian company supplied to a U.S. contractor oil-refinery equipment for use in Mexico and in Australia. A U.S. firm setting up a hot and cold strip rolling mill in Japan bought some of the equipment here.

Surprisingly, one Canadian firm has found it easier to get U.S. than Canadian customers. This firm developed a tracing attachment for metalworking machines. Cold-shouldered here, it turned its attention to the U.S. market and made sales. This in turn enhanced its prestige and boosted its sales at home. Another company which worked out a method of precision assembly by die casting that eliminates distortion has also sold to the U.S. Lately it received a serious U.S. inquiry for enough of its machines to turn out one million parts a day.

Salesmanship Needed

Given the advantages just outlined, Canadian machinery still doesn't sell itself. Canadian firms in search of U.S. customers must realize that machinery, like breakfast food, has to be merchandised. And one can't give prospects a sample, or merely show them a pic-

ture in a catalogue. The man has to see with his own eyes what the machine will do. Take the method of assembly by die casting mentioned above. Preliminary market research turned up the names of certain U.S. prospects. They were invited to pay a visit to the Canadian plant and observe this assembly system in operation. Once interest was aroused, the Canadian firm sent its engineers into the prospect's plant to study his production, bring the problem back, and work out an adaptation of the machine. (Naturally, machinery of this type should be protected by world-wide patents before any attempt is made to enter foreign markets.)

Go to the Fair

It's not always easy to persuade an American company to dispatch men to Canada to look over a new piece of equipment. The alternative is to take the machine to them. Impractical? Not if the Canadian manufacturer displays it at one of the specialized trade fairs in the United States. There he can set up his machine and demonstrate it to technical men who attend these fairs to become familiar with new equipment and new production methods.

In the past eighteen months the Department of Trade and Commerce has taken the lead in organizing Canadian participation in four of these fairs. In October 1958, 11 Canadian firms displayed machines at the Western Tool Show in Los Angeles. The results were heartening. One company alone expects ultimately to do \$700,000 worth of business as a result; it has already written \$100,000 worth. Many of the machines were sold right off the floor. In April 1959, 26 Canadian firms exhibited products and services in the field of nuclear energy at the AtomFair in Cleveland, Ohio. In May, 26 Canadian companies sent exhibits to the Design Engineering Show in Philadelphia and in November, 14 had products at the 41st National Metal Exposition in Chicago. Eight Canadian-made machines were in operation at this fair.

Even at fairs, machines have to be marketed. Each company must supply two operators for each machine—men who are also well versed in the sales approach. Many send in addition some of their senior executives; at Los Angeles the president and secretary-treasurer of one company were on hand throughout the show and returned home convinced that it was time well spent.

Benefits Widespread

Participation in trade fairs in the United States appears to benefit Canadian industry in general as well as individual exhibitors. Some U.S. industrialists still regard Canada primarily as a good place to hunt and fish; our progress towards industrial maturity has escaped their notice. Collective displays at trade fairs help to correct this impression and have even led certain U.S. companies to consider manufacturing some of their products here, either through licensing or by setting up subsidiary companies.

In 1960, the Department expects to sponsor Canadian displays at five trade fairs: the Tool Show in Detroit in April, the AtomFair in New York that same month, the Design Engineering Show in New York in May, the Metal Exposition in Philadelphia in October, and probably the Coliseum Machinery Show (held once in five years) in Chicago in September.

Surveying the Market

If the U.S. market for machinery has possibilities, it also presents the exporter with certain problems. The initial one is where and how to start looking for American clients. The machinery manufacturer often finds this simpler than the maker of consumer goods. His best markets will lie in the areas where industries that can use his products are concentrated. The man who makes moulds useful in the motor-car industry will turn to Detroit; the company with a product of value to the aviation industry will investigate Los Angeles. Two or three areas are usually

enough to experiment with and the Department of Trade and Commerce stands ready to help the exporter with suggestions and advice.

Customs Problem Soluble

The customs tariff regulations have probably deterred a number of Canadian firms from seeking U.S. orders. Admittedly, the duty on machinery and equipment entering the U.S. has to be determined early in the sales campaign because the customer wants to be quoted a duty-paid delivered price. But this customs problem isn't insoluble and need not frustrate the would-be exporter. Early in 1958 the U.S. Customs valuation procedures were simplified considerably. This has tended to make things easier for the Canadian supplier; it is not so difficult to establish what the duty will be and, in general, this duty is levied on the export price. Canadian manufacturers are invited to ask the Department's help with their tariff problems. In making shipments to the U.S., the usual practice is to employ a customs broker in the United States to look after these and clear them at the port of entry.

Service Problem

Once a sale has been made, the question of service and of speedy replacement of parts when necessary assumes importance. The prospective U.S. buyer wants reassurance on these points. Many Canadian machinery companies, when they have a fair volume of U.S. business, find it practical to set up sales and service depots at various places. Some even establish a subsidiary company in the U.S. As one old hand puts it, once your products have cleared the border and the duty has been paid, you are "home free." Parts can then be stockpiled and distributed quickly when the need arises. The Canadian firm that developed the process for extracting hydrogen and oxygen from water now has a subsidiary company in Buffalo; the makers of the tracing attachment have service depots in

Chicago, Los Angeles, and other industrial centers.

Other Sales Factors

Important too is the securing of good agents who will look after the exporter's interests and push his products. The U.S. offices of the Canadian Trade Commissioner Service can supply the names of reliable agents and the manufacturer can then negotiate with them directly. One excellent way to make contact with agents is at the specialized trade fairs; agents attend them to discover new lines to handle and to look over the equipment exhibited.

One factor in success across the border is close adherence to delivery schedules; the man with an eye to business lives up to his delivery promises. Canadians commonly have a better record on this score than their competitors from other countries. This can be a useful argument in obtaining business.

The process of selling the type of machinery that Canadians are now shipping to the United States has three phases—the designing of the machine to meet the client's needs, the working out and quoting of a delivered price, and the building of the machines when the order is secured. Two years may elapse between the time the manufacturer holds his first discussions with the customer until the finished machines are delivered. The search for orders thus must be started early and continued over a long period.

In the past five years, Canada's exports of engineering equipment and machinery of the type we have been discussing here have gone up 52 per cent. About 42 per cent of this increase represents sales to the United States. Of the 300 Canadian producers in this field, some fifty to sixty have already sought and found U.S. business. The United States is not necessarily the only market for Canadian machinery, but it is nearby and it is the only one that has been seriously cultivated. The experience of their colleagues should tempt more Canadian companies to try their fortunes there. ●

Conditions of International Contracts

CONSTRUCTION contractors, equipment manufacturers and consulting engineers engaged in exporting will be interested in several documents issued by international organizations on conditions of contract for engineering work. These documents represent an effort to unify contract practices within the framework of existing national systems of law and commercial practices.

Conditions of contract for works of civil engineering construction have been issued jointly by the Federation Internationale des Ingenieurs Conseils (FIDIC) and the Federation Internationale du Batiment et des Travaux Publics (FIBTP). The *Conditions* are designed to assist employing authorities and others responsible for carrying out development programs and may be used either as a model with adaptations or as the actual contract document. Part I groups clauses with universal application; Part II has space for clauses specially drafted to suit each contract. The document provides for a fair distribution of risks inherent in works of civil engineering construction. The relationship between client, consulting engineer and contractor is defined in precise terms. The engineer is held responsible for supervision of the work and for adjudicating on claims. A clause provides for arbitration by the Board of Arbitration of the International Chamber of Commerce.

In the field of mechanical and electrical engineering, counterparts to this document have been issued under the auspices of the United Nations Economic Commission for Europe. They cover supply and erection of plant and machinery, and also supply only.

Conditions for the supply of electrical and mechanical services that would be of special interest to Canadian contractors specializing in mechanical or electrical erection are not yet available but are expected to be the subject of a meeting in February 1960 of the responsible ECE committee, the ad hoc working party on contract practices in engineering.

Each of the ECE documents is issued in two versions. *General Conditions for the Supply and Erection of Plant and Machinery for Import and Export No. 188A* provides a set of conditions designed to form a basis for engineering contracts in international trade generally. *General Conditions No. 574A* incorporates conditions acceptable to the Eastern European countries and is more suitable for East/West trade.

The conditions for the supply of plant only are No. 188 for international trade generally and No. 574 for East/West trade. The working party has provided a commentary on both these documents explaining some of the clauses.

The conditions acceptable for general trade state that disputes shall be settled in accordance with the rules of conciliation and arbitration of the International Chamber of Commerce. The Eastern European conditions specify that disputes shall be finally settled by arbitration without recourse to the courts and the procedure shall be as agreed between the parties.

The conditions relating to civil engineering work are available through either the Association of Consulting Engineers of Canada, which is a member of the FIDIC, or the Canadian Construction Association, which is a member of the FIBTP. The ECE documents can be purchased from the United Nations sales agents.

Those who would like to peruse any of these documents may obtain them from the Chief, Engineering and Equipment Division, Department of Trade and Commerce, Ottawa. ●



How CCW Sells Abroad

To market a complex precision product in foreign countries at competitive prices, Canadian Curtiss-Wright had to devise a special export policy. Other Canadian companies might find their experience helpful.

O. MARY HILL,
Editor, "Foreign Trade."

WHAT is the most successful way of selling highly engineered precision equipment overseas? How can the Canadian manufacturer, with his sometimes high production costs, meet the competition and match the prices offered by European and other suppliers?

Recently *Foreign Trade* put these questions to Canadian Curtiss-Wright Limited, a firm that is marketing an automatic control system in foreign countries. It has sold the Betameter to customers in Finland, Italy, Japan and Brazil, and has other types of gauges ready to export. And while the company has been developing and perfecting these, it has also been working out an export policy that goes far towards solving the problems posed in our first paragraph.

What Betameter Is

The policy naturally depends upon what kind of product is being sold. The Betameter purchased by Messrs. Pirelli, s.p.A., of Milan, Italy, and installed last spring provides a good example. Basically, it's a device that uses radioactive isotopes to measure and control the thickness of continuous running substances or sheet material. It may also, as it is doing in the Pirelli

plant, measure the thickness of the rubber coating applied to tire fabric. The absorption of radiation passing through the sheet material is used to determine the weight per unit area and to reveal 5 to 10 per cent variations in most stock. Its use is said to increase quality control, cut down rejects, and insure a more uniform product.

In essence, the Betameter consists of two parts. One is the radioactive measuring device and the other the supporting structures needed to attach it to the machine and set it working. A good part of the system must be custom-tailored to the particular job and this means large outlays for labour and materials and for installing and servicing the equipment.

Development of the Betameter began about ten years ago; it has taken that long to get it ready to market and to sell five outside the North American continent. Naturally, Canadian Curtiss-Wright wishes to retain control of a product in which it has invested so much money and brainpower. At the same time, it wants to keep the price down. A way of achieving both objectives came with the invention of what it calls its "Isopac" system. This is a method of packaging all the radioactive materials and instruments used in the Betameter in one compact, sealed unit. This is made only in CCW's Oakville, Ontario, plant, thoroughly tested before shipment abroad, and guaranteed.

Limited Licensing

The perfecting of the Isopac system (CCW retains and controls all the manufacturing rights) opened the way to a limited form of licensing

that makes the best of both worlds. The company's plan is to have the licensee install the Betameter according to the CCW design and specifications, providing the necessary labour and raw materials. This arrangement will, the company believes, keep the price of the gauge down because of lower local wages and raw material costs for the supporting structures and for installation. This will improve CCW's competitive position, especially in Western Europe, and may also pay off in goodwill in job-hungry areas. Following installation of the Betameter the licensee will supervise the early runs and provide "preventive maintenance" once the system is functioning properly.

Canadian Curtiss-Wright, for its part, will continue to ship the heart of the system, the Isopac or sealed unit, from its Oakville plant. It will also supply blueprints for the licensee to use in the installation process and engineering assistance as needed. The original sale ensures repeat business because the sealed units have a varying life of from seven to ten years. The licensee will keep a stock of these on hand.

Selecting Licensees

This licensing system, CCW points out, is just getting under way. In the fall of 1958 E. A. Carter, the then vice-president and general manager of the company, made a trip to Europe to scout around for suitable licensees. He felt strongly that, because the success of this export policy depends a good deal on the licensees, they must be selected by personal, on-the-spot interviews and investigations. Mr. Carter was looking for firms with the proper technical

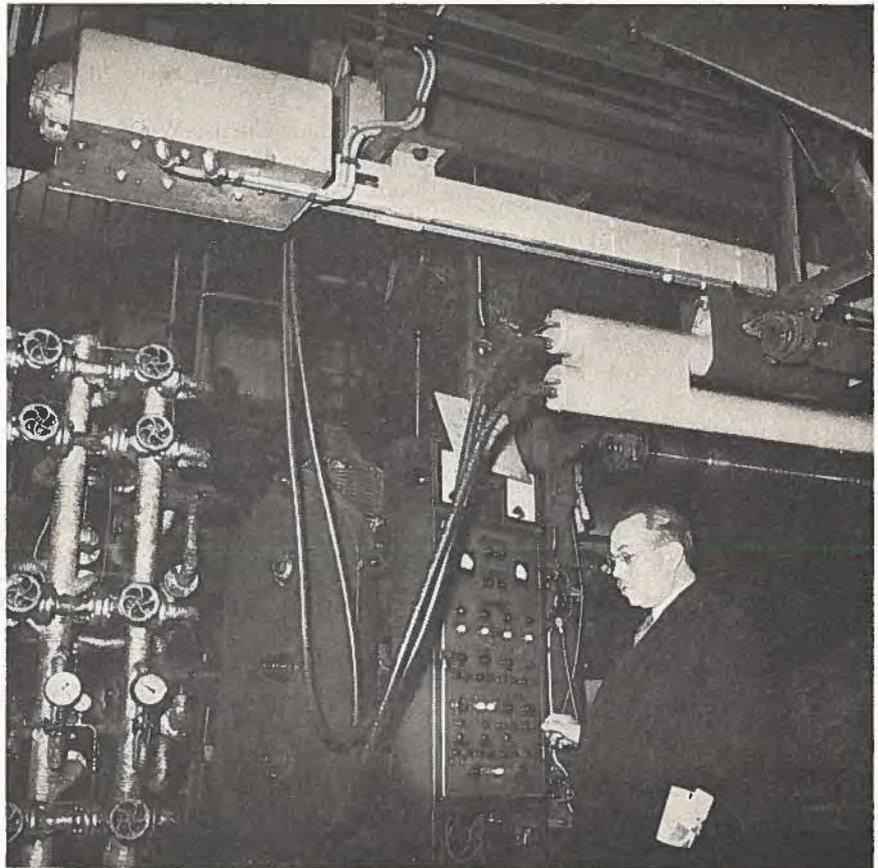
facilities, skilled engineers, and a sound reputation in the territory. To check this last point he visited many of the prospective licensees' customers and noted the relationship between seller and buyer.

During a second trip to Europe last spring, Mr. Carter concluded licensing agreements on behalf of the company with two European firms, each for a specified territory. The first was with G. Barazzetti and Co. of Milan, Italy, and the second with Elliott Brothers of London, England. This fall, another CCW executive flew to Japan to select a licensee there. In the early stages of these licensing agreements, CCW expects to supply practically the complete system to meet immediate needs. Eventually it will ship only the sealed units.

Export Experience

The company made its first sale outside North America about three years ago, when one Betameter went to Finland and two to Japan. It does not know how two of these gauges are being used, but one bought by a Japanese company is measuring the thickness of cellophane sheet. These, and the one sold to Pirelli last year, were made entirely in Canada and involved no licensing arrangement. Two CCW engineers went to Milan for a month to install the Betameter in the Pirelli plant, calibrate the instruments, and supervise the initial runs. (The Barazzetti firm sent some of its staff to observe the process and gain experience.) Shortly another Betameter will be shipped to a Firestone Rubber plant in Brazil. Rubber, paper and plastics plants are the best potential customers.

Soon the company hopes to put other types of gauges on the export market. Mining companies in Canada are already using its Gamma-gauge to determine the per cent of solids in a slurry. Because it will also measure the wall thickness of steel and other metals, oil companies are employing it to reveal the extent of corrosion in pipelines. A third type of gauge, the Aquatel, tests



Shirley MacDonald, then Canadian Commercial Counsellor in Rome, Italy, presses a button in the Pirelli tire factory in Milan that starts a machine that coats tire fabric with rubber. The same button put into operation a "Betameter" electronic gauge, made by Canadian Curtiss-Wright, that measures the thickness of this coating.

moisture content. A fourth, to determine the level of liquids or solids in large closed vessels (such as silos) is nearly ready to promote; Eldorado Mining and Refining Limited is currently making field tests of it. All four of these gauges will eventually be included in the licensing agreements. Three use the "Isopac" system; the company now makes a Betapac, a Gammapac, and an Aquapac.

The Right Approach

CCW's experience in trying to sell complex, carefully developed equipment overseas should have value for other Canadian firms with somewhat similar products. When I asked CCW executives what advice they could give hopeful exporters, I received some specific, helpful answers.

1. If costs make you uncompetitive in foreign markets, cast about for ways to reduce them. Some sort of licensing arrangement may be the answer. Try to retain control of the manufacture of at least some of the components. Be sure to choose your licensees carefully.

2. Answer all requests from abroad for technical information on your product quickly, clearly and completely.

3. Provide plenty of technical literature aimed at manufacturers, particularly in those industries you wish to serve. Plan this so that the text can be easily translated into another language. (CCW sends plenty of literature to its licensees; about 50 per cent of it is used in English and about 50 per cent translated.)

4. If the initial cost of your equipment is high, as with the Betameter, look for customers among companies that are building large new plants or making extensive renovations. At such times, the original expense does not loom as large.

5. Investigate exhibits at trade fairs as a means of breaking into a market. Canadian Curtiss-Wright had a

display last spring at the AtomFair in Cleveland, Ohio, and also at the Design Engineering Show in Philadelphia.

Canadian Curtiss-Wright's determined drive for export markets has been sparked by its realization that, if its ten years of research in and experimentation with these gauges are to bear fruit financially, it must have a larger market than Canada

provides. From the first, its executives understood that foreign business was not just a simple matter of saying, "We are going to sell overseas." They have studied the situation carefully, assessed the problems, and formulated an export policy that combines ingenuity and enterprise. Other Canadian companies in related fields might find the CCW approach worth study. ●



Joint Ventures and Consortia

R. A. FRIGON and DAVID MOTT, *Engineering and Equipment Division.*

What can they mean to exporters of engineering services and equipment?

CO-OPERATING for export can mean increased business for Canadian firms interested in undertaking construction projects in other countries. Joint venturing is already well known to the Canadian construction industry as a method of tackling large civil engineering works beyond the capacity of a single firm. When construction firms are joined by manufacturers and perhaps consulting engineers, it is possible to undertake complex schemes involving civil, electrical and mechanical engineering and special process knowledge.

The Canadian construction industry is well placed to undertake co-operatively projects in other countries. It has a solid core of competent general contractors experienced in such matters as earth-moving techniques and foundation problems. These experts are complemented by contractors who have specialized in electrical and mechanical installations, transmission-

line construction, pipelines, oil-well drilling, diamond drilling, chemical process plant, and so on. Supplemented by consulting engineers, the combination results in a highly experienced team well qualified to undertake complicated assignments.

Canadian Firms Active

A number of Canadian contractors are already competently performing construction and installation work abroad. Several have formed international companies to take care of foreign activities. In many instances, they have had recourse to joint operations. For example, to qualify for electrical contract work in Central America, a firm bought into a foreign company. Two Canadian firms, a general contractor and a mechanical-electrical contractor, are now jointly completing a contract in Pakistan. A transmission-line construction firm is tendering in Malaya in co-operation with a local Malayan firm. The same firm tendered in Lebanon jointly with a Swedish firm. Several electrical-mechanical contractors are currently seeking local partnerships in South East Asian countries.

If Canadian firms are now showing these signs of activity in faraway places, this does not mean that little remains to be done. The surface is being scratched by the more adventurous. Many opportunities beckon for those who will adopt the right approach.

To begin at the beginning, joint ventures require someone to act as a catalyst. The contractor falls into this role naturally. He is accustomed to marshalling men and materials and to co-ordinating complex tasks. He has the experience of conducting difficult negotiations leading to a contract. Given these attributes, what alternative modes of co-operation are open to the contractor interested in securing a greater share of overseas work? There are three possible avenues: joint venture with other Canadian firms; partnership with a local firm, and co-operation with a foreign firm that has international experience.

Joint Venturing

Joint venturing with other firms allows a pooling of manpower, technical knowledge and equipment, as

well as financial resources. It is a way of sharing the risks. In its more permanent form—perhaps more correctly called a consortium—it enables joint prospecting for foreign assignments. Through a common staff, financial negotiations and perhaps barter deals can be more readily transacted.

If the interest of manufacturers and consultants can be secured, it may be possible to offer package deals, made up of a preliminary feasibility study followed by design, construction and delivery of a complete project in running order, with possibly management over an initial period. Consulting engineers, for professional reasons, may hesitate to associate themselves with such ventures unless steps are taken to protect their position. In some instances, this can be done by arranging for the consultant to act as an adviser to the sponsoring authority and to scrutinize the designs. Another solution that has been adopted in the United Kingdom, where consulting engineering is a tradition, is for the consulting engineer to work for a contractor or group of contractors in preparing designs and giving technical advice. This arrangement is the result of an agreement between the Export Group for the Constructional Industries and the Association of Consulting Engineers, an association well known for high professional standards.

The great range of equipment manufactured in Canada offers the opportunity for the supply of complete plant containing at least a portion of Canadian equipment, especially when over-all price and standards of the project can be kept competitive. In this respect, the consortium offers an unusual opportunity for those Canadian manufacturers who, if they depended on their own resources, might not be in a position to secure the export order. A pulp and paper plant recently constructed abroad contains an interesting percentage of Canadian equipment because Canadian

engineers had a hand in the design and construction.

Partnership with Local Firms

Partnerships with Canadian firms may not be sufficient to secure a foreign contract. It may be advisable and perhaps necessary to join forces with a competent local contractor who not only knows local labour conditions, costs, taxation and legislation, but who has the necessary influence and contacts. A local partnership can do much to enhance prestige and acceptance by the local community. In many instances, it is a condition for admission to tendering. Canadian Trade Commissioners, especially those located in under-developed countries of Asia, Africa, Latin America and the Middle East, are in contact with local firms that are anxious to find experienced Canadian companies willing to bid on local projects. Requests addressed to these Trade Commissioners will bring in reply names of interested and recommended construction firms in their areas.

Co-operation with Foreign Firm

An alliance with a foreign firm that has international experience offers the aspiring exporter the possibility of securing valuable experience that he otherwise might find difficult to acquire. This may mean joining up with competitors but mutual interest may dictate at least a marriage of convenience. There will be occasions where a Canadian firm's special experience will conveniently mesh with that of the foreign partner. The firm will benefit not only from the other's experience of foreign conditions but also its financial capacities and its negotiating ability. Once the firm has some initial acquaintance with the foreign scene, it may feel ready to venture on its own.

Some Examples

Many examples of co-operation for export are to be found in the exporting countries. An example often cited is ISCON, the Indian

Steel Works Construction Company Limited, which was set up in 1955 as a consortium of 13 British manufacturing, electrical, structural and civil engineering firms for the specific purpose of delivering to India in a package deal a 1½ million ingotons per year steel plant. ISCON was set up mainly through the activities of MEECO, the Metallurgical Equipment Export Company Limited, a permanent-type consortium formed in 1945 and composed of six firms. Among more recent groups are the nuclear power consortia established in the United Kingdom for the construction of reactors. An example of an *ad hoc* consortium is RUSTYFIA, a group of British firms formed to build a tire factory at Dnepropetrovsk in the U.S.S.R.

Other foreign examples of co-operative effort for export include associations of companies interested in developing foreign work for their members, but not undertaking such work. One such group is France-Technique, an association of 11 French companies established for the purpose just described. It arranges for the formation of consortia of French firms, members or not, either alone or in partnership with non-French firms. ICOFRANCE is an association of French consulting engineers interested in overseas projects. NEDECO, Netherlands Engineering Consultants, is a co-operative unit that pools the efforts of consulting engineering bureaus with the assistance of other experts and technical and scientific organizations in the Netherlands.

Many other examples could be mentioned, including groups associated to market equipment abroad. In every case, the joint venture or consortium association illustrates the application of the maxim that in union there is strength. Applied to the winning and execution of large and complex engineering contracts, it takes on new significance as a useful tool in the hands of the construction contractor and other engineering firms that wish a greater share of overseas opportunities. ●



Foreign Projects

DAVID MOTT, *Engineering and Equipment Division.*

THE foreign projects described here have been selected from many that come regularly to the attention of the Foreign Trade Service through Canadian Trade Commissioners and other sources. Contractors, manufacturers, consulting engineers, aerial survey firms and others interested in overseas engineering work are invited to make their interest known and to inquire about these and other projects from the Chief, Engineering and Equipment Division, Department of Trade and Commerce, Ottawa.

✓ ARGENTINA

Hydro-Electric Project—The agreement on the Salto Grande project between the Governments of Argentina and Uruguay, which was signed on December 30, 1946, and ratified in August 1958, provides for the joint development of a hydro-electric project making use of the Salto Grande Falls on the Uruguay River. It is expected that when it is completed this project will generate 6 billion kwh. The cost is estimated at approximately \$250 million and will be divided equally between the two governments.

Construction of the dam will extend navigation on the Uruguay River another 250 kilometers and provide rail and road connection between the two countries across the top of the dam. The water will also be used to expand irrigation facilities on both sides of the river.

The agreement provides for a Joint Commission (Sede de la Comision Tecnia Mixta de Salto Grande) to study the financial and economic aspects of the project and to supervise construction. Its headquarters are at Av. Diaz Velez 3902, Buenos Aires.

The commission has issued invitations to consulting engineering companies to submit tenders for the preparation of technical, economic and financial reports. Bids will be opened on March 29, 1960.

✓ AUSTRALIA

Hydro-Electric Project, Barron River—Tenders will be called during the first quarter of 1960 by the chief engineer of the Co-ordinator-General's Department, P.O. Box 8, South Brisbane, Queensland, Australia, for the Barron River hydro-electric extension project. Details are as follows:

1. A mass concrete diversion and pondage weir which will be about 25 feet high and between 500 and 600 feet long.

2. Intake works leading to a diversion tunnel. The intake will probably be designed to remove any bed

load, heavy silt, etc., and will include screens and the usual gates.

3. A horizontal tunnel that will be about 5,370 feet long and of the general order of 10 feet in diameter. This will be of concrete and perhaps steel-lined. It will supply a pressure tunnel of slightly smaller diameter and some 950 feet long leading to the power station. The fall in this section will be of the general order of 900 feet. Between the horizontal and inclined sections of the tunnel there will be an excavated surge tank and valve chamber, with essential equipment. The inclined pressure tunnel will be steel-lined.

4. A machine room, expected to be completely underground, that will house two 30,000 kw. turbo-generators. Access will be by a tunnel about 500 feet long, with a tailrace tunnel and excavated tailrace surge tank. Work in the machine room will include the building of foundations for the generating sets.

Access roads will be available to the various parts of the work and only local construction roads will be involved. At the present time it is anticipated that all the above work will be incorporated in one comprehensive contract.

✓ BELGIAN CONGO

Hydro-Electric Project, Inga—Development of the Inga project is currently at a standstill until the extent of the bauxite deposits in the area is determined. Once the bauxite studies are completed, work should proceed on the hydro-electric facilities. Present plans are for development in several stages. Consulting engineers for the project are the Abelinga Association, which groups the principal Belgian engineering consultants.

Professor P. Fourmarier, Institut National des Etudes pour le Developpement du Bas Congo, 3 rue Montoyer, Brussels 4, Belgium, is interested in receiving from manufacturers of electrical equipment details on prices, products, etc.

✓ BRAZIL

Port Facilities—The Brazilian Government has plans under way to develop additional port facilities and is at present considering 22 projects. Although presidential approval has not yet been granted, it was expected that approval for some projects would be obtained by December. Tenders will probably be called as soon as the individual projects are approved.

Sao Francisco River Basin—The United Nations Special Fund and the Brazilian Government will finance a comprehensive survey of the Sao Francisco River Basin to determine the feasibility of an irrigation project. The total engineering fund provided will be approximately \$1.96 million. The investigation will involve a soil survey, mapping, and some aerial surveying. The United Nations portion of the project is under the direction of the Food and Agriculture Organization (FAO) in Rome, Italy.

✓ GHANA

Volta River Development—The Government of Ghana is interested in developing the Volta River project at an early date. Feasibility studies were completed by the Henry J. Kaiser Company some time ago. At present further preliminary studies are under way: drilling at the dam site, engineering design, etc.

✓ GUATEMALA

Hydro-Electric Project—The Government of Guatemala has established a National Electrification Institute to control all future hydro-electric power development. Guatemala is not short of power at present but it is expected that a start will soon have to be made on the Jurum Marinala hydro-electric project to keep abreast of the present rate of industrial growth.

✓ INDIA

Pulp and Paper Plant—Mr. R. S. Phatak, Secretary, Pulp and Paper Conversions Ltd., 376 Shaukrwar, Peth, Poona 2, India, desires to contact consulting engineers and equipment suppliers active in the pulp and paper industry. The company plans to build a plant to make bleached sulphite pulp with a capacity of 50 tons a day. Raw material will be bamboo.

✓ IRAN

Road System—The World Bank, with the participation of four private United States banks, recently made a \$72 million loan to Iran for the construction and improvement of roads included in the present Iranian Seven Year Plan. Consulting engineers will be employed to design and supervise construction. Work will

be done on a unit price basis and contracts awarded on competitive bids.

✓ ISRAEL

Deep-Water Harbour—The Israeli Government plans to build a new deep-water port at Ashdod on the Mediterranean coast near Tel Aviv. A New York firm, Frederick R. Harris and Company, is now preparing the working drawings. Cost of the project is estimated at \$54 million.

✓ NEW ZEALAND

Power Station—The Government has begun a study of potential power stations on eight rivers in the North Island and one in the South Island. The estimated cost of this investigation is NZ£3 million. At present the Government plans to construct the Aratiatia power station on the Waikato River on the North Island. Estimated cost is approximately \$19.6 million.

✓ PAKISTAN

Flood Control—The Government of Pakistan has established a new agency, the East Pakistan Water and Power Development Authority. Chairman is Kan Mohammad Azan Khan, who was until recently chief engineer of the Warsak Dam Project Organization. Initially the new agency intends to concentrate on flood-control projects. It will go into larger projects, irrigation schemes, etc., later.

Hydro-Electric Project, Mangla—This project is also in West Pakistan and the World Bank may participate in the financing. It is still being considered by three consulting engineering firms—Crowden (U.S.), Gruner (Switzerland), and Morgan (U.K.). The difficulties surrounding this project should be removed once both India and Pakistan have accepted the World Bank proposals for the development of the Indus River Basin. Some preliminary tunnelling to determine rock structure, etc., has been carried out by Angus Robertson, Limited, Montreal.

Hydro-Electric Project, Tarbela—This project in West Pakistan may also be financed by the World Bank. It is still in the planning stage and the engineering report will be prepared by consultants, in addition to the feasibility report. It is expected that contracts will be let early in 1960.

Mineral Survey—The United Nations Special Fund will finance a mineral survey of Pakistan. Pakistan has already had an aerial survey and the purpose of the present mineral survey is to investigate specific areas. Estimated cost of the survey is \$158,000.

Nineteen other countries have made application to the United Nations Special Fund for funds to finance similar services.

Oil Refinery—A. K. Khan, the Minister of Industries, has announced that an agreement has been reached between the Government of Pakistan and Burma Oil Company Limited, Caltex, Shell, and Standard Vacuum oil companies for the establishment of an oil refinery in Karachi.

The principal features of the agreement are:

1. The oil refinery will be built in Karachi on the Karangi Road site. It will be capable of refining an initial 1.5 million tons of crude oil a year and can be expanded to 2 million tons.

2. The estimated capital cost of the refinery is Rs. 15.5 crores. Of this amount, Rs.11 crores will be in the form of foreign exchange.

3. The refining company will be incorporated in Pakistan, with 40 per cent of its shares held by Pakistan nationals.

It is hoped that tenders will be called at an early date and that the work will be completed in approximately 2½ years.

✓ VARIOUS COUNTRIES

Hotel Construction—The Hilton Hotels Corporation has negotiated several arrangements similar to a lease-back type proposal. The Hilton company supplies architects' drawings and specifications to the hotel owner, which may be either a foreign government or private individuals in a foreign country who build the hotel. Hilton then arranges a management contract for the operation of the hotel.

Present information indicates that Hilton is planning to negotiate further arrangements in other countries. Interested general contractors and sub-contractors in the mechanical-electrical and air-conditioning trades should contact the Hilton Hotels Corporation, 121 Richmond Street West, Toronto. ●



World Bank and IFC Projects

J. D. BLACKWOOD, *Assistant Commercial Secretary, Washington, D.C.*

MANY of the large engineering projects being undertaken in the less developed countries are made possible by loans from the International Bank for Reconstruction and Development (World Bank) or by investments made by its affiliate, the International Finance Corporation.

Canadian companies that export engineering services and equipment frequently ask whether projects qualifying for World Bank or IFC aid offer business opportunities and how they can capitalize on these opportunities. The first step is to understand the policies governing the loans and the procedures followed in awarding contracts. The questions and answers set out below cover these points.

What is the World Bank's function?

The World Bank was set up in 1944 to assist in the development of economically backward areas by supplying long-term credits. It has a capital fund of \$10 billion, subscribed by the 68 member countries in varying proportions. Since it opened its doors for business in 1946, it has made 234 loans totalling almost \$4,500 million to 50 of the 68 member countries and their territories.

What types of projects qualify for World Bank loans?

In evaluating loan applications for specific projects, the World Bank seeks satisfactory answers to the following questions. Does the project have a high priority? Is it

technically sound? Will it increase productive capacity? What are the prospects for satisfactory repayment? Will the project encourage the growth of private enterprise?

Have any particular industries or any one area received the greater share of these loans?

Of the \$703 million loaned by the Bank in the fiscal year ended June 30, 1959, \$294 million was earmarked for the development of electric power in 11 countries, \$257 million for the improvement of transportation in seven countries, and \$149 million for the expansion of industry. Half of these loans were made to Asia, \$136.5 million to Latin America, \$110.6 million to Africa, and \$102 million to Europe.

Does the World Bank stipulate how and where borrowers should buy engineering services or equipment?

The Bank lays down the principle that goods and services be purchased in countries that are IBRD members, usually on the basis of competitive tenders. It does not itself select or recommend specific firms, but leaves the choice entirely to the borrower. It does retain the right to approve the firms chosen and to make certain that the loan is being used in the best possible way.

Do World Bank projects offer opportunities to engineering consultants?

Yes, because the Bank encourages borrowers to employ qualified consultants. Some of the projects, however, are so large that they can be undertaken only by the biggest consulting firms.

Is there any chance of smaller firms or individual consultants obtaining business?

Yes, there is some chance, particularly in the investigation and evaluation of proposed projects, supplementing the Bank's own staff of experts. Canadian consultants and engineering firms interested in obtaining foreign work should keep the World Bank supplied with up-to-date information on their activities and services, so that the Bank may keep its files current.

How can Canadian companies learn about projects that the World Bank intends to finance or is considering?

World Bank officials have a standard answer to this question: "Business must be solicited and secured in the country to which the loan is made." This means that advance information about projects is best secured in the field—that is, in the borrowing countries. On-the-spot "intelligence agents" or an intelligence network are particularly useful but only the larger firms are likely to have these. Small and medium-sized firms, with a reasonable budget for world travel to build up close connections with foreign officials and engineers, and regular correspondence with the Canadian Trade Commissioners stationed in the less developed countries and with the Engineering and Equipment Division of the Department in Ottawa, could learn about and perhaps capitalize on certain opportunities for doing business.

Is there any general information published on procedures, etc., in obtaining contracts?

A booklet entitled *What Every Consulting Engineer Should Know about Dealing with the World Bank*, put out by the IBRD, can be obtained from the Engineering and Equipment Division, Department of Trade and Commerce.

What is the function of the IFC?

The International Finance Corporation was set up in 1956 to promote industrial development in the less developed countries by encouraging the growth of productive private enterprise and direct private foreign investment. Its 58 member countries, including Canada, are also members of the World Bank. The IFC, unlike the World Bank (with which it is closely affiliated), invests rather than loans money and does not require government guarantees. It supplies a type of venture capital in the form of long-term loans, usually combining a rate of fixed interest with the right to share in the profits and growth of the business.

What types of investment has it made?

To date, IFC has made 28 investments in 13 countries, to a total of over \$25 million. Half of these investments were made in partnership with local capital; the rest were either joint enterprises combining local capital in association with foreign firms, or subsidiaries of foreign firms. Generally an investment does not exceed a million dollars and never more than several million.

Does the IFC recommend to its clients the use of specific engineering firms or specific equipment?

No. It does not select nor recommend either firms or types of equipment. It considers that its partners in any investment are normally completely competent to choose for themselves.

Does the IFC make use of consultants?

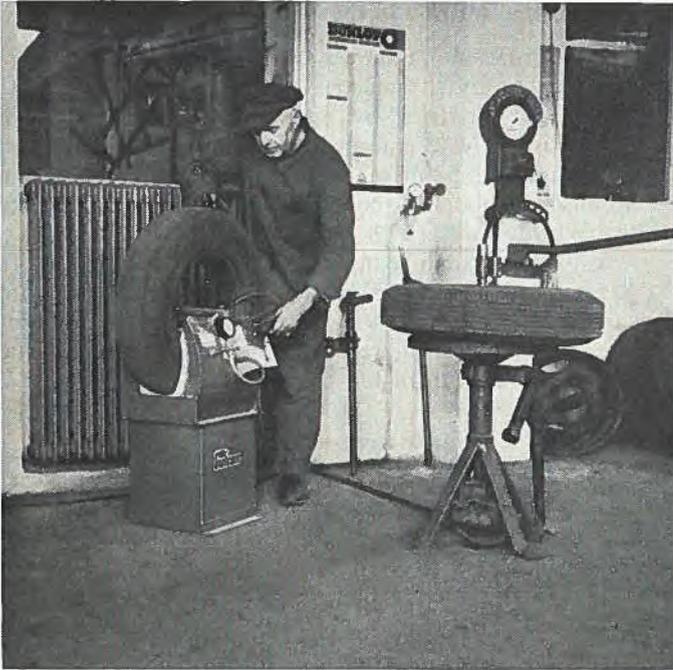
The IFC sometimes hires consultants to help it investigate prospective investment opportunities and to advise management. It also encourages its partners to use independent consulting services.

Are there opportunities for Canadians to obtain consulting work under IFC?

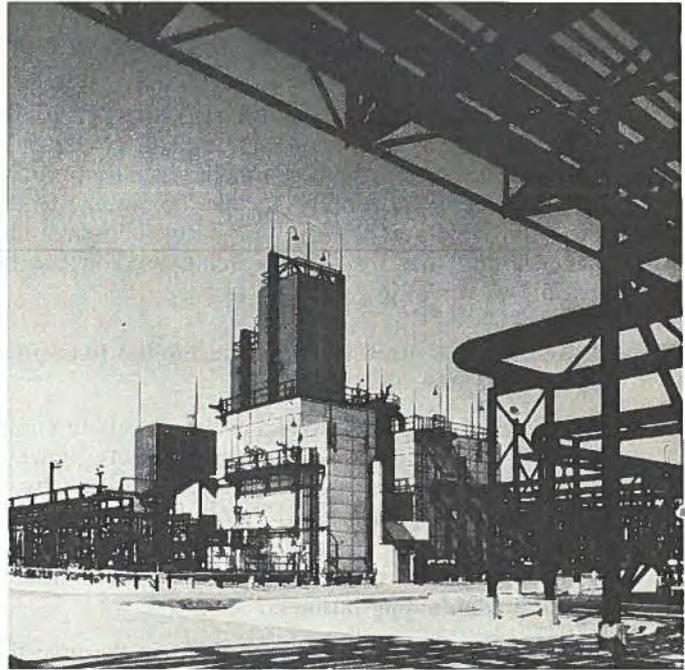
Yes. To save money and to make sure of getting someone with experience of local conditions, the IFC tries to secure the advice of experts working in the country in which it is considering making an investment. It therefore welcomes information on Canadian consultants working in the less developed countries. IFC has used the services of several Canadian firms in this way.

Where are the headquarters of the World Bank and the International Finance Corporation?

In Washington, D.C. The International Bank for Reconstruction and Development, 1818 H Street N.W., Washington 25, D.C. The International Finance Corporation, same address. Both these bodies regularly issue press releases giving information about loans and investments made and details about each project. ●



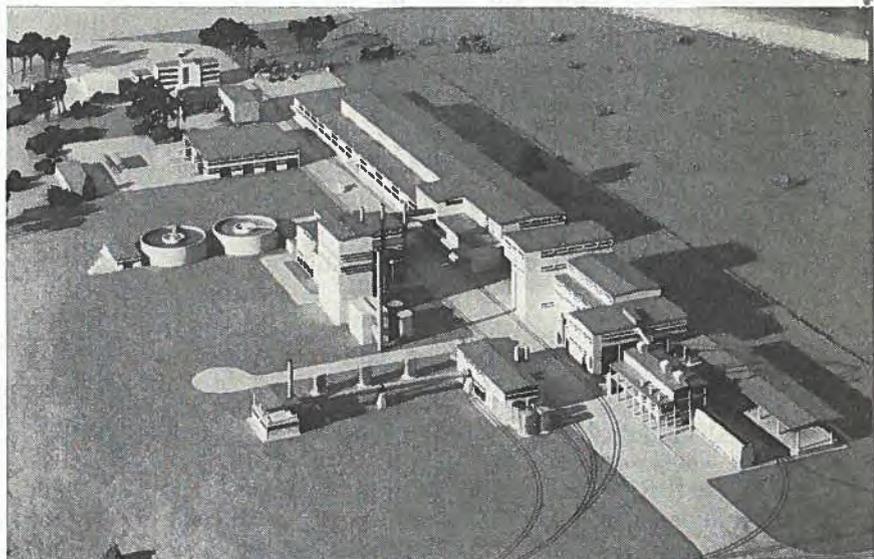
This sectional vulcanizing machine, designed and built by Vulcan Equipment Co. Ltd. of Toronto, is pictured in use in a tire-repair shop in West Germany. The company has found a market for it in other countries, particularly the United States, which now absorbs nearly two-thirds of its current sales to foreign buyers.



When a Houston, Texas, firm needed a tonnage oxygen plant, called an Oxyton, to be integrated into its petrochemical complex, it turned to L'Air Liquide, Montreal. The Oxyton that this company supplied, pictured above, is capable of producing 300 tons of high-purity (98 per cent) oxygen a day, working at capacity.

Canadian Engineering Goes Abroad

The model of a pulp and fine-paper mill now being built near Cairo, Egypt, shows the mill design and layout. A Canadian firm, Stadler Hurter International Limited, acted as consultants, made the layout, and are supervising the engineering. The mill will produce 80 metric tons of pulp and fine paper a day, using rice straw and reeds as raw material. Sponsor of the project is Egypt's Organization for Executing the Five Year Industrial Plan, somewhat like a Canadian Crown company in its structure.

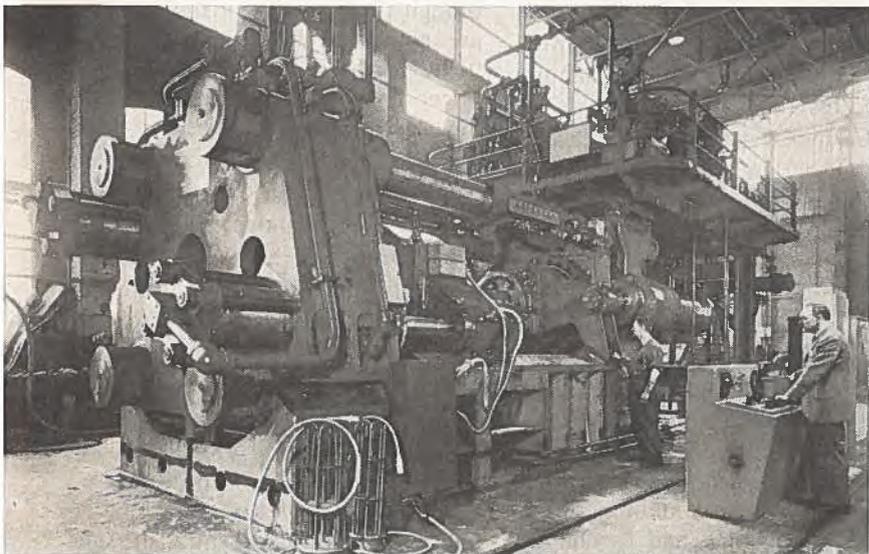




A four-engine, jet-prop, long-range transport plane, built in Canada, has already found customers in the United States, though the first one of the type pictured will not take to the air until April 1961. Known as the CL-44, it is produced by Canadair Limited in two versions, military and commercial (model above). One feature that makes it particularly suited to cargo work is the hinged tail that allows the rear section to be swung aside for the quick end-loading of bulky and heavy shipments.



Switzerland recently purchased this electronic RAMAC 305 computer, made by International Business Machines Company Limited at its Don Mills plant. The RAMAC (Random Access Method of Accounting and Control), shown above being assembled and tested, weighs 10,000 pounds and is the first computer of this type to be exported from Canada. It can be employed in almost any phase of business accounting and record-keeping; was carried by air freight to the company that ordered it, Aufina of Zurich.



An aluminum plant at Alicante, Spain, owned by Aluminio Iberico, S.A., ordered this aluminum extrusion press from Canadian Vickers Limited, Montreal. The press, which weighs 3,500 tons, was photographed as it was undergoing tests on the assembly floor before being shipped. It operates on a direct oil hydraulic drive. The same company bought a 72-ton hydraulic aluminum extrusion stretcher and auxiliary equipment from Vickers. Altogether, this Spanish order totalled more than \$400 thousand.



Meet the Industrial Designer

He can help your product stand up to tougher competition in world markets.

NORMAN DAHL, *Foreign Trade*.

CANADA'S manufacturing industries have a new ally in the fight for a bigger share of world markets—the industrial designer. A relative newcomer to the scene, he has already helped some Canadian businessmen to make bigger sales and win new prestige in foreign markets.

How does he accomplish this? Basically, by applying to a product the rule that form must be related to function. Sometimes he simply changes colours, shapes, materials and packages; often he revamps the entire production process, from planning through fabrication to sales, taking the smallest components into account.

Industrial designers do not confine themselves to consumer goods, where new developments naturally attract more attention. They are also called in to redesign industrial machinery such as printing presses, machine tools, bottling machines and clothes pressers. We sometimes see the results in the new show-window type of plant, with production going on before our eyes. Sometimes the designer's influence is less direct. Factory engineers admit, for instance, that the controls, name plates, dials, knobs, etc., of even the biggest and ugliest machines owe something to changing concepts of design in the consumer goods field. There is a growing awareness that these controls should be better suited to, in fact the essence of, the function they perform.

The Canadian manufacturer who wants to study how design can help boost his sales can begin by investigating two things: first, what is being done in Canada to promote good design and how the manufacturer can benefit; second, how our efforts stack up against those of our competitors.

Canada's Design Council

Canada has a National Industrial Design Council, set up in 1948 to encourage better industrial design and increase public acceptance of it. The Council sets the policies and directs the activities of the Industrial Design Division of the National Gallery of Canada. Its ten or more members include designers, manufacturers, retailers, consumer representatives and architects; it meets in Ottawa about three times a year. Since its inception, it has, through the Design Centre in Ottawa, been hard at work promoting better design, believing that this is the most important factor in the success of Canadian-made goods in international trade in the light of increasing competition from countries with huge home markets and low labour costs. This theme runs through all the Council's work—its Design Award Program, its exhibitions, its scholarships to Canadian students, and its publicity in the press and on radio and television.

"NIDC's message has caught on, but only just," says Norman Hay, Director of the Council and of the Design Centre. "One of our most important tasks has been to point out that basic industrial design means more than mere *styling*." In fact, it was because manufacturers began thinking they had to change

the styling of their products every year, as the automobile industry does, that NIDC has decided to present the Design Awards in future every three years. The categories of products eligible for the awards have been broadened to include engineering equipment and architectural components and the first awards under the new setup will be made in the fall of 1961. An international jury will choose the winners.

Choosing a Designer

When I asked Mr. Hay what services are available to Canadian businessmen, he showed me a file of the names of Canadian designers. The Design Centre, he explained, acts as a clearing-house for manufacturers seeking designers and designers looking for jobs. Each designer provides information about his education and experience, the products he has designed (this includes the manufacturer, the date of production and trade name), types of material he is most interested in working with, and so on. Although the majority of these people are active in the consumer goods field, Mr. Hay can also put his finger on some who might help in the development of machine tools and heavy industrial equipment. He expects that the next three years will see much more collaboration between designers and engineers and hopes for significant results by the time the next Design Awards are presented.

Canadian Designs Abroad

Export success stories about Canadian firms will soon be appearing in the first of a series of bulletins that NIDC will publish. The

process of collecting these case histories is just beginning, but the results so far are interesting because a number of the firms list design as one of the important factors in their success abroad. All of these firms turn out products that have won Design Awards.

Clairtone Sound Corporation Ltd. of Toronto, makers of stereophonic high-fidelity sets, places design at the top of its list, side by side with market research in the United States. The firm's vice-president is a furniture designer. Electro Vox Ltd. of Toronto, which engages a firm of consultant designers, feels that the success of its inter-office communication systems in Mexico and the U.S. is due to flexibility and design. Sunshine Waterloo Co. Ltd. of Waterloo, Ontario, designed its steel office furniture especially to withstand fluctuations in heat and humidity; this firm has been exporting to Central and South America and the West Indies for the past 13 years. Vertical Records Limited of Toronto, which makes record-keeping systems, sells 15 per cent of its production in the United States; it has an industrial designer on its staff. Some time ago, J. A. Wilson Lighting and Display Ltd. of Toronto felt that production for the home market was limiting its designs and struck out on a program of designing for export, using the services of a professional. That was six years ago and since then it has sold lighting fixtures in Britain, Australia, the United States, France, Germany, South America and India.

Automation

What of the future? With a hard-working Industrial Design Council on their side, Canadian manufacturers should be able to multiply these successes and develop striking and original products for export. With rapid changes in technology, however, they may find that keeping pace with other countries will require effort and ingenuity. "Think of the advance in automation, for example," Norman Hay points out. "This could help correct Canada's

competitive disadvantage of high labour costs." Danish furniture-makers get the smooth-as-butter finish on their teak furniture by hand rubbing, a method that would shoot costs far too high to be economical in Canada. The retooling necessary for the introduction of automated processes into Canadian plants poses problems for production planners and designers. But Mr. Hay has confidence in Canadian know-how and the world has confidence in Canadian materials. "The need," he says, "is to arrange a more effective marriage of the two."

Developments in Europe

If Canadians are only beginning to swing into high gear, what has been going on among our competitors in the past few years?

● *Britain* set up its Council of Industrial Design in 1944. The Government was alarmed, writes Sir Gordon Russell, Director of the Council, in the *Board of Trade Journal*, at the prospects for British exports at the end of the war and at the advances in industrial design made in other countries. One of the Council's earliest projects was a report to the Ministry of Education on the training of industrial designers. The Council's propaganda has proved so effective that the Federation of British Industries is concerned about a possible shortage of industrial designers. And this has happened because Sir Gordon, in a period of booming trade, has been able to convince British manufacturers that their designs are not good enough!

● *France* is said to have originated the concept of industrial designing—at least according to the late J. Vienot, formerly Director General of the French Institute of Industrial Designing. "Industrial designing," he once wrote, "was born out of the necessity to produce satisfactory objects, and out of the impossibility of indulging in trial and error or making basic changes once production has gotten under way." The

designer in France is being called in more and more not to correct dropping sales but to collaborate with the engineer in the early stages of production. The Institute awards the label "Beauté-France" periodically and winners are grouped together in an association.

● *Czechoslovakia*, whose pavilion at the Brussels World's Fair caused such favourable comment, is undergoing an "internal aesthetic revolution", according to Norman Hay who visited the country last May. "This revolution," he says, "may make Czechoslovakia a real leader in the world of design, because with complete nationalization it is theoretically possible for the design of all consumer goods to be radically altered and changed in a matter of months and this is just what is being attempted." Mr. Hay noted everywhere a feeling of excitement at the prospect of design becoming an integral part of manufacturing and a determination to put the country's most advanced designs on the export market.

● *Norway's* design centre PLUS was set up in 1958 to promote co-operation between designers, craftsmen and industry in order to raise the standard of Norwegian products. Twelve workshops have been opened, each under the direction of a leading Norwegian designer, in the ancient town of Fredrikstad. Here 30 craftsmen, sponsored by PLUS, live, work out their designs and sell them to manufacturers for large-scale production. Norwegian industrialists have taken a keen interest in the project; in fact, they have established and equipped most of the workshops. Money for upkeep has been raised from municipal and other sources but it is expected that the shops will be self-supporting in two or three years through sales of designs to manufacturers and of crafts to the tourists who flock to Fredrikstad.

Also from abroad come these interesting sidelights. In Czechoslovakia, machine-tool builders have

called in three prominent sculptors to add aesthetic appeal to the functional lines of their equipment. In Norway, Fred Olsen & Co., ship-owners, have commissioned the abstract painter Jakob Weidemann to decorate the bow of their big new turbine tanker *Borgny*. Says Weidemann, "Graphic art can soften and warm the mechanical perfection which a turbine tanker represents."

Rather 'far out,' as they say? Not as far as one might think. Success in the harsh world of the 'hard sell' is beginning to depend more and more on producing what human beings find pleasing. And buyers are influenced—often controlled entirely—by what they think beautiful.

The Corporate Image

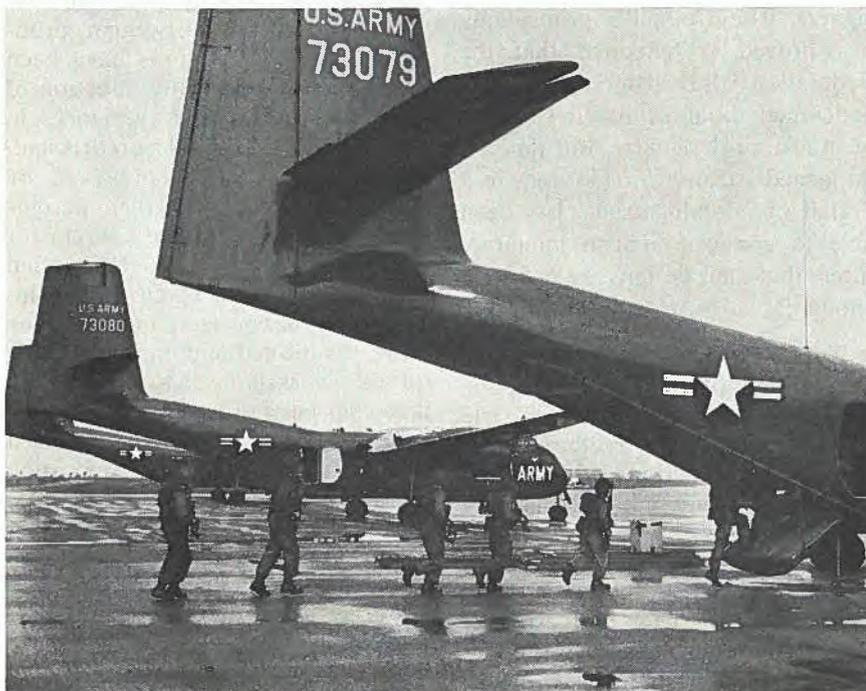
Coldly beautiful products, however, do not sell themselves. Businessmen skilled in sales promotion know how much depends on personal contact with their customers.

This can mean not only the impression made through actual visits to agents and buyers abroad, but also through what has come to be known as the firm's 'corporate image', or the over-all picture customers get of the company and its products. A firm sometimes asks a designer to reshape its personality. When this is done well, we are conscious of the firm's image in everything it owns that can be seen and handled. The designer co-ordinates the company's trademark, packaging, stationery, invoices, catalogues, advertisements, plant and office equipment and décor, the signs on its delivery vehicles—virtually everything that will fix the image in people's minds.

This sounds like an ambitious undertaking and indeed some large European firms, such as Olivetti and Max Braun, have made a remarkable success of it. But of all the factors affecting sales, design is probably the least dependent on

size. In fact, the advantage often lies with the small company, according to the U.S. Small Business Administration in its booklet *Design Is Your Business*. Design is a creative activity that is best carried on by an individual or a small group. The small manufacturer is often better able to concentrate on the particular section of the market or the type of consumer he is best able to serve. He can design products for special customers in a specific export market and, because his operation is small, can adjust quickly and cheaply to changes in taste or in an emergency can shift production to meet strong competition.

There is no lack of competitive products on the export market these days. Canadian goods, however, can hold their own with the best of them, especially if a company's export team includes a skilled and experienced industrial designer.



First export customer for the new DHC-4 "Caribou", made by de-Havilland Aircraft of Canada Limited, was the United States Army. The picture shows the U.S. crew taking over when four of these planes were delivered to the Army at the company's Downsview plant. The "Caribou" is a utility transport plane that can carry 29 battle-ready men and can operate to and from unprepared landing strips of about 600 feet. It has a cargo capacity of up to 3½ tons and a range of up to 1,400 miles. A team from de-Havilland is now on a world tour to demonstrate and sell this new aircraft, which is also made for use in commercial transport.



Commodity Notes

Alcoholic Beverages

CEYLON—More foreign alcoholic beverages are being imported into Ceylon. For the seven months ended July this year, the value of these imports, chiefly beer, was Rs. 4,076,889 compared with Rs. 2,468,260 for the corresponding period last year. Sales of local beer and spirits have also risen, despite the increase in prices introduced in the budget this year—Colombo.

Aluminum

UNITED STATES—Automotive stylists continue to find more uses for aluminum trim on cars. In the past four years, more than 150 million pounds of the light metal have been employed for trim, according to the American Society of Body Engineers which met recently in Detroit. In 1956, aluminum trim averaged a mere 2.8 pounds a car; now it is estimated at ten pounds. Total use of aluminum in a modern car now averages over 50 pounds.

About 70 per cent of the aluminum sold for car trim is for exterior use; it is predicted that this will rise sharply if aluminum bumpers make their appearance. Some reports indicate that at least two companies are considering aluminum bumpers for their 1961 models—Detroit.

Asbestos

UNITED STATES—The Jefferson Lake Sulphur Company of New Orleans has acquired a major deposit of chrysotile asbestos near Stockton, California, and will enter the asbestos-products field. Some 15 million tons of commercial asbestos ore have been proven and substantial additional quantities are indicated. The company plans to install equipment and erect a mill with a daily rated capacity of 2,000 tons of ore. This, it is reported, will meet one-third of California's needs—New Orleans.

Breakfast Foods

IRELAND—A new factory, Brown & Polson (Ireland) Ltd., to produce breakfast foods (Kellogg's cornflakes, rice crispies and wheat flakes) was opened in Dublin on October 27, 1959. It covers 13 acres and the buildings and machinery cost £200,000. Apart from the production of breakfast foods, it will carry on a large

trade in bulk goods including starch, adhesive products, sugar for brewing, and other commodities, serving over 80 different industries. It will also export to Iceland, France and other countries—Dublin.

Cattle

JAMAICA—Efforts of the Jamaican agricultural authorities to develop distinct breeds of tropical cattle have paid off with a £30,000 order from a Venezuelan rancher. The 500 head of cattle, the largest single order ever received, comprised Jamaica Brahman, Jamaica Red and Jamaica Black—Kingston.

Crayfish

AUSTRALIA—Record crayfish exports in 1958-59 totalled 7,673,000 lb., valued at over \$7 million. The bulk of Australia's crayfish production comes from Western Australia. The largest market is the United States and this commodity is thus a significant dollar earner. The average f.o.b. price of shipments from Western Australia was about 86 cents per lb., a slight decrease from the previous year—Sydney.

Fish

NORWAY—During the first half of this year 13,800 tons of fresh fish and shellfish valued at an estimated kr.33 million were exported, against 12,700 tons valued at kr.31 million over the same period of 1958. The United Kingdom took 8,700 tons, an increase of 23 per cent, and this year is expected to buy altogether some 18,000 to 19,000 tons—Oslo.

Fuel Oil

ARGENTINA—Uruguay is to receive Argentina's first shipment of fuel oil. An agreement was signed in October for the supply of 10,000 cubic metres of oil valued at about US\$250,000—Buenos Aires.

Gloves

HONG KONG—Hong Kong glove manufacturers are discussing the possibility of forming a syndicate or federation to handle their sales. Under present plans, the proposed federation would accept orders and dis-

tribute them among member factories according to their production capacity and past export records. The main purpose of this federation is to eliminate cut-throat competition among manufacturers who have been undercutting prices and thus losing potential profits to the benefit of foreign buyers—Hong Kong.

Honey

CUBA—The first co-operative of beekeepers has been organized in the Province of Matanzas by the National Agrarian Reform Institute. The 13 members are already producing 241,000 barrels of honey a year and hope to reach the 500,000 barrel-mark next year—Havana.

Mandarin Oranges

JAPAN—According to the Japan Agricultural Products Exporters' Association, the estimated pack of mandarin oranges for 1959 is set at 820,000 metric tons, about 10 per cent more than in 1958. Of this, about 500,000 tons will be consumed in Japan, 146,000 will be deep-frozen for sale domestically in the off-season and for export, 120,000 will be canned, 20,000 packed as juice, and 16,000 exported. Expressed in terms of cases weighing 9½ lb. each, the total quantity Japan expects to ship to Canada this year is 2,950,000, compared with last year's record of 2,675,000—Tokyo.

Meat

JAMAICA—Plans have been completed for a £25,000 plant to produce bacon, sausages and hams from local pork. Farmers are being urged to switch to a leaner type of animal in the interest of better quality meat products—Kingston.

Mink

IRELAND—It is estimated that there are about 25 mink farms in operation in Ireland. The largest of these is situated in Co. Dublin, where some 800 animals are housed at present. Many of these will be killed shortly and their pelts consigned to the Hudson's Bay Co., London. Mink raising in Ireland is a relatively new industry and apparently has a future. Should a market develop, mink would prove an important export earner. The import of live mink is rigidly controlled under licence by the local Department of Agriculture. Present breeding stocks in Ireland consist largely of Norwegian, Danish and Finnish strains—Dublin.

Paints

TRINIDAD—Imperial Chemical Industries Limited has been granted pioneer status by the Government of Trinidad to manufacture its range of decorative and maintenance paints on the island.

A modern factory will be erected about 16 miles from Port-of-Spain within the near future and will be

the first of ICI's plants in the Caribbean. It is estimated that output will not only supply Trinidad and Tobago but other West Indian markets as well—Port-of-Spain.

Paper Machinery

INDIA—Three paper machinery manufacturing plants are to be set up in India, in collaboration with Swedish and British firms. The Government has given its approval to the project submitted by two firms in Bombay and one in Calcutta. The plants will make seven paper-and-pulp making units with a capacity ranging from 4 to 15 tons a day. One of the plants will manufacture 1,000 tons of papermaking accessories a year. The Government is also considering a scheme for a similar plant in collaboration with a Japanese firm—Bombay.

Printing Ink

VENEZUELA—The Sun and Chemical Corporation of the United States recently opened Venezuela's first printing-ink factory. It will produce all types of inks such as typographic, lithographic, flexographic and rotogravure—Caracas.

Rubber Chemicals

INDIA—The Government of India has issued a licence to a private firm to make, beginning in 1961, organic accelerators, antioxidants and retardants for the rubber industry. It is hoped that the firm will largely satisfy India's need for these chemicals—Bombay.

Seed Potatoes

VENEZUELA—The Venezuelan Agriculture and Livestock Bank, the Potato Growers Co-operative of the States of Yaracuy, Aragua and Carabobo, and the National Agrarian Institute have placed and confirmed orders with two leading Canadian exporters of seed potatoes for 194,273 crates of seed of the Red Pontiac, Kennebec and Sebago varieties, valued at over \$775,000—Caracas.

Washing Machines

PERU—An earlier issue of *Foreign Trade* reported that Peru would begin manufacturing household appliances, including washing machines, in 1960. The International Finance Corporation has now agreed to invest US\$250,000 to assist the Peruvian firm to install plant facilities for the manufacture of these appliances. The company will produce washing machines under licence from RCA Whirlpool of the United States. An industrial promotion law is now before the Peruvian Congress and if it is approved, it will guarantee local manufacturers adequate tariff protection. There are possibilities of other U.S. companies manufacturing their appliances in Peru—Lima.

Argentina Attracts Investors

Foreign capital investment law, passed a year ago, has prompted the setting up of many new enterprises. Manufacture of motor vehicles is stressed, but wide range of industries is represented.

C. S. BISSETT, *Commercial Counsellor, Buenos Aires.*

A diversity of foreign investors representing most of the major industrial countries have demonstrated confidence in Argentina's future and in its new economic policy. On December 30, 1958, a new foreign capital investment law was promulgated. It abrogated the previous restrictive law passed during the Peron regime, the chief effect of which was to discourage investment in any worthwhile volume. The advantages of the new law were confined to capital investments in essential and economically desirable industries, the products of which could either be sold abroad to produce needed foreign exchange or replace necessary products now imported and so conserve foreign exchange. Money, machinery or other kinds of equipment, spare parts or prime materials were all allowed to be classed as "foreign capital". Existing local industry was accorded equal import privileges and was protected against undue competition by the selective clause mentioned above. Certain concessions on customs duties, taxation, credit facilities, capital repatriation, etc., were offered. Unrestricted remission of profits and dividends through the free exchange market was permitted and treatment equal in all respects to that accorded domestic capital was guaranteed.

Motor Vehicles Preferred

The new law has attracted a substantial amount of new foreign private capital, spread among a large number of industries. The Minister of Economy has stated that he has

already accepted 90 proposals and many more are still under study. Of these, 74 involved an investment of \$173 million. Many of them are wholly new industries established by firms entirely new to Argentina. Others, either to set up a new industry or extend the range of an existing one, are to be undertaken in co-operation with established local firms or with the foreign company's Argentine branch. The number of new entries covering two products—motor vehicles and tractors—is surprising; in neither of these had there been much previous interest. Kaiser Argentina has been turning out jeeps for some years plus a few *Carabela* passenger cars; another small firm produced a few *Autocar* pick-up trucks. However, Ford and General Motors are now rehabilitating their assembly plants of pre-Peron days and are gearing them to make trucks with up to an expected 90 per cent Argentine content within five years. Chrysler is also setting up to turn out trucks on the same basis. The new plant of Mercedes Benz which, because of its association with Peron, never got into production is also to start making trucks and Sweden's *Volvo* will establish a plant to produce ten-ton trucks. France's *Renault*, Italy's *Fiat* and Germany's *Borgward* and *Auto Union DKW*, all light cars, are to be produced here, as are Britain's *Morris Minor* and *Austin A40 and A55*. An Italian firm will turn out three-wheeled vehicles and also motor scooters, although the *Lambretta* is already produced here.

Previously only a limited quantity of one make of tractor was manufactured in Argentina. This was assembled from parts made by a number of individual firms. Now several companies plan to establish tractor plants here on the same basis as those for motor trucks, gradually increasing to the maximum the percentage of the total to be manufactured in Argentina. The firms that have announced entry into this field are Deutz Hanomag and Fahr of Germany, John Deere of the United States, and Fiat of Italy.

Chief Projects Authorized

Apart from the above items, the chief projects that have been authorized and that are designed to manufacture for resale are given below, by country and product.

United States—rubber auto tires (2), oil-well pumping equipment, electrical equipment for diesel-electric locomotives, underground railway carriages, trolley buses, electric motors, generators and transformers, pipe for oil and gas pipelines, synthetic rubber and carbon black, nylon yarn, petrochemicals, spark-plugs, reconditioning oil drums, steel rolling mill, razor blades, pharmaceuticals (3), electric automatic industrial controls, precision instruments, electronic equipment, edible and industrial gelatine, road-paving machines, foundry stampings, electric light bulbs, petroleum refinery, wood pulp, textiles, fountain pens.

Germany—woollen yarn, diesel motor pistons, wood pulp, opaline plaques, wooden plaques, wet batteries, electric lighting plants

Peru—roadmaking equipment

Sweden—matches, wet batteries, bulldozers

United Kingdom—matches, diesel motors, forms for tabulating machines, cash registers

Holland—glycerine and vegetable oils and fats, tea processing

France—polyvinyl chloride

Switzerland—rubber auto tires, pipe for oilfields, pre-compressed cement pipes, tools and machine tools

Italy—electric motors, electro-mechanical equipment, railway materiel, pharmaceuticals, extruded metal screen, hydraulic engineering equipment

Belgium—textiles and yarns, steel rolling mill

Liberia—water filter tubes

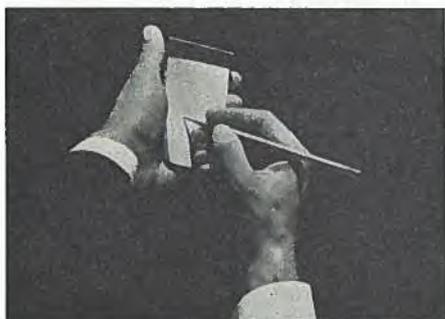
Venezuela—pharmaceutical products

Finland—aerological radiosonde apparatus

Panama—pharmaceuticals.

In addition to the above projects already approved, a substantial number of others are under study, including two for paper mills in which Canadian paper producers are interested. Some of these projects are based on loans from inter-

national financial institutions and others are covered by insurance from foreign governments. A large number, however, are otherwise unsecured investments made at the investor's sole risk. To the projects above must be added many others, such as the petroleum development and distribution contracts requiring heavy initial investment, and those not concerned with manufacture for resale—such as public utilities, cargo ships, railway rolling stock and other types of goods for the service industries. ●



General Notes

Brazil

WORLD BANK AIDS POWER DEVELOPMENT—Brazil's National Treasury has guaranteed the \$11.6 million loan granted by the World Bank to the Brazilian Traction, Light & Power Co. The loan is to be applied to the company's expansion program in the States of São Paulo and Rio de Janeiro—São Paulo.

British Honduras

PRICE CONTROLS REMOVED—Price controls were removed from meat and cattle on July 15 as a means of stimulating production. Supply is expected to exceed local demand in the near future and the industry hopes to begin exporting chilled and frozen beef—Kingston.

Finland

NEW ORE MINES—The Finnish state-owned mining company Outokumpu was recently granted a loan of DM50 million, the biggest foreign loan ever given to a company in Finland. The money will be used to finance a new mine in Pyhasalmi, central Finland. It is estimated that the mine will yield 600,000 tons of ore for at least 30 years or, on processing, 360,000 tons

of high-quality sulphur concentrate, 5,000 tons of copper and 18,000 tons of zinc concentrates.

In July the iron ore mine in Karvasvaara, owned by the Otanmaki Company, came into production. Deposits are estimated at 1.5 million tons of iron ore. In the beginning of 1960, the Hutunvaara uranium mine in North Karelia will start producing. Initial output is estimated at 30,000 tons a year—Stockholm.

India

EXPORTS OF MANUFACTURES—Exports of manufactured goods during the first seven months of this year totalled Rs.37 million compared with Rs.22.9 million during the corresponding period of 1958. Principal increases were in sewing machines, electric fans, steel furniture, textile machinery, aluminumware and diesel engines—Bombay.

Ireland

NEW FACTORY—A new Irish company (International Dynamic Industries Ltd., an associate of Chicago Dynamic Industries Inc.) has set up a factory at Shannon Free Airport to produce bowling alleys. It

will also assemble electrical components and make cable harness. Products will be exported to Europe and to Commonwealth countries—Dublin.

Jamaica

TELECOMMUNICATIONS EXPANDED—Cable & Wireless (West Indies) Ltd. plans to spend £750,000 over the next 18 months to expand and improve present facilities. This includes the establishment of a teleprinter service to New York, plus additional telephone lines to Miami and Barbados—Kingston.

Netherlands

FERTILIZERS FROM NATURAL GAS—A contract was signed recently between the State Gas Enterprise and Hoogovens (Royal Netherlands Blast Furnaces and Steelworks), under which the State Gas Enterprise will supply about 200,000 cubic metres of natural gas a day to Hoogovens. Mekog (N.V. Maatschappij tot Exploitatie van Kooksoevengassen) will use the gas as base material for fertilizers. The new natural gas process replaces one that has become economically less attractive. It is expected that the new unit will be in operation by the end of 1960—The Hague.

NUCLEAR POWER PLANT POSTPONED—The directors of the Co-operating Electricity Works (SEP) have decided that construction of a nuclear power plant is not yet economically justified, according to a recent press release.

They are of the opinion that construction of a 150 thousand kw. plant with an annual capacity of 1,000 million kwh. would be ten million guilders dearer per year than that of a conventional power plant. Although the price of fissionable material is expected to drop gradually, a loss of 100 million guilders should be taken into account during a depreciation period of 15 years. Electricity from a nuclear plant would be one cent per kilowatt dearer than that from a conventional plant.

The directors of SEP said they had received ten offers from firms willing to build a nuclear power plant—The Hague.

Norway

NICKEL WORKS—A ten-year expansion scheme at the Falconbridge Nikkelverk in Kristiansand has now been completed. This company, the sole producer of nickel in Norway, is a subsidiary of the Canadian Falconbridge Nickel Mines Ltd. In ten years the annual output capacity of the Kristiansand plant has been raised from 10,000 to 26,000 tons of nickel, and from 6,000 to 14,000 tons of copper. In 1952 the firm started producing cobalt and its annual output now totals about 3,000 tons. The raw material used is nickel-copper matte imported from Canada.

Last year exports of nickel totalled 21,400 tons valued at Kr.269 million. The United States took nearly 12,600 tons, West Germany 3,800, Sweden 2,300 and the United Kingdom 1,500. Exports of copper totalled 16,900 tons worth Kr.63 million, of which 9,200 went to West Germany, 3,200 to Switzerland, 2,500 to France and 1,700 to the United Kingdom—Oslo.

Venezuela

NEW VISA REGULATIONS—As of November 1, Canadian citizens intending to visit Venezuela will be granted multi-entry visas valid for one year at a fee of ten bolivars (\$2.85), one-half the normal fee of twenty bolivars. Canadians going to Venezuela as tourists for a period of up to six months will be granted tourist cards free of charge. Venezuelan citizens intending to visit Canada will be granted, free, multi-entry visas valid for one year. Venezuelans who do not now require visas will continue to be admitted without them. Entry to either country remains subject to the laws and regulations of each—Caracas.

Trade Commissioner on Tour

The following officer of the Trade Commissioner Service is undertaking a tour in Canada. His itinerary is:

JOHN MACNAUGHT, Assistant Commercial Secretary in Wellington, New Zealand.

Ottawa—Jan. 18-29

Montreal—Feb. 1-3

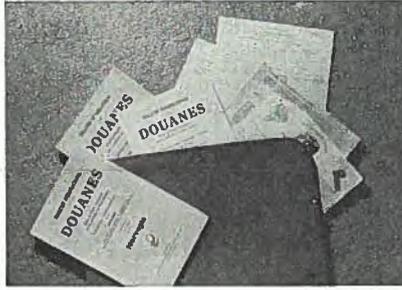
Businessmen who wish to see Mr. MacNaught should get in touch with the Board of Trade or Chamber of Commerce in the cities mentioned, with the following exceptions. In Toronto, Winnipeg and Edmonton, the Trade Commissioners make their headquarters at the offices of the Canadian Manufacturers Association; in Windsor, Ontario, at the offices of the Greater Windsor Industrial Commission; in St. John's, Ottawa and Vancouver, at the Department of Trade and Commerce; in Victoria, at the Department of Trade and Industry, and in Fredericton at the Department of Industry and Development.

Tours of Territory

R. F. RENWICK, Commercial Secretary in Port-of-Spain, Trinidad, will visit Bridgetown, Barbados, from February 1-6, and St. George's, Grenada, from February 7-10.

H. W. RICHARDSON, Trade Commissioner in Guatemala City, Guatemala, will visit Nicaragua and El Salvador from January 18-30.

Businessmen who would like these officers to undertake assignments should get in touch with them at their posts as soon as possible. Write to Mr. Renwick at Port-of-Spain and Mr. Richardson at Guatemala City.



Trade and Tariff Regulations

Australia

TARIFF BOARD INQUIRIES—The Australian Minister for Trade and Customs recently referred to the Tariff Board for inquiry and report the question whether assistance should be accorded, through tariff action or otherwise, to the production of the following goods:

1. Hand saws, non-mechanical; blades (other than hacksaw blades) for hand or machine saws, handles and frames for non-mechanical saws.

For the purpose of this reference, the term blades includes band saw and endless saw blades; circular saw blades; straight saw blades, including those for filigree saws; circular slitting and slotting saw blades; straight toothless stone-cutting saw blades, provided that their extremities are perforated or otherwise shaped for fixing; toothless cutting discs (friction discs) for cutting through metal, and chain saws, i.e., not being sawing machines.

2. Woven fabrics and fabrics consisting of warp without weft assembled by means of an adhesive, of a width not exceeding thirty centimetres, with woven or false selvages, but not including:—seamless tubular fabrics, waterwaved ribbons, braids, fringes, ornamental trimmings and edgings, woven labels and badges, impregnated or coated fabrics, elastic, embroidery, asbestos cloth, glass piecegoods, or human hair piecegoods.

3. Dolls.

4. Travel goods (for example, trunks, suitcases, hat boxes, travelling bags, haversacks, knapsacks, rucksacks, kitbags), handbags, wallets, purses, satchels, briefcases, collar boxes, dressing cases, pouches, toilet bags, tool cases and similar containers, of leather or of composition leather, of vulcanized fibre, of artificial plastic sheeting, of paperboard, or of textile fabric.

Canadian firms exporting these products to Australia may wish to have their views on these inquiries placed before the Tariff Board. The most effective method of doing so is for the Canadian exporter to have his Australian agents act on his behalf before the Board. Action should be taken as soon as possible because tariff inquiries normally begin in Australia soon after the announcements are made.

Rates of duty on these products may be obtained from the International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

IMPORT RESTRICTIONS LIBERALIZED—The Australian Government announced recently further steps towards the removal of discrimination against the dollar area and the general relaxation of import restrictions.

Discrimination against imports from the dollar area of lumber, veneers, plywoods, and a number of consumer goods has been eliminated in Australia effective December 1, 1959. As a result, Canada will now be on the same footing as sterling countries and other non-dollar countries for all exports to Australia except motor vehicles, most textiles and a few other consumer goods. The Australian Government has announced also that discrimination against motor vehicles imported from the dollar area will be removed effective October 1, 1960.

Australia has also increased the ceiling on total imports from A £850 million to A £875 million on an annual basis, effective December 1, 1959. Import controls have been liberalized for most products remaining under restriction. Sixteen additional industrial materials have now been exempted from licensing and 48 other industrial items are being permitted import on a freer basis. Nearly all import quotas have been increased by 5 per cent. Many products of interest to Canada are subject to quota, particularly manufactured products.

The Australian Government has further announced that effective April 1, 1960, imports of lumber will be licensed more freely. Australia is an important market for Canadian lumber. In the first nine months of 1959, this export to Australia amounted to \$4.6 million, or more than 10 per cent of total exports to Australia.

Further details regarding this liberalization may be obtained from International Trade Relations Branch, Department of Trade and Commerce.

Bermuda

LICENSING ANNOUNCEMENT—The Bermuda Supplies Commission has announced that, effective November 21, 1959, the list of goods prohibited

import from dollar countries has been abolished, with the exception of auto-cycle and bicycle propulsion units, and motor vehicles. These two items will be removed from the prohibited list effective May 1, 1960.

The effect of this announcement is that Bermuda will no longer operate a list of prohibited imports in connection with import procedure, as from May 1, 1960.

Ceylon

IMPORTS OF BASIC FOODSTUFFS FREED—The Government has lifted restrictions on the import of a wide range of essential foodstuffs in an effort to bring down the cost of living. It has been found that the existing restrictions by the private trade on imports of essential foodstuffs, such as rice, dhal, Maldive fish and other commodities, tended to create artificial shortages and pushed prices up. It is expected that a freer system of imports will facilitate marketing and bring down prices. Further revisions in import policy are being prepared by the Minister of Commerce and Trade—Colombo.

Ethiopia

IMPORT CONTROL REGULATIONS AMENDED—In three Exchange Control Notices to Importers dated August 29, September 1 and 29, 1959, the Assistant Exchange Controller of the State Bank of Ethiopia announced amendments to the import trade control regulations of Ethiopia.

Under the import control regulations currently in effect, import licences are not required but payments for imports require exchange licences issued by the Exchange Control, a department of the State Bank of Ethiopia. Importers must apply for an exchange licence prior to the clearance of the goods and these are freely granted for all goods and commodities.

According to the Exchange Control Notice of September 1, 1959, importers must now obtain the necessary foreign exchange licence from the State Bank of Ethiopia before placing orders for goods from abroad. The foreign exchange licence for imports will not be issued other than for payment in the currency of the country of origin of the goods.

The Exchange Control Notice dated August 29 provides that applications for foreign exchange in payment for imports included in the list attached to the notice will be authorized and issued only upon payment to the State Bank of Ethiopia of a deposit in Ethiopian dollars equivalent to 100 per cent of the value of the goods imported. Such deposits may be withdrawn only to effect payment for the specified imports in whatever manner is called for, or in the event of cancellation of the foreign exchange licence.

The goods subject to 100 per cent deposit include:

Apparel; woollen piecegoods; blankets (woollen); cotton thread; cotton yarn; cotton manufactures (excluding cotton yarn); cotton drills; cotton piecegoods; cotton cordage; grey cotton piecegoods;

jeans, grey, white or dyed; alcohol in bulk; cereals, raw; fish of all kinds; fruits, canned; foodstuffs, canned; fats, edible; jams; jellies; milk, evaporated or condensed dried; cocoa preparations; macaroni; marmalades; spirits; tomato juice and extracts; vegetables, fresh or preserved; wheat paste; flour of all kinds; bicycles; motorcycles; motor vehicles, other than for industrial purposes; plastic manufactures, except for industrial purposes; radio sets and parts; stoves, ranges for cooking and heating; watches.

The Exchange Control Notice dated September 29 provides that foreign exchange will not be provided for a period of six months beginning October 1, 1959, and/or until further notice for the following goods: grey cotton goods; yarn; gunny bags; sugar; alcohol in bulk; leather shoes; beer.

The complete schedule of goods affected by the Exchange Control Notice of August 29, 1959, may be obtained from the Asia and Middle East Division, International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Ghana

IMPORT LICENSING ANNOUNCEMENT—The Acting Controller of Imports and Exports, Ghana, advised importers on November 14, 1959, that consideration will be given to the issuance to established merchants of licences which authorize the import into Ghana from dollar areas during 1960 of all classes of goods with the exception of the following: petroleum products, explosives, ordnance, cinematograph films, gold.

Applications for import licences should not be submitted for the following goods which have already been placed under Open General Licence: wheat flour, cash registers and parts, tractors and spares, timber machinery and spares, salmon and salmon trout, newsprint, road motor vehicles and spares.

Lebanon

RESTRICTED IMPORTS ANNOUNCED—The Ministry of National Economy of the Republic of Lebanon announced on October 1, 1959, the schedule of commodities which are subject to a "prior import licence" and the list of prohibited imports.

For the purposes of import control, restricted goods are divided into two classes: goods for which prior licences must be obtained before a firm order is placed abroad, and prohibited goods. Under the current import trade control regulations of Lebanon, all goods not included in these two lists are free and can be imported into Lebanon without licence.

The commodities announced as restricted on import into Lebanon are as follows:

Goods subject to a prior import licence include: powdered milk for the chocolate and biscuit factories, wheat, rye, barley, oats, maize, buckwheat, flour, groats, semolina and husked cereal grains,

bran, malt and malt extracts, preserved apples, salt, acetic acid and acetic anhydride, methanol, varnished leather, travelling requisites of leather, carpentry or joinery work, furniture and parts, women's clothing except knitted wear, footwear, furniture and parts of iron or steel, doors and windows of iron or steel, gas meters, toy balloons and similar articles of thin inflatable sheet-rubber.

Prohibited goods include: arms, weapons, ammunition and all implements of war; narcotics; tobacco, cigarettes, cigars, unless for the government monopoly; diesel vehicles, engines and cylinders.

The complete schedules of restricted goods under the current import control regulations of Lebanon may be obtained from the Asia and Middle East Division, International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Peru

IMPORTS OF MOTOR VEHICLES—Peru has abolished the quota system for imports of motor vehicles. Previously, each foreign manufacturer was assigned a quota, covering the number of vehicles per year he could import into Peru. This restriction has now been removed. The quota for the year ended October 1, 1959, was 4,000 units.—Lima.

Rhodesia and Nyasaland

QUALIFICATION FOR PREFERENTIAL RATES OF DUTY—The Federal Government of Rhodesia and Nyasaland has amended the regulations governing the qualifications under which manufactured goods may enter the Federation at preferential rates of duty.

Rebate of customs duties may be allowed on goods manufactured in a specified country if a specific percentage of the factory cost of the goods in their finished condition is represented by the labour, or the material and labour, of the specified country in which the last process of manufacture was performed. The percentages which apply to various goods are listed below.

(a) Goods classified under Item 73 (a) or 75 (1) of the customs tariff, not less than 30 per cent

(b) Printed piecegoods as defined in Note (2) to Item 76 of the customs tariff, and being classified under that item of the customs tariff, not less than 30 per cent

(c) Piecegoods classified under Item 76 of the customs tariff, with the exception of printed piecegoods as defined in Note (2) to that item, imported or taken out of bond:

(i) for use, under rebate in terms of paragraph (s) of subsection (1) of section 102, in the rubber tire and tube manufacturing industry, not less than 30 per cent

(ii) otherwise, not less than 50 per cent

(d) Cables, wires, flexible cords, conductors, busbars and similar materials used as conductors, or in connection with the generation, transmission and distribution of electric power, classified under Item 110 (1) of the customs tariff, not less than 5 per cent

(e) Goods not enamelled or coated, classified under Item 121 of the customs tariff, not less than 5 per cent

(f) Brazing alloys, welding electrodes; brass, bronze, copper and copper alloys in foil, rod, bar, slab, pellet, grain, block or powder form, classified under Item 126 (1) of the customs tariff, not less than 5 per cent

(g) Brass or copper tube in the length and brass and copper tube in the length, classified under Item 134 (f) of the customs tariff, not less than 5 per cent

(h) Goods other than those mentioned in paragraphs (a), (b), (c), (d), (e), (f) and (g), not less than 25 per cent

Goods which fall under tariff Items 73 (a), 75 (1), 76 and 121 are:

73 (a), towels, towelling napkins, and towelling, in the piece.

75 (1), piecegoods, canvas, not less than 10 oz. in weight per square yard.

76, piecegoods, woven, knitted, crocheted or felted, n.e.e.

121, brass, bronze, copper and copper alloys; angles and similar forms; extruded sections in the length; sheets and strips, perforated or not perforated, plain enamelled or coated but not further worked up.

Note (2) to Item 76 of the customs tariff reads as follows:

(2) Printed cloth means:

(a) "fabric which has been subjected to any process of printing whereby there is printed on it a design or pattern covering the whole of the surface of the fabric or a substantial portion of it;

(b) "fabric which has been woven from yarns which have been subjected to any process of printing resulting in fabric bearing a design or pattern over the whole of its surface or over a substantial portion of it."

For the purpose of this definition the term "printed" excludes material printed on the reverse side only and material printed on either side with only fugitive colours or dyes.

IMPORT RESTRICTIONS LIBERALIZED—The Government of Rhodesia and Nyasaland entirely eliminated special dollar controls on some 60 items, effective November 27. This means that, with the exception of a few remaining items, all goods from Canada may now be freely imported into the Federation under Open General Licence without individual import permits.

Complete details of the revised licensing system have not as yet been received, but it is understood that the following items of interest to Canada are among the products that have been liberalized:

Cheese, confectionery, wheat, canned fruit, macaroni and spaghetti, meats, peas and beans, furs, hats, hosiery, motor vehicles, sewing machines, detergents, footwear, leather, rubber products, paper bags, cardboard and wrapping paper, stationery, jewellery and musical instruments.

The only remaining items for which special dollar area restrictions are still in effect are:

Blankets and rugs, clothing, textile nets and netting, canvas, tarpaulins, cotton piecegoods, cutlery, metal furniture, radio and television receiving sets, and gramophones. Licences will be freely issued, however, to manufacturers for imports of cotton piecegoods which are still under restriction.

A small number of items will still be subject to control on import into the Federation from all sources.

Further details regarding the licensing treatment to be accorded to specific items remaining under restriction will be published when they have been received in the Department.

South Africa

REPRESENTATIONS RESPECTING THE TARIFF
—The South African Board of Trade announced recently that it had received the following representations respecting the tariff:

Increase in duty on:

1. The following solvents, or blends or mixtures thereof, from free and 10 per cent ad valorem to 25 per cent ad valorem, or 3s. per gallon, whichever duty shall be the greater:

acetone, methyl ethyl ketone
methyl isobutyl ketone
methyl n-butyl ketone
diacetone alcohol
amyl acetate
butyl acetate
secondary butyl acetate
isobutyl acetate
ethyl acetate
propyl acetate
isopropyl acetate
methyl amyl acetate
amyl alcohol
butyl alcohol
secondary butyl alcohol
tertiary butyl alcohol
isobutyl alcohol
methyl isobutyl carbinol

(Applicants: National Chemical Products Limited, P.O. Box 344, Germiston, and Sasol Marketing Company Limited, P.O. Box 11437, Johannesburg.)

2. Woven interlining and tie lining, from various rates of duty to 25 per cent ad valorem or 6d. per yard, whichever is the greater (intermediate duty), and 50 per cent ad valorem or 1s. per yard, whichever is the greater (maximum duty).

Definitions of interlinings and tie linings suggested by the applicant:

(i) Interlining—materials for the interlining or stiffening of garments in the garment manufacturing industry and/or tailoring trade.

Composition

A. Warp—made wholly of single or folded yarn composed of crossbred wool, cotton, rayon, jute, flax, or a combination of any of these.

B. Weft—made wholly of goat, coarse wool or other coarse hair mixed with wool, alpaca, mohair, rayon, cotton, nylon or other man-made fibres, or a combination of any of these.

C. Colour—either natural, tinted, unbleached or dyed black, checked or striped.

(ii) Tie linings—materials for the interlining or lining of neckties for men's and women's wear.

Composition

A. Warp—made wholly of single or folded yarn composed of crossbred wool (not finer than standard Bradford 52's prepared quality), cotton, rayon or other man-made fibres or a combination of any of these.

B. Weft—as in A.

C. Colour and finish—either natural, tinted, unbleached, dyed black, raised, checked or striped.

(Applicant: Stroud, Riley (Pty.), Ltd., P.O. Box 1449, Port Elizabeth.)

3. Shoulder pads, from free of duty to:

(a) in respect of foam plastic pads, 35 per cent ad valorem; and

(b) in respect of wadding pads, 25 per cent ad valorem.

(Applicant: S.A. Shoulder Pad Manufacturers (Pty.), Ltd., P.O. Box 4840, Johannesburg.)

4. Toe caps for boots, from free of duty if of metal and 10 per cent ad valorem if of plastic, to 25 per cent ad valorem.

(Applicant: Mast Industries (1947) (Pty.), Ltd., P.O. Box 1699, Johannesburg.)

5. Stationary diesel engines up to 20 h.p. by 20 per cent ad valorem.

(Applicant: Marendaz Diesel Engines (Pty.), Ltd., Marendaz Town, Meyerton, Transvaal.)

6. Traced napery made from linen and rayon, from 15 per cent ad valorem, and made from cotton from 30 per cent ad valorem, to 40 per cent ad valorem in both cases.

(Applicant: A. G. Morris & Co. (S.A.) (Pty.), Ltd., P.O. Box 72, Elsie's River, Cape.)

7. Electric kettles and finished or semi-finished elements therefor, from 15 per cent ad valorem (minimum rate) and 20 per cent ad valorem (intermediate rate) to, respectively, 30 per cent and 35 per cent ad valorem.

(Applicant: Sunrae Electrical Element Co. (S.A.) (Pty.), Ltd., P.O. Box 299, Johannesburg.)

8. Black and galvanized malleable iron-pipe fittings, by 136s. per 100 lb. in the maximum column of the tariff.

Canadian firms exporting these goods to South Africa may wish to have their views on these tariff inquiries placed before the Tariff Board. The most effective method of doing so is for the Canadian exporter to have his South African agents act on his behalf. Action should be taken as soon as possible because tariff inquiries normally begin in South Africa soon after the announcements are made.

Thailand

RESTRICTED IMPORTS ANNOUNCED—The Ministry of Economic Affairs of the Government of Thailand has recently published the list of goods under existing import control as of October 30, 1959.

Under the current import trade control regulations of Thailand, imports are classified into the following categories: essential goods, the import of which is permitted without the requirement of an import licence, and non-essential goods that may be imported only under an import licence.

The commodities announced as subject to import licence include:

Gold; iron cooking pans; soap containers; ladles, spoons and forks made of aluminum and brass; coat-hangers; tin foil; enamel ironware; metal, cut into spoons, plates, bowls, trays and number plates; sugar; garlic; potatoes; pepper; fresh fruits; fresh or frozen meats; carbonated beverages; melon seeds; matches, veneer splints; coat-hangers; plywood and fibreboards; toothpicks; old newspapers; paper files or folders; paper for printing or writing; wrapping paper; cotton piecegoods; grey cotton shirting and poplin; knitted fabrics; gunny bags; cotton yarns; bags made of grey cotton shirting; canvas shoes, slippers and sandals with rubber soles; rubber heels and soles; ink erasing solutions; stationery paste and glue; fluid glue for stationery uses; rulers made of wood; rubber bands; stationery clips and pins; mosquito poisoning incense; monosodium glutamate; radioactive materials; resins; crude oil; fire-works; mortar, pestle and grinding mill made of stone; shuttlecocks; dummies for merchandise displays; glass tumblers; bottles with screw lids.

The complete schedule of goods subject to import licence on import into Thailand may be obtained from the Asia and Middle East Division, International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

The following nominal quotations may prove useful in checking prices. Canadian traders should consult their banks before making any firm commitments.

Conversions into Canadian dollar equivalent and units of foreign currency per Canadian dollar have been made at cross rates with sterling or the United States dollar on the date shown.

Except when buying and selling rates are specified, the mid rates only are quoted. The buying rate is that at which the banks purchase exchange from exporters. The selling rate is that at which banks sell exchange to importers.

When several rates are indicated, the rate applicable depends on the commodity traded. Information on the rate for any specific commodity may be obtained from the International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Rates used exclusively in non-merchandise trading are *not* included in the table. For conversion to United States dollar equivalent multiply by 1.0515938.

Foreign Exchange Rates

Country	Unit	Type of Exchange	Can. dollar equivalent Dec. 7	Units per Canadian dollar	Notes (See below)
Argentina	Peso	Free .....	.01149	87.03	(1)
Austria	Schilling ..	.....	.03709	26.96	
Australia	Pound .....	.....	2.1280	.4699	
Bahamas	Pound .....	.....	2.6600	.3759	
Belgium, Belgian Congo and Luxembourg	Franc .....	.....	.01902	52.57	
Bermuda	Pound .....	.....	2.6600	.3759	
Bolivia	Boliviano ..	Free .....	.00008323	12,014.90	
British Guiana	Dollar .....	.....	.5542	1.80	
British Honduras	Dollar .....	.....	.6650	1.50	
Brazil	Cruzeiro ..	General Category* .....	.004384	228.11	*Nov. 10 (2)
		Special Category .....	.002238	446.84	
		Official selling .....	.05027	19.89	(3)
Burma	Kyat .....	.....	.1997	5.01	
Ceylon	Rupee .....	.....	.1995	5.01	
Chile	Peso	Free .....	.0009039	1,106.32	(4)
Colombia	Peso	Certificate .....	.1485	6.73	
Costa Rica	Colon	Official .....	.1694	5.90	
		Controlled free .....	.1431	6.99	
Cuba	Peso .....	.....	.9509	1.05	tax 2%
Czechoslovakia	Koruna .....	.....	.1321	7.57	
Denmark	Krone .....	.....	.1376	7.27	
Dominican Republic	Peso .....	.....	.9509	1.05	
Ecuador	Sucre	Official .....	.06340	15.77	
		Free .....	.05418	18.45	
Egyptian Region, United Arab Rep.	Pound	Official	2.7307	.3662	
		Export account selling ..	2.0925	.4779	
El Salvador	Colon .....	.....	.3804	2.63	
Fiji	Pound .....	.....	2.3964	.4173	
Finland	Markka .....	.....	.002972	336.47	
France, Monaco, etc.	Franc .....	.....	.001939	515.73	(5)
French colonies	Franc .....	.....	.003878	257.86	(6)
French Pacific	Franc .....	.....	.01066	93.81	(7)
Germany	D Mark .....	.....	.2280	4.38	
Ghana	Pound .....	.....	2.6600	.3759	
Greece	Drachma .....	.....	.03169	31.55	
Guatemala	Quetzal .....	.....	.9509	1.05	
Haiti	Gourde .....	.....	.1902	5.26	
Honduras	Lempira .....	.....	.4755	2.10	
Hong Kong	Dollar	Free* .....	.1664	6.01	*Nov. 27
		Official .....	.1663	6.01	
Iceland	Krona	Official .....	.05839	17.13	(8)
India	Rupee .....	.....	.1995	5.01	
Indonesia	Rupiah	Official rate .....	.02113	47.32	(8)
Iran	Rial .....	.....	.01255	79.66	
Iraq	Dinar .....	.....	2.6626	.3756	

*Latest available quotation date.

Country	Unit	Type of Exchange	Can. dollar equivalent Dec. 7	Units per Canadian dollar	Notes (See below)
Ireland	Pound		2.6600	.3759	
Israel	Pound		.5283	1.89	
Italy	Lira		.001532	652.74	
Japan	Yen		.002642	378.50	
Lebanon	Pound	Free	.2995	3.34	
Mexico	Peso		.07608	13.14	
Netherlands	Florin		.2519	3.97	
Netherlands Antilles	Florin		.5076	1.97	
New Zealand	Pound		2.6600	.3759	
Nicaragua	Cordoba	Effective buying	.1441	6.94	
		Official selling	.1349	7.41	
Norway	Krone		.1330	7.52	
Pakistan	Rupee		.1995	5.01	
Panama	Balboa		.9509	1.05	
Paraguay	Guarani	Official	.007827	127.76	
Peru	Sol	Certificate	.03429	29.16	
Philippines	Peso		.4755	2.10	
Portugal & Colonies	Escudo		.03319	30.13	(9)
Singapore and Malaya	Straits Dollar		.3103	3.22	
Spain and Dependencies	Peseta		.01585	63.09	
Sweden	Krona		.1836	5.45	
Switzerland	Franc		.2195	4.55	
Syrian Region, United Arab Rep.	Pound	Free	.2659	3.76	
Thailand	Baht	Free	.04526	22.09	(8)
Turkey	Lira		.1057	9.46	(8)
Union of South Africa	Pound		2.6600	.3759	
United Kingdom	Pound		2.6600	.3759	
United States	Dollar		.9509375	1.0515938	
Uruguay	Peso	Free	.08360	11.96	
		Basic buying	.6289	1.59	(8)
		Principal selling	.4525	2.21	
Venezuela	Bolivar		.2839	3.52	
West Indies Fed.	Dollar		.5542	1.80	(10)
	Pound		2.6600	.3759	(11)
Yugoslavia	Dinar	Official	.003169	315.56	(8)
		Settlement rate	.001505	664.61	

*Latest available quotation date.

Notes

1. Argentina: effective Jan. 1, 1959, a single fluctuating exchange rate was introduced. Exports are subject to retention taxes of either 10 or 20 per cent ad valorem under this system.
2. Brazil: exporters receive cruzeiros at official buying rate of Cr.\$18.36 plus (a) an exchange premium of Cr.\$57.64 per U.S. dollar for coffee, cocoa beans and cake, and castor seeds, and (b) Cr.\$81.64 per U.S. dollar for all other exports except sugar, cotton and cocoa butter, and a few other products, export returns from which may be sold on the free exchange market.
3. For imports of wheat, newsprint and petroleum, the effective rate of exchange is the official selling rate of Cr.\$18.92 per U.S. dollar plus a surcharge of Cr.\$81.08 per U.S. dollar.
4. Chile: free rate applies to exports and to imports, except prohibited imports. Chilean importers must deposit local currency in amounts ranging from 5 to 5,000 per cent, depending on product, prior to shipment of goods.
5. France: territory includes Algeria, Tunisia, Guiana, Guadeloupe, Martinique.
6. Equatorial Africa, West Africa, Cameroons, Togoland, Somaliland, Madagascar, Reunion, St. Pierre and Miquelon.
7. New Caledonia, New Hebrides, Oceania.
8. Additional rates are in effect.
9. Portugal: approximately same rate for Portuguese territories in Africa.
10. Barbados, Trinidad, Tobago, Leeward and Windward Islands.
11. Jamaica.

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