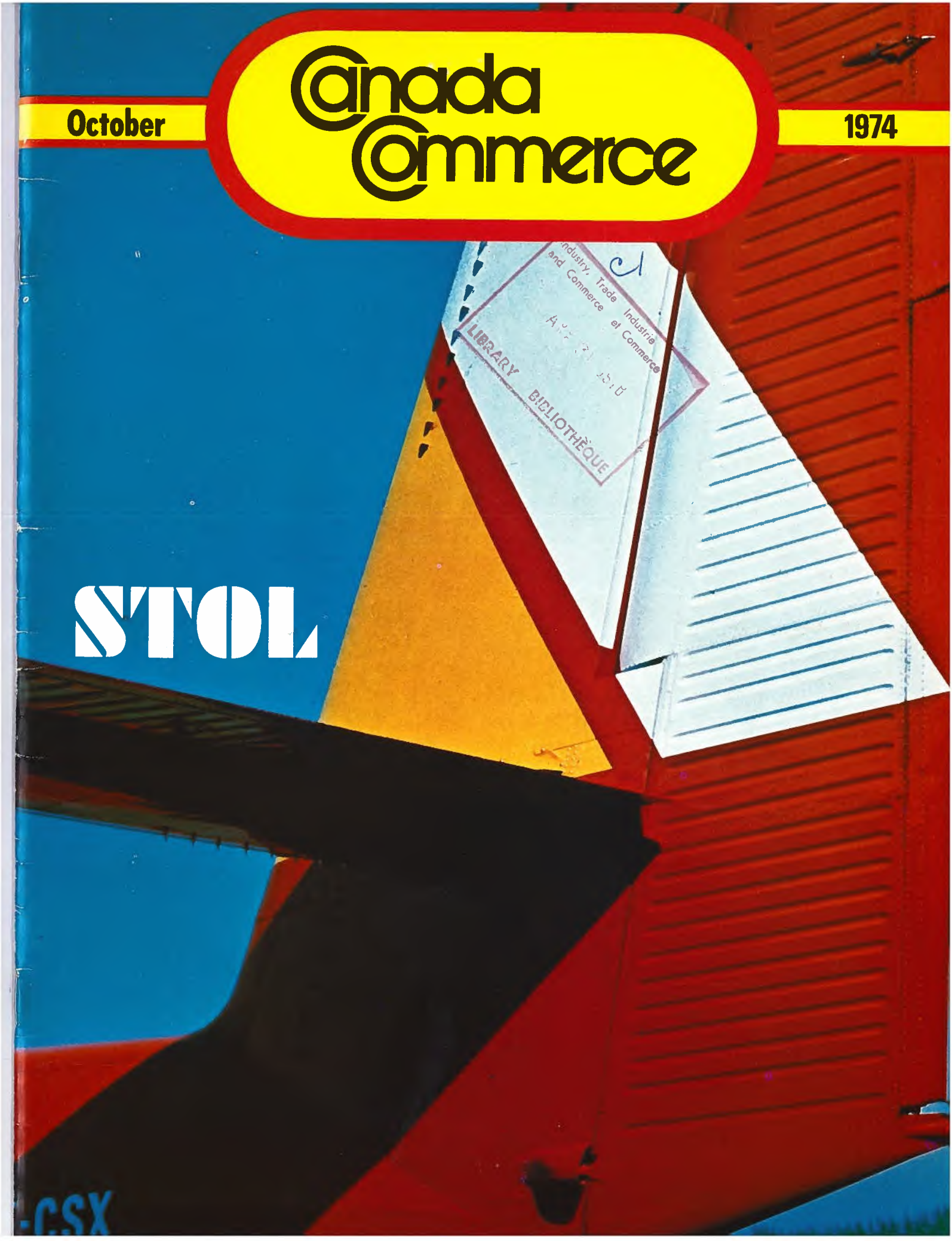
Canada Commerce

October 1974



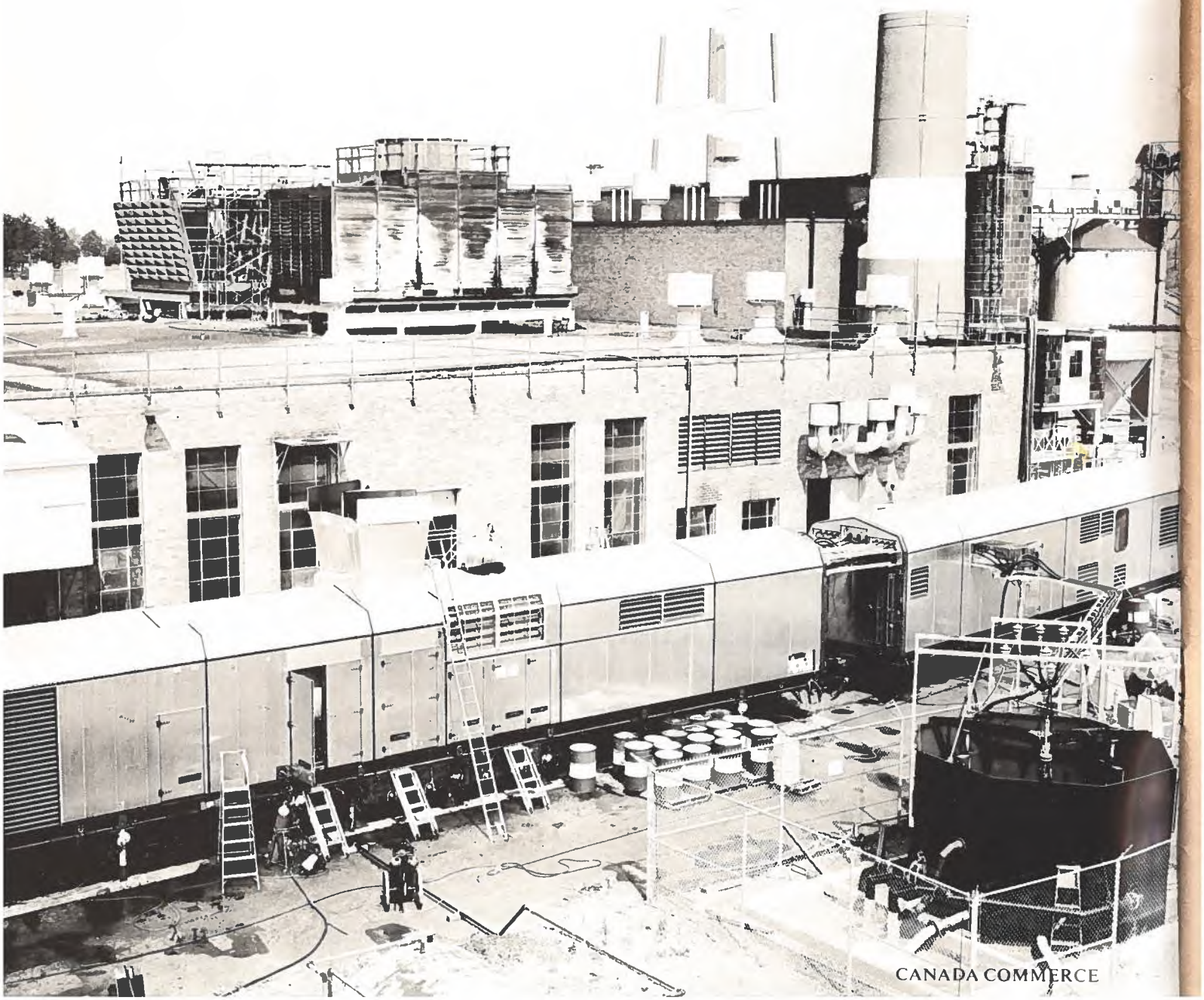
Power for China

Two gas turbine-powered generator sets mounted on rail cars recently left the Mississauga, Ontario, plant of the Orenda Division of Hawker Siddeley Canada Ltd. for the People's Republic of China. Together with spare parts shipped with them they are valued at approximately $4 million.

Each set is made up of two separate rail car units of special design. One car houses an Orenda OT-2100 heavy duty industrial gas turbine which drives a 9,000 kilowatt generator through a gearbox. Switch gear, controls, and an auxiliary diesel-powered 150 kilowatt generator are contained in the other. Together, the two cars in each set form a completely self-contained mobile power station capable of providing virtually immediate electric power at any isolated point on China's railway system.

The special rail cars were designed and fabricated up to floor level by the company's Trenton Works Division in Trenton, Nova Scotia.

One of the two sets is shown here under test at Orenda's Mississauga plant. The car on the left houses the gas turbine and generator. Controls and switchgear are in the second car.



Canada Commerce

Vol. 138 No. 10 October 1974

THIS MAGAZINE IS YOURS

We do not believe this magazine is perfect and cannot be improved. We do believe that the best way to improve it is by asking our readers to tell us what they would like to see in *Canada Commerce*, what changes they want, what type of article they find most useful.

In this issue is a card which we ask you to please fill out and return to us. The right-hand side will indicate that you agree to fill out a brief — and it really is brief — questionnaire that we will send on receipt of the card. This questionnaire will let you tell us what changes, what improvements you want to see.

The left-hand side of the card is for those who are too busy to let us know in more detail what they think of *Canada Commerce*.

Individual replies will, of course, be confidential, but the results of the survey will be published. And future issues will reflect your opinions.

Please fill out at least one side of the survey card and return it to us. By doing so, you will help to make *Canada Commerce* a better market intelligence magazine, a better source of information, and more truly your magazine.

Industry, Trade and Commerce Industrie et Commerce

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Publié aussi en français

Pay Attention to Taching!

A drilling team at work in the Taching area.

MARGARET CORNISH, Second Secretary, Peking

Pay attention to Taching is a commonly-heard slogan in China today, urging China's industrial managers and workers to learn from the successes achieved in the development of the Taching oil industry.

The People's Republic of China is experiencing an oil boom — a period of unparalleled development, both on and offshore, of what may become its most valuable export resource. China's imports of high-technology oil exploration and production equipment indicate strong interest in exploiting these reserves as quickly as possible for both domestic consumption and export. In view of the internationally competitive position achieved by many Canadian firms in this field, particularly in the aspects of exploration, extraction and transmission relevant to Chinese conditions, the following review of China's experience and outlook in this area may be helpful in establishing an approach to this most promising market.

Potential reserves and production — Until recently, China was believed to be oil-poor but the country is now ranked among the world's 11 largest producers of crude. Taching, its largest oilfield, is believed to have produced 12 to 18 million metric tons (MT) last year. Recently, semi-official Chinese disclosures indicate that total crude output in 1973 exceeded 50 million MT, compared with the 20 million MT produced in 1970. China's onshore crude oil reserves are now estimated to be in the vicinity of six billion to 10 billion MT, plus 20 billion MT of oil shale.

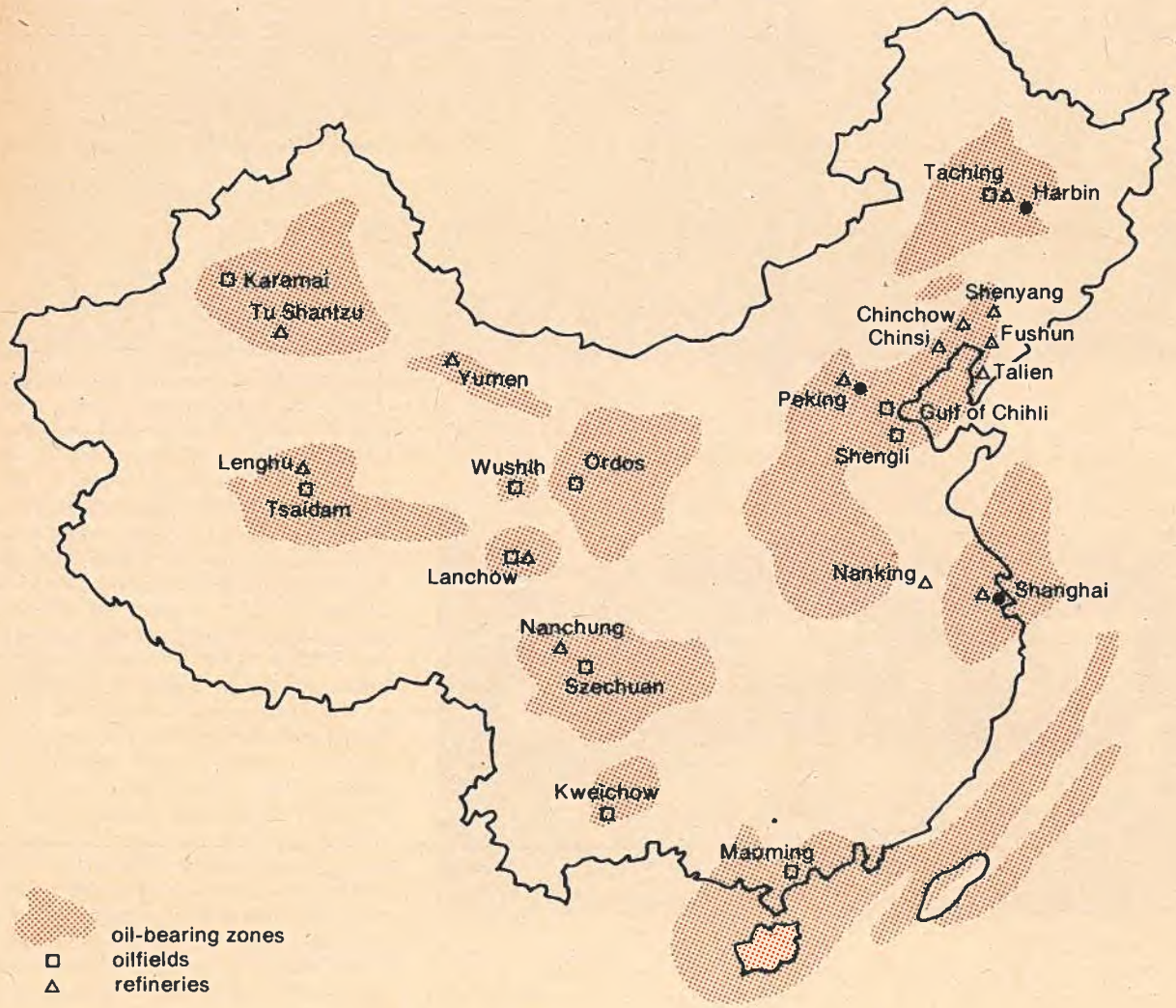
In addition to this spectacular jump in onshore output, China is exploring and exploiting its most accessible offshore field in the Gulf of Chihli (also known as Pohai). The presence of petroleum deposits in China's continental shelf

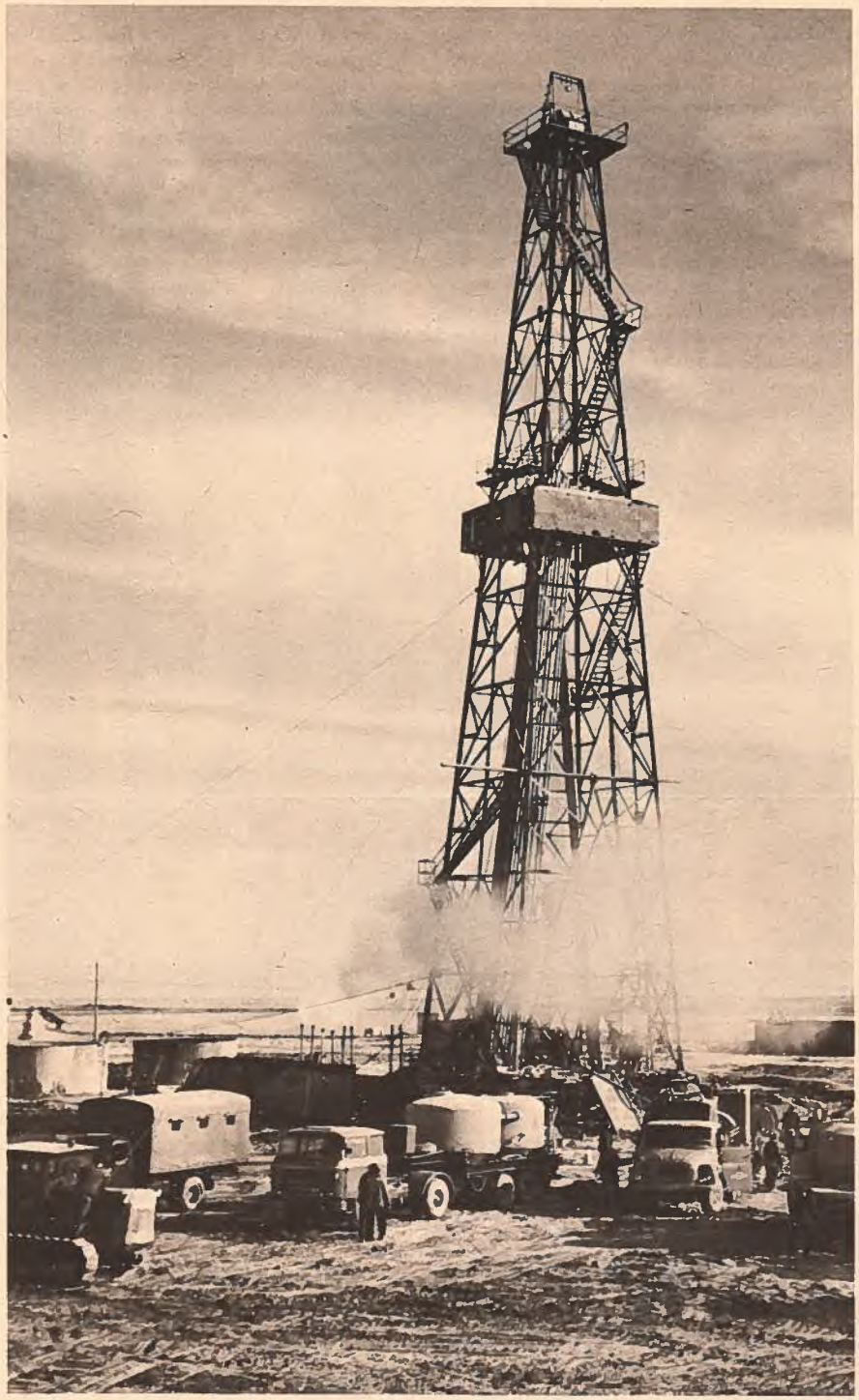
did not become generally known until the publication of a United Nations ECAFE survey team report which indicated that the portion of the shelf between the island of Taiwan and Japan is potentially one of the world's great oil reservoirs and that the Yellow Sea, which encompasses the Gulf of Chihli to the north, is only slightly less promising. Although little actual exploration has been carried out, some experts estimate that China's offshore oil reserves may amount to 20 billion MT. This would rank China with the Arab nations and North America as one of the top three oil-rich areas of the world, and possibly a rival to both.

Production increases of the magnitude achieved over the past few years by China's major onshore fields, Taching, Shengli and Takang, were essential to enable the country to keep pace with its rapidly-increasing domestic requirements. It is estimated that 85 per cent of China's energy requirements are supplied by coal; 10 per cent by oil and gas, and less than 5 per cent by hydroelectric power. But rapid expansion and modernization of China's industrial, transportation and agricultural sectors are altering these percentages as oil assumes greater importance as a fuel.

Despite increased domestic demand, surplus crude production was sufficient to permit the export of one million MT to Japan in 1973 and an additional five million MT in 1974, enabling China to capitalize on the rise in world oil prices. Prices such as are obtainable in world markets could provide China with the ability to finance, at least in part, its imports of high-technology equipment and plant. In many respects, oil could offer China the greatest potential for immediate returns on investments.

Transport — Three principal factors affect China's capacity for continued exploitation of its crude reserves: lack of a pipeline network connecting oil fields with sea ports and refineries; an over-burdened railway transport system;





A rig in the Takang oilfield.

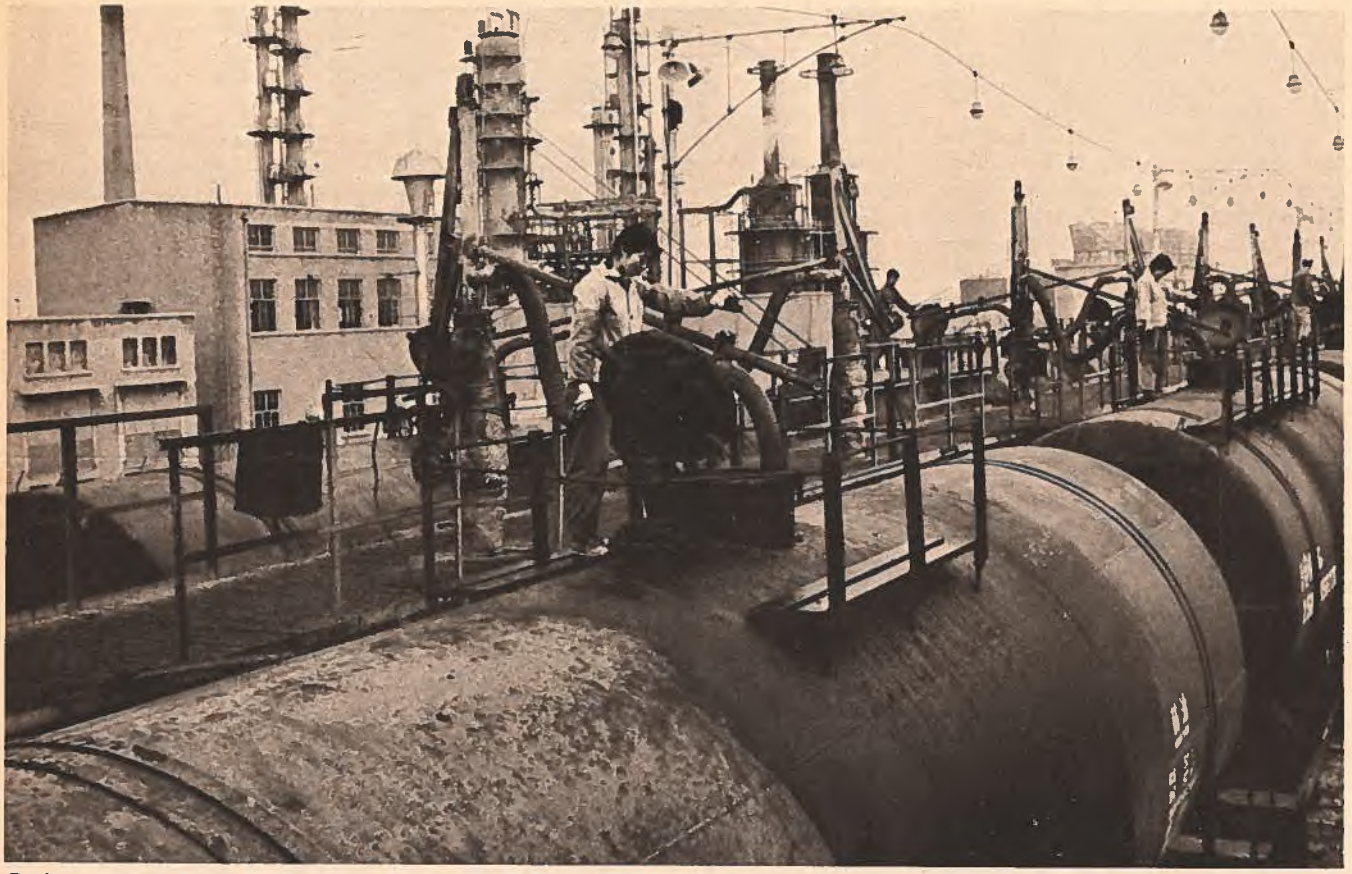
absence of deep water ports to service large oil tankers.

Pipeline construction poses the most difficult obstacle, requiring high-grade steel plate and sophisticated engineering techniques. Furthermore, the high paraffin content of Taching oil, combined with the low temperatures of China's most northerly province, are understood to pose serious coagulation problems.

Various pipelines are believed to have been constructed on China's eastern seaboard, including one from Shenyang (Mukden) to Lu-ta, the combined port of Talien (formerly Dairen) and Lu-shun, and from Shenyang to Chingwangtao, the largest port on the Gulf of Chihli. The southward continuation of this line to the Peking refinery, which is now supplied by rail from the Taching and Takang/Shengli oilfields, is scheduled to be completed sometime in 1975. The existence of the crucial link between the Taching oilfields and Shenyang is a matter of conjecture. Any such pipeline would be likely to encounter the most severe technical difficulties due to its northerly location.

Refining capacity — Many of China's principal refineries have been developed from pre-1949 plants, including those at Fushun, Chinchow, Chinsi, Shenyang and Talien in Liaoning Province, and in Shanghai. Known refining capacities include those of the plant at Taching at five million MT; Peking Petrochemical Works at three and a half million MT; Shanghai Petrochemical Works at four million MT; Fushun Shale Oil Refinery at two million MT; the Maoming Shale Oil Refinery at five million MT; and the Nanking Petrochemical Works with one million MT. Other major oil refineries are located at Lanchow (which services the Yumen fields in Kansu) and at Shenyang, Talien, Chinchow and Chinsi.

The spectacular increase in crude output over the past few years no doubt has outstripped China's refining capacity. But considerable emphasis continues to be placed on development of the petrochemical industry. Major petrochemical and chemical fertilizer complexes have been built around refineries in Talien, Shanghai, Lanchow and Peking. The latest and most sophisticated is the Peking Petrochemical Works built under a Sino-Romanian agreement of



Railway tankers being filled with crude from the Takang oilfield.

1969 which provided a substantial number of Romanian technicians to participate in the project.

The enormous petrochemical plant (steam cracking tower and 16 other units for synthetic textiles production) sold to China by a French consortium in 1973 will be built around the existing oil refinery at Shenyang with a crude throughput of three million MT. Presumably, the synthetic fibre and vinylon plants sold to China by various Japanese firms last year also will be located near major refineries.

Equipment requirements — The first major oil find at Taching was made in 1959/1960 on the eve of the Soviet withdrawal from aid and technical projects in China. Due to its isolation from most Western technology throughout the decade of the sixties, China initially was forced to develop these resources on its own. After 1964/65, China entered into a relatively extensive co-operation agreement with Romania which culminated in the building of the refinery already mentioned. This complex was completed by mid-1973 and the current Sino-Romanian five-year trade agreement calls for the annual delivery of 30 drilling rigs capable of reaching 5,000 meters. However, the vastly increased pace of China's petroleum development since 1970 has resulted in substantial imports of predominantly offshore petroleum exploration and production equipment. The possibility of joint ventures or the presence in China of foreign technical personnel, other than for the purpose of installing equipment, has been excluded so far.

Known contracts to date include eight oil rig supply and towing vessels from Weco (Denmark, $20 million); an offshore well drilling rig, Fuji, with its support ship and components included (Japan Offshore Drilling, $9.8 million); a No. 2 Hakuryu second-hand heavy duty drilling rig (Mitsubishi Heavy Industries, $21.4 million); a "jacket type" or stationary undersea oil drilling unit (Asia Offshore Drilling — affiliated with Teikoku Oil — contract not concluded at time of writing, Japan); four trailing suction hopper dredgers (N.V.

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Industrieel Handelscombinate, Holland, $39.3 million); and eight self-propelling bucket dredgers (Nippon Kokan, $53 million). It is believed that all this equipment will be used in conjunction with the Pohai oil development project.

Pipeline, both on and offshore, has been another important area of investment. Examples are an onshore oil pipeline for part of the 370-mile pipeline from Taching to Lu-ta on the Gulf of Chihli and an offshore pipeline for use in the Gulf of Chihli. The only known major investment in onshore equipment was a contract for 20 land blowout preventer stacks (Rucker California, $2 million).

Virtually all contracts for this equipment were signed in the first half of 1973 and call for delivery in 1974/75. But last year's oil crisis and the subsequent worldwide emphasis on oil exploration and production equipment has radically altered delivery dates; in many cases, lead times have been extended by two or three years. Therefore, deliveries for contracts negotiated late in 1974 may not be made until 1976/77, delaying the on-stream dates of required equipment and hampering China's oil development programs.

Potential for Canadians — Following establishment of diplomatic relations between the People's Republic of China and Canada in October 1970, and the subsequent active development of trade relations, oil exploration and development was identified as an area in which significant co-operation between the two countries could be established. In the spring of 1973, the 35-member Canadian Petroleum Mission, led by the Hon. Donald S. Macdonald, Minister of Energy, Mines and Resources, visited China and was escorted to a refinery, a truck plant, a drill and drill bit factory, and the Taching and Takang oilfields. Members of the mission also held discussions with officials and technicians of the Ministry of Fuels and Chemicals and the China National Machinery Corporation.

This first venture enabled senior Canadian executives of the petroleum industry to familiarize themselves with China's petroleum production and refining industries, to establish a framework for the export to China of Canadian equipment and technology in the field of oil exploration and development, and to identify some of the most promising areas of potential Sino-Canadian co-operation. These are pipeline systems, heavy-duty off-road vehicles, synthetic rubber technology and equipment, offshore refining equipment, seismic exploration equipment and computers with seismic application systems.

To further acquaint Chinese authorities with Canadian capabilities in these fields, a Chinese Petroleum Mission visited Canada in September 1972, and a smaller, more specialized, Chinese mission went to Canada in July 1974 to study oil and gas transmission pipeline technology.

As a result of these and other efforts, a number of Canadian companies have held prolonged discussions with the Chinese authorities and some sales have already taken place, with more substantial ones expected to follow.

Approaching the Chinese market — All China's foreign trade is conducted through eight State Trading Corporations which have jurisdiction over specific products (see *Canada Commerce,* April, 1973). But in the case of high-technology equipment and complete sets of equipment, there is some overlap between the following two corporations: China National Machinery Import and Export Corporation, Erh Li Kou, Hsi Chiao, Peking and the China National Technical Import Corporation, Erh Li Kou, Hsi Chiao, Peking.

Companies interested in pursuing this market should forward letters of introduction outlining, in as much detail as possible, their particular expertise and capabilities to both the above corporations, together with relevant technical literature (price list, spare parts, etc.) in at least 15 copies. This letter, together with any technical documentation which may be attached, will be studied first by specialists within the corporation and then forwarded to potential end-users to consider whether they are seriously interested in the equipment. Normally, this process will take anywhere from six to nine months.

To expedite matters, we suggest you provide the Commercial Counsellor of the Canadian Embassy in Peking with copies of all correspondence with the corporations so that we may follow up your enquiries and make representations on your behalf. Once a prospective end-user has indicated a definite interest in your product, the corporation will request the submission of a detailed quotation, followed by an invitation to several members of your firm to travel to Peking to begin "technical" discussions. These talks are generally attended by specialists from within the corporation and sometimes by representatives of the end-user. At this stage, the Chinese will require extensive scientific and technical information about the equipment. Only after this stage is completed do commercial negotiations begin.

Doing business in China requires much patience and perseverance but the market is large, expanding and rewarding. □

READERSHIP SURVEY

In this issue is a card which we ask you to fill out and return to us. We want to find out what our readers think of *Canada Commerce,* what improvements they want to see, the type of reports they would like to read. If you are too busy to answer a brief questionnaire that will be sent to those who fill in the right-hand part of the card, then do please fill in the left-hand part.

Israel's growing needs

A partial view of Haifa, Israel's chief port. Most of the country's heavy industry is located near here and part of it can be seen in the background of the photo.

P.S. DINGLEDINE, Assistant Commercial Secretary, Tel Aviv

Israel is much more than the Jewish homeland and a military power. It is a fast growing industrialized society and, in specific areas, one of the most scientifically advanced. It is a booming tourist market where sandy beaches and coral reefs mix with ancient and religious history. It is a significant producer of some raw materials and a major grower of certain agricultural products. And it is a growing market for Canadian goods and services.

Israel has two chief priorities in its economy — defence and immigration. The creation of an economy that can contribute to local defence requirements and, at the same time, absorb the extraordinary costs of imported equipment is not an easy task. Indeed, it would be impossible without the heavy inflow of capital from private and public sources abroad. Nevertheless, Israel has put forth an exceptional effort towards import substitution and export promotion.

Rebuilding and expanding industry after the periodic Middle East conflicts has created a host of short-term fiscal and monetary problems. But, in the long run, this has resulted in a country whose economic base and scientific advancement is well out of proportion to its relatively small population and its 26 years of existence.

Because of the exceptionally high costs of imports of defence and defence-related equipment, and the consequent adverse balance of payments, development emphasis has been on industries which can be export earners. Most conspicuous among these are the diamond industry, the citrus crops, textiles, chemicals and electronics.

The second priority is immigration. Between 1962 and 1972, Israel absorbed 420,000 immigrants (as well as a natural population increase of 432,000), a substantial number for a country of three million. These immigrants put a variety of strains on the economy which must, for the initial period at least, support them as non-contributors.

Growth figures — As an indication of the growth of the Israeli economy, largely but not wholly a function of the above priorities, it may be worthwhile to consider some comparative statistics. The per capita GNP, for instance, rose from $663 in 1960 to $1,216 in 1972 (1964 prices in both cases); the value of agricultural production rose from $17.8 million in 1960 to $72.4 million in 1972; in the same period the number of passengers arriving and departing by air grew from a modest 225,500 to 1,713,200, and the number of registered motor vehicles in the country rose from 69,580 to 327,906. Perhaps of significance, also, is the increase in the number gaining first degrees at academic institutions: 1,237 in 1960 to 7,487 in 1972.

This growth is unique in the sense that it has been fostered largely by the mass migration of both manpower and capital in lieu of domestic resources. The effect of these inflows, of course, is to create a perpetually increasing demand. While industrial development has been one of the results of this demand, other effects include a serious inflationary spiral and an increasingly adverse balance of trade. These features have become more or less permanent in the Israeli economy and in 1974, of course, are much more serious as a consequence of the 1973 conflict. Repeated devaluations and a very high tax rate have been the most commonly applied remedies.

Canadian exports to Israel have risen 250 per cent in the last three years alone, reaching a total of $35.6 million last year. There has been a significant change in our export mix, from resource materials to manufactured goods, primarily capital components for power generation, airport buildings and navigational aids, telecommunications and railway equipment. The availability of Canadian financing through the Export Development Corporation has played a significant role in both the expansion and diversification of our exports to Israel.

Israeli exports to Canada have also grown over the past few years although, at $22.5 million in 1973, they are well below the Canadian rate of expansion. The prime component of our imports from Israel is polished diamonds. Most of the remainder is composed of Israeli foodstuffs (particularly fruits and fruit juices), apparel and textiles. Canada's recently introduced General Scheme of Preferences for Developing Countries will no doubt assist Israel in its export endeavours.

Export opportunities — Opportunities for Canadian suppliers of goods and services abound in Israel, particularly in the capital goods fields.

Much of Canada's trade with Israel is in raw materials but, because of recent shortages in the Canadian market, these exports have suffered somewhat. Israel normally imports from Canada large quantities of aluminum, copper and other metals in either ingot, tube or sheet forms. Considerable success has been realized also in other basic products, for example asbestos. Israel's high productive capacity and restricted supplies of raw materials mean that virtually all basic products must be imported.

Tremendous potential exists here for primary and manufactured wood products, including pulp, paper of all grades, and paperboard products. Recently a full shipload of British Columbia softwoods arrived in Israel's main port and it is hoped that this will provide the entré for a wide range of Canadian woods into this receptive market. The recent addition of a $30 million paper machine to one of Israel's largest mills will create a significant need for additional pulp imports.

Electronics — Canada has had considerable success also in the electronics industry. Expanding at a rate of 20 per cent annually, this sector is undoubtedly the fastest growing of Israel's industries. Although still small by world standards, there are about 65 major electronic companies in Israel, five of which account for 80 per cent of the over-all

WHAT ISRAEL SELLS TO . . .

	$'000	
	1970	**1973**
Fruit & fruit products	1,725	2,684
Wines & liquors	188	285
Other foodstuffs	293	510
Yarns	3,032	2,286
Fabrics	868	1,187
Chemicals	158	297
Resins, plastics & plastic products	313	397
Diamonds & other gems	3,779	8,866
Other basic products	1,135	89
General machinery & equipment	107	228
Electrical, electronics (including communications) equipment	12	242
Pipe fittings & other plumbers' goods	138	398
Apparel	1,866	3,029
Jewellery, works of art, collectors' items, etc.	200	788
Other manufactured items	655	1,204
Total, including others	**14,469**	**22,490**

turnover and employment. The major areas of local production are telecommunications equipment and systems, control systems and equipment, medical and laboratory equipment, computers and peripheral equipment, and, to a lesser degree, components which are still being manufactured on a small scale primarily for export.

The industry has expanded horizontally rather than vertically and because of this the market is quite significant for components of practically every description as well as systems and sub-systems that can be integrated into end products. It is expected that by the early 1980's about 30,000 employees will produce close to $1 billion in turnover. It has been estimated that the import component will reach between $300 million and $400 million at that time. This sector undoubtedly offers major marketing opportunities to the Canadian electronics industry and a number of companies already enjoy repeat business at significant levels from Israel's manufacturers.

The chemical industry is also experiencing rapid growth, and within the coming decade will form a major sector of Israeli industry. Plans call for expansion of the petrochemical and fertilizer industries. These developments, however, still leave a wide variety of chemicals that are being imported and will be for some time. Imports of organic chemicals totalled $31 million in 1970, $36 million in 1971, and $38 million in 1972. In the organic chemical group of heterocyclic compounds, nucleic acids and monoacids and their halides each reached import totals in the $3 – $4 million bracket; organo-sulphur compounds, compounds with nitrogen-function compounds, oxygen-function-amino compounds were over $2 million each and imports of polyacids, phenols, polyhydric alcohols, halogen derivatives of hydrocarbons, and other forms of hydrocarbons all ranged between $1 – $2 million in 1972.

Import of inorganic chemicals rose from $12 million in 1970 to $16 million in 1972. The main items were titanium oxide, phosphites, anhydrous sodium carbonate and sulphates and persulphates, all of which were at the $1 million-plus level. We expect an accelerated growth rate in the import of both organic and inorganic compounds as the secondary chemical industry expands and new industrial users come into being.

One of the major components of Canadian exports to Israel is wheat and barley, of which over $19 million worth was sold in 1973. Certain other foodstuffs, including skimmed milk powder, have also found a ready market here.

. . . AND BUYS FROM CANADA

	$'000	
	1970	**1973**
Cattle		684.3
Skimmed milk powder	11.6	820.4
Barley	5,052.4	17,664.5
Wheat	10.6	1,739.4
Other agricultural, fish & food products	63.2	158.6
Asbestos & asbestos products	926.7	1,198.8
Lumber	140.8	19.7
Newsprint	67.4	153.7
Other paper & paper products	432.1	642.7
Textiles	107.5	295
Chemicals & plastics	574.2	526.9
Iron & steel	1,273.1	56.2
Aluminum	1,615.4	4,725.8
Copper	1,638.7	1,392.4
Zinc	78.1	658.5
Other metals	62.1	239.4
Other basic products	620.1	659.2
General machinery	302.7	810.5
Transportation equipment & parts	570.1	952.1
Communications equipment	160.9	287.3
Electrical & electronics	138.4	500.3
Professional, medical & scientific equipment	95.5	189.5
Prefabricated buildings, structures & parts		497.1
Other manufactured articles	504.9	792.3
Total, including others	**14,446.6**	**35,664.6**

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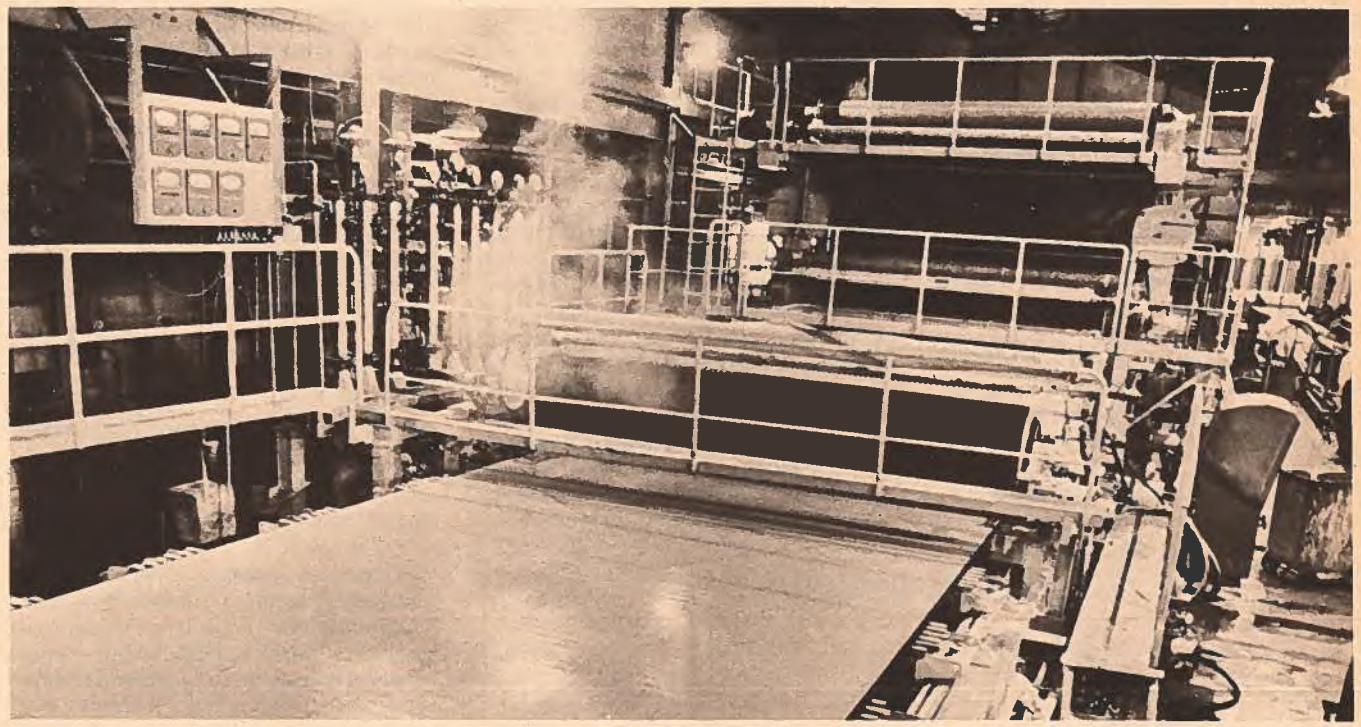
Consumer goods — Until now, Canadian processed foods have not found their way into Israel's markets because of high shipping rates, heavy local and European competition in some goods, and the Kashrut (dietary) laws which stipulate that all processed foods be Kosher. Nevertheless, opportunities for many food items are becoming apparent and interested Canadian producers should try their luck in the Israeli market.

Similarly, consumer items from Canada are rarely seen in this country. Once again, competition from Europe and the U.S. is difficult to beat. But the Israeli consumer market is growing quickly and, despite high taxation, there appears to be a considerable amount of disposable income available for purchases of durables and other consumer items. Although local production can supply a good deal of this demand, imports continue to find a receptive market.

Another of growing importance is the tourist market. In the years 1970 to 1972, Israel was host to 1.2 million tourists (67,000 from Canada alone). Accordingly, hotel construction and other tourist-related construction has been booming. Canadian Pacific is one firm in the process of erecting a luxury



Paper machine in the American-Israel paper mill.

hotel, but other international operations also have definite plans or construction under way. This tourist development presents a wide range of markets to suppliers of hotel equipment and furnishings as well as to other tourist-related products.

What about investment in Israel? The Israeli Government is most anxious to encourage foreign investors and offers a variety of incentives through the Law for the Encouragement of Capital Investment. Depending on the type of industry and the location in Israel, these incentives may include cash grants to help defray investment costs, development loans, income tax exemptions, special depreciation allowances and a range of tax reductions. The diversification of industries, the rate of technological advance, the immigration of skilled workers plus a host of other advantages make Israel an appealing location for many foreign firms. In fact, business investments from abroad have risen to an annual $100 million.

Importance of visit — Whether your interest is investment or sales, a personal trip to Israel is mandatory for a proper understanding of this market. Although the official language is Hebrew, English and French are widely spoken and understood. The most agreeable seasons for a business visit are spring and fall, but if the object of your visit is business, you would be well advised to avoid the important holidays of Passover and the Jewish New Year which occur in the spring and fall.

Tel Aviv is the commercial centre of the country, but most of the heavy industry is located in Haifa (60 miles north of Tel Aviv) and government offices are in Jerusalem. Depending on the nature of your business, you should allow sufficient time for visits to these centres. Also, when planning your trip, do not forget that there are enough tourist attractions in Israel to keep a visitor occupied for many weeks. Be sure to allow yourself some time to take in the "highlights" of this very interesting country.

One parting comment. Before you plan your visit, contact the Commercial Secretary, Canadian Embassy, 84 Hahashmonaim Street, Tel Aviv. If you give us sufficient advance notice, we can advise you on your market prospects, arrange appointments for you and generally help you in any way we can. □

Israeli market for machinery

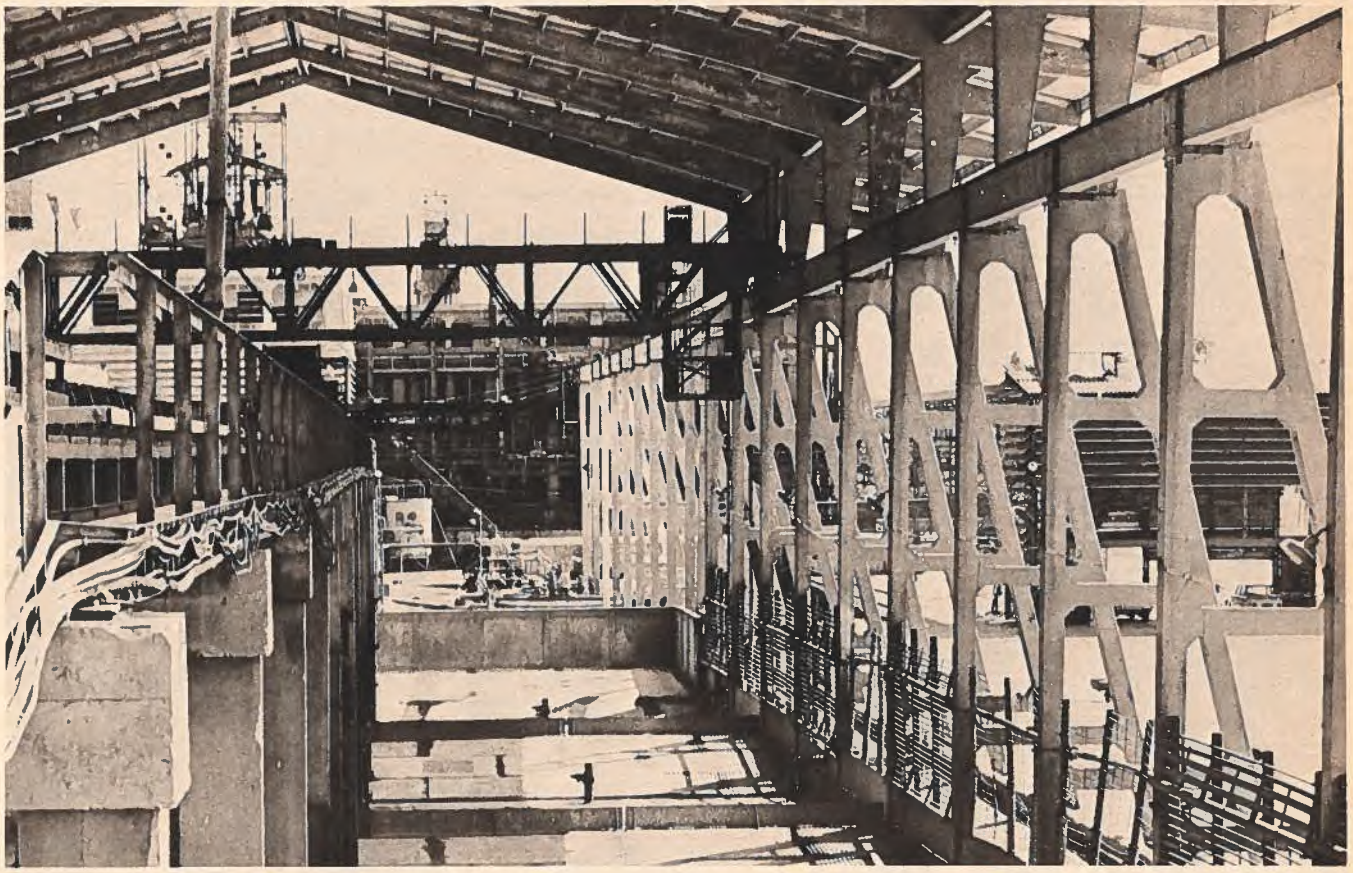
Downtown Tel Aviv. Most retail outlets are small shops either of the specialized boutique or the corner store variety.

BERNARD FYNNE, Commercial Officer, Tel Aviv

Mr. Fynne joined the Tel Aviv Trade Commissioner's post five years ago. A former U.S. citizen and trained as an industrial engineer. Mr. Fynne has had engineering experience in the U.S., Europe and Israel. He brings to his job as Commercial Officer a broad knowledge of mechanical, electrical/electronic and chemical engineering. This knowledge, combined with a familiarity with the local market gained from 24 years in Israel, makes him the Tel Aviv post's resident expert on industrial supplies and equipment.

Canadian businessmen exploring the Israeli market for the first time are often surprised at the diversity and volume of machinery and equipment being imported. In 1972 these imports reached approximately $400 million, an increase of almost $100 million over 1971. Covering a wide range of mechanical and electrical requirements, these imports reflect the fast development of industry which is expected to continue throughout the '70s. Priority has been given to the expansion of science-based industries in the fields of metals and machinery, electricals, electronics, optics, chemicals and minerals.

Development is paced by the expansion of the metals industry which shows a growth rate of 12 per cent annually, thus providing the market base for foreign supply. In the five-year period 1968-72, more than 90,000 machine tools for working metal were imported at an approximate cost of $90 million.



Use of prefabricated material can be seen in this extension of one of the two sugar mills in Israel.

During the first year of this cycle, imports reached approximately $10 million, jumped to $18 million the subsequent year and peaked at $22.5 million in 1970. Volume decreased somewhat in 1971 and was at the $17 million level in 1972. It is generally agreed that this levelling out reflects the need to absorb the equipment rather than any slowing down of the expansion program. It is expected that during the balance of the '70s we will see another cycle of expansion equal to or, more probably, greater than before.

Metal-working tools — Canadian manufacturers should take a closer look at this market. For example, more than 27,000 lathes were imported by Israel during the five-year period under review at a cost of approximately $20 million. The market trend is upward for this particular type of equipment with over 7,000 lathes having been imported in 1972, almost double the amount brought in in 1971.

Machine tools for working metal represent the major market opportunity in this particular commodity group, but other industries are expanding also, although at a lesser rate. Most of their machine tool requirements are imported as well. Imports of tools for working minerals, glass, wood, cork and plastic each amounted to more than $1 million in 1972. To complete the tool picture, at the other end of the line we find a steadily rising market for hand tools. In 1972, the import volume for this commodity group exceeded $1.5 million and probably will be a lot more for 1973.

Chemical industry — The near- and medium-term future will present major marketing opportunities for Canadian suppliers of process plant machinery and equipment for the basic chemical industry. In response to international market conditions, plans are being formed for a massive expansion of plant to exploit Israel's few natural resources. Israel today produces close to a million tons of potash, approximately 800,000 tons of phosphates, 20,000 tons of bromine and bromides and about 30,000 tons of periclase (magnesium oxide). A new plant is producing approximately 30 tons of phosphoric acid annually during its running-in period of two to three years.

The over-all concept is for an integrated system of plants, co-ordinated in production capacity, date of establishment, and even location, costing about

$100 million. The finished product of one will be the raw material of another and all will be connected by a common marketing system. Development of this integrated system is helped by the fact that most of Israel's basic resource materials are found in the same area in the south of the country. Indeed, the area known as the Negev Desert is the only place in the world where all the three materials used by the fertilizer industry are found at the same place. It is estimated that, within the next decade, approximately $1 billion will be invested in this program.

The first stage of development is already under way. Production of phosphates is being doubled, and at the Dead Sea works complex a large-scale expansion is under way including, in particular, an increase in the production of chlorine gas, chloric acid and of bromide compounds. These two latter projects alone involve a total expenditure of approximately $100 million.

The over-all project will involve the import of practically all chemical process plant machinery and equipment to be used. This would involve, just to mention a few items, complete liquid and solids transfer systems, chemical reactors, energy sources, structural steel and storage vessels, process controls, mixing equipment and the usual installations for utility services common to the chemical industry.

Programs for the expansion of the organic chemical sector are also being started. Significant market opportunities are developing for process plant machinery and equipment through a $325 million project of the refineries and auxiliary firms to boost the country's potential for producing plastics, petrochemicals and lubricating oils. The expansion program involves also a substantial increase in the output of heating oil, basic lubricating oils, wax, ethylene, polyethylene, styrene, polystyrene, phenolics and PVC. The ethylene, polyethylene and styrene projects represent an investment of about $120 million and should be of particular interest to Canadian suppliers of related machinery and equipment.

Transport, communications — Obviously, expansion programs like these must be paced by equivalent development of the country's transport and communication services. For example, the doubling of phosphate production, mentioned earlier, requires a 30-kilometre extension of the railway network to reach the deposits, and the resultant increased volume of exports will involve expansion of port facilities. Canadian supply to the Israel State Railways reached significant proportions during 1973, with sales of equipment and rails valued at approximately $3 million. Other equipment ranged from tamping machines to inter-city communications systems.

A major program is being initiated to expand the over-all rail network in the country that will involve literally hundreds of millions of dollars, of which the foreign component will be significant. Resulting from the successful supply effort in 1973, Canada is now looked upon as a prime source for rail equipment.

This vast expansion of industry and infrastructure obviously means more inland container-handling facilities and a rail system that would support container transport. A number of container terminals of this type are being developed which, in turn, will mean a market for mobile container cranes, fork lifts and storage facilities.

A parallel development is taking place within Israel's air transport system. Canada has figured prominently in the supply of communications gear, navigational aids, ground handling equipment and air terminal facilities. Canadian consultants have also participated in the development of future plans covering Israel's air transport infrastructure needs up to the year 2000. These will probably include expansion of existing facilities, additional domestic airports and an additional international airport.

On the communications side, it is expected that Israel's telephone network will double within the next six years at an estimated cost of $2 billion, approximately half of which is earmarked for equipment. Canadian suppliers have a long, fruitful history of co-operation with the Ministry of Communications and have been particularly successful in the supply of mobile telephone exchanges. Israeli government authorities have expressed keen interest in expanding their relationship with the Canadian communications industry and it is probable that Canadian companies will be bidding on a significant portion of the new equipment.

Generating capacity — At the core of Israel's over-all development program is the provision of generating capacity to power the greatly expanded industrial machine. By the end of the '70s the country will have increased its installed generating capacity by 2,100 Mw produced in three new fossil-fuel stations. Canada continues to participate through the supply of boilers and other capital components to all three of the new stations. Approximately $60 million in power generating equipment has been imported from Canada and bids are being submitted for an additional $20 million in ancillary machinery.

All this activity has, of course, created a market of world-wide interest. Major companies from industrialized nations compete vigorously to supply machinery and equipment. In such an environment, a first-hand knowledge of the market and local business practices is almost essential. This is achieved best by visiting Israel to meet the key personnel dealing with your particular market sector, either within government or private enterprise.

Canadian expertise will be at your service all along the way. CP Air provides a comfortable, frequent service to Israel. The control tower at Ben Gurion International Airport will probably contact your pilot via Canadian communications gear and guide him to a safe landing with Canadian navigational aids. Your ground hostess will conduct you to the new Canadian-built extension of the arrivals hall, and we would be pleased to take it from there. Contact the Commercial Secretary, Canadian Embassy, 84 Hahashmonaim Street, Tel Aviv, for further information. □

STOL, an experiment for the future

The Airtransit fleet on the tarmac.

A lot of people in government and industry circles are closely watching an experiment now in progress. Many hopes are pinned on the experiment and so far there is every reason for the watchers to be optimistic.

What they are watching is a 'down-town-to-downtown air service between Montreal and Ottawa (a distance of about 120 miles) that was inaugurated officially on July 23 in a short ceremony conducted by Transport Minister Marchand. This is claimed to be the first true Short Takeoff and Landing (STOL) service anywhere in the world and it is operated by a wholly-owned Air Canada subsidiary, Airtransit Canada. It was intended originally to demonstrate Canada's leadership in STOL technology, with profitability being a secondary consideration, but the scarlet Airtransit Twin Otters have become profit-makers.

Businessmen quickly discovered that they could save time by using STOL, and Airtransit's hourly return flights were sold out during the first weeks of operation. Some people, no doubt, have taken the flights out of curiosity but obviously many more see them as an aid to doing business more efficiently. A measure of Airtransit's initial success is the fact that journalists have found it impossible to get free flights in order to write about the service. They have to

Partial view of the Montreal STOL-port.

pay the $40 return fare like everyone else, because the airline has too many customers to waste seats on non-paying passengers.

As *The Financial Post* said, $40 return seems a high fare to pay for a relatively short ride. Conventional airline service between Montreal and Ottawa is $36 return, Monday through Friday, with more in-flight amenities, while bus service between the two cities is much cheaper still, at just over $7 return. But *The Financial Post* pointed out that the STOL service includes buses that "make connections without charge at both ends. Passengers leave downtown Montreal at, say, 9:45 a.m., get the 10 a.m. flight and are downtown in Ottawa just after 11 a.m."

That is faster than normal air service and a lot faster than taking a bus. Besides, STOL is more fun. Passengers can watch pilot and co-pilot at work and the Twin Otters fly at low altitude, which is always more interesting than watching the clouds go by at 20,000 feet — even takeoffs and landings are quite a thrill, due to the steep angles at which STOL aircraft perform these manoeuvres.

The Airtransit concept began to solidify back in 1971 when the Ministry of Transport was directed by Cabinet to "plan, carry out and evaluate a STOL air transport demonstration service." The experiment also was aimed at gathering data on passenger and community reaction, testing the economics involved and determining the feasibility of such an inter-city service — the ultimate goal being to create a STOL package that could be sold internationally as well as in Canada. The system's initial success has been thrilling for its backers but the testing and evaluating will continue until 1976.

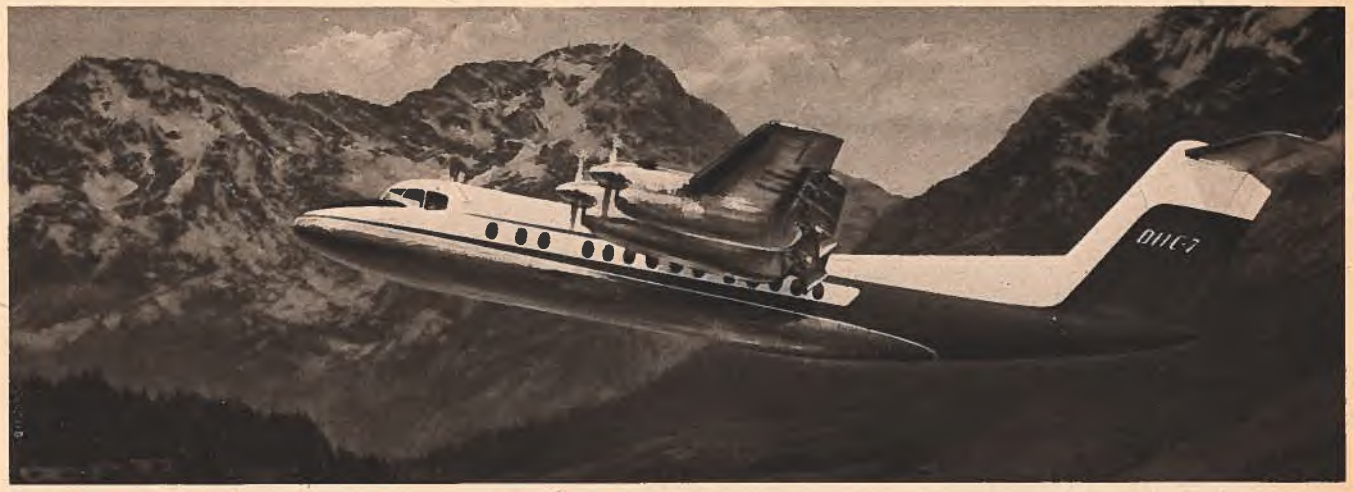
Key is simplicity — The Montreal STOL-port is built on a former parking lot near the site of Expo '67 and only a short distance from the downtown area. The Ottawa base is at the former Rockcliffe airport. Each has a single paved runway 2,000 feet long and 100 feet wide, with 400 feet of clearance at each end. The runways have complete lighting systems as well as a Visual Approach Slope Indicator (VASI) and a Microwave Landing System (MLS) at each end. The pilot's depth perception during STOL landings is aided by special lighting in the touchdown areas.

Each STOL-port has a passenger terminal, control tower, maintenance hangar and maintenance garage. The terminals house all facilities required to accommodate passengers during "rush hours" and minibuses provide transportation to and from the STOL-ports, but there are taxi stands and public parking for 220 cars.

Passenger-handling procedures emphasize simplicity and passengers are required to check in not more than 10 minutes before flight time. Underseat stowage accommodates carry-on bags and there is provision for hanging coats and garment bags but the Twin Otter has limited carrying capacity and the service is aimed especially at commuters. Baggage weight, therefore, is restricted to 30 pounds per passenger with a charge for overweight baggage. Because time aloft is brief, there is no in-flight service.

New systems — Flight instruments aboard the Airtransit planes include a computer linked to an Area Navigation System (R-NAV) which allows the pilot to fly a "profile" — a predetermined route fed into the computer on a data card. The pilot maintains the profile by following the command signals generated by the aircraft's flight director instruments linked to the computer. There are provisions for altered flight plans and other contingencies.

There is also the advanced Microwave Landing System, Co-Scan, which allows landings and takeoffs in all but the worst weather and guides the aircraft into short landing strips at an approach angle of six to nine degrees, which is very steep by conventional aircraft standards. The main part of the system is on the ground and emits beams giving aircraft elevation and bearing information. This information is picked up by a receiver on the aircraft which gives the pilot a visual indication of whether he is on the correct path leading to the touchdown point.



The DASH-7 will look like this.

Noise — The de Havilland Twin Otter is, for its size and weight, one of the quietest aircraft in the world. Studies done before Airtransit began operations indicated that noise would not be a serious problem, partly because the aircraft's angle of approach reduces noise on the ground and partly because of the Twin Otter's quietness. So far there have been few serious complaints from people living and working near the Ottawa and Montreal STOL-ports. At its loudest, a Twin Otter in flight creates no more noise than a city bus travelling at 30 miles an hour heard at a distance of 100 feet.

Norwegian experience — The Montreal-Ottawa Airtransit run may be billed as the first true STOL service anywhere, because it uses special aircraft, special avionics and special passenger-handling facilities (even the tickets are a new type suitable for computer use), but Norway's oldest airline, Wideroe, has been flying Twin Otters on some of its routes for several years and they have become an important part of that country's transportation system.

Wideroe's nine Twin Otters carry passengers between 30 airports, most of which are located in remote areas. The aircraft carry local traffic as well as providing connecting services between airlines operating from the major centres. It was estimated that they would transport 200,000 passengers during 1974 and the service has been so successful that it is being studied by other countries.

Obviously, the proven success of Wideroe and the apparent success of Airtransit will help tremendously in the effort to promote Canadian STOL expertise and equipment in a world market that could be worth ultimately about $1.5 billion to us. Much of the promotional effort will be spent on the DASH-7 (de Havilland DHC-7) now under development. Two of these 48-seat, four-engine aircraft are being built, with the first flying this year for certification by the end of 1975.

The DASH-7 is a high-wing aircraft to be powered by United Aircraft of Canada Limited PT6A-50 turbo-prop engines. It is intended for short hauls, with the ability to carry full payloads over 450-mile ranges when operating from 2,000-foot runways. It will never require the 6,000 to 8,000 feet needed by conventional aircraft but, by operating from runways a bit longer than 2,000 feet, the DASH-7 will be able to extend its range to about 800 miles. It will use exactly the same type of facilities now under test by Airtransit but will be able to carry more than twice as many passengers in greater comfort. The DASH-7 will be slow by comparison with the jets, with a cruising speed of about 300 miles an hour, but it will deliver passengers to many destinations faster than more powerful aircraft because all the time-consuming activity involved in getting to and from, and around, conventional airports will be eliminated.

In other words, Canada appears to have a very attractive package to offer the world. But the big question potential buyers will be asking is this: "Has it gained acceptance in Canada?" The Airtransit experiment will determine whether the answer to that is positive. □

First DASH-7 sale to Canadian operator

AirWest Airlines Limited, the Vancouver-based commuter airline, has ordered two DASH-7 STOL airliners, becoming the first Canadian company to place an order for the aircraft. They will be used to expand AirWest's successful west coast commuter operation and could enter service in 1977. AirWest's managing director, Norm Gold, introduced a scheduled downtown floatplane service in the Vancouver area in 1965 to serve the hub city of Nanaimo and in 1969 added the commuter service between mainland Vancouver and the capital city, Victoria.

"The normal car and ferry time of more than three hours from Vancouver to Victoria was the reason I expanded the floatplane service," Mr. Gold said. "With the faster land-based DASH-7, which will provide even quicker access to the two cities, we will be able to offer a downtown-to-downtown flight time of less than 30 minutes."

Edward R. Bennett

Reverse takeover – it can happen

DAVID MAGEE, Assistant Editor

On June 8, 1972, a news release datelined Toronto began: "Through a relatively rare process of reverse takeover, one of this country's leading consulting firms is now 100 per cent owned and operated by its Canadian employees." Six short paragraphs followed this sentence, telling of a transformation that took 18 years to complete.

The consulting firm was De Leuw, Cather & Company of Canada Limited, formerly a wholly-owned subsidiary of the Chicago firm of De Leuw, Cather, providing consulting services in transportation, municipal development and urban planning. Since that rather significant news release two years ago there have been more changes, including a new name for the overseas arm of the company. In Canada it is known now as De Leuw Cather, Canada Ltd., while overseas it is Delcanda International Limited.

Recently Edward R. Bennett, president of Delcanda, told *Canada Commerce* about the firm's evolution: "It started, I guess, in 1950 when De Luew, Cather of Chicago was hired as over-all consultants for the Toronto Transit Commission's new subway. It wound up establishing a wholly-owned subsidiary in Canada which, as its first job, did the consulting work for Toronto's Gardiner Expressway in a joint venture.

Turning point — "From there it was nowhere but up. The Canadian operation expanded and soon its employees were letting it be known to the American firm that they'd like to own some of the company up here. A small amount of stock was sold to the Canadians at first but by 1961 the parent had agreed to sell us a total of 51 per cent, which was quite a turning point."

Mr. Bennett told *Canada Commerce* that De Leuw, Cather stock never went public and by 1972 the Canadian employees owned 60 per cent of the operation. "We liked the idea of owning ourselves and that year, after a long series of negotiations, we bought the remaining 40 per cent from Chicago." These negotiations were somewhat complicated by the fact that while the Americans owned 40 per cent of the Canadian company, the Canadian company owned 11 per cent of the Americans' domestic operations and 33 per cent of their international subsidiary. As Mr. Bennett put it, there was "a lot of giving and taking" before the deal was completed.

Identity problem — After the firm had become independent, its officials found, not surprisingly, that they had an identity problem — not in Canada, but in other countries. They were being mistaken for their American cousins.

Mr. Bennett told *Canada Commerce* that the Canadian company had been doing overseas work since 1964 but had always avoided becoming involved in the same parts of the world as its then parent company. For example, no projects were ever undertaken in Southeast Asia. But, said Mr. Bennett, when the company became wholly Canadian-owned it was into head-to-head competition with its former owner.

"As far as we were concerned," he said, "it was quite clear that De Leuw Cather, Canada Ltd. and De Leuw Cather International were two completely different companies but the overseas clients were confused. For example, there was the time we got onto a short list after a lot of hard work and were just delighted. But the invitation to tender went by mistake to the Chicago company. It wasn't long before we decided to change our name as far as overseas work was concerned."

A new group was floated at the end of 1973 under the name Delcanda International Limited. It has its own staff but also draws on the personnel of De Leuw Cather, Canada Ltd. Its engineers, planners, designers, ecologists, systems analysts, economists, technicians and draftsmen do feasibility studies, planning preliminary and final design, technical inspection and project management in three fields: transportation, housing and municipal works.

Delcanda has projects under way or completed in Britain, France, Ethiopia, Paraguay, Niger, Tanzania, Zambia, Zaire, Guyana, Peru, Finland, Malaysia, Jamaica, Hong Kong, Nigeria, Togo, Ghana, Kenya, Panama and Bolivia. Mr. Bennett is particularly proud of what the company is doing in Bolivia. He called it the "mother and father" of all the company's projects. It is a highway that will run from La Paz through mountains and jungles to terminate at Puerto Salinas on the Pacific Ocean. The total distance is about 325 miles, with construction starting at 12,500 feet above sea level, rising to 16,000 feet and then dropping to 1,000 feet above sea level.

Delcanda offices are maintained in Ottawa (head office), Toronto, Montreal, London (Ontario), St. John's, Calgary, Edmonton, Regina, Niagara Falls, Georgetown, Dublin, Cork, Manchester, London (England), Lagos, La Paz and Kinshasa.

Asked why De Leuw Cather, Canada Ltd. expanded internationally in the first place, Mr. Bennett conceded that overseas work is "really a rat race." He said it is not particularly profitable, that it is "easy to lose your shirt and if you do make a profit, it's not as big as the one you'd get back home."

Morale booster — On the other hand, being involved in the international market gives a firm more prestige and a kind of clout it would not have otherwise. In addition, said Mr. Bennett, "it's a tremendous help to the morale of a big company such as ours, where we have people coast-to-coast in Canada and every young engineer in the company feels that one day he may be asked to go to Jamaica or Singapore or Addis Ababa or somewhere like that. It very definitely boosts morale."

Company officials are highly promotion-conscious. Mr. Bennett said: "We're prepared to spend a lot of money on travel. I travel. The directors

Highway project, Bolivia

of the company travel. We associate with local firms. We try to set up a chain of associated companies and we have them all over Latin America. We don't have so many associate companies in Africa because there aren't that many available to associate with. Southeast Asia is a new area to us but we're working on developing the market and we do have three associates there."

Mr. Bennett was critical of companies that believe international business can be built "by an occasional visit to CIDA or the World Bank in Washington or the United Nations in New York. These are important but there's nothing as important as getting out to the countries.

"We spend about 10 to 15 per cent of any fee we get on promotion and a lot of that is eaten up by travel and making out endless proposals."

The first thing a company must do, according to Mr. Bennett, is to get on the short list of any project. To do that a company must find out about the job almost before any other company does — even before an application for funding has been made. And to accomplish that, he said, you have to be talking to the minister of public works or the chief engineer of highways or the chief planning officer of the city, before the project gets to the World Bank.

"You may be talking socially with these fellows," he said, "and they may mention some dream they have, something they're thinking of doing. Maybe they mention looking for sources of money and maybe you can help them. Maybe you can give them a few pointers as to how they should best present their case for funding. If you get to them at that stage, you're almost certain to get on the short list."

Poor practice — When a company does make it onto a short list, probably it can consider itself to be safely on third base but definitely not yet at home plate. It is at this point, according to Mr. Bennett, where some companies go wrong.

"This is the time to prove they really deserve the job," he said, "and they do put together very attractive proposals showing the wonderful team of people they'll have working on the project. They may be selected on the basis of the people they say they'll use but as soon as they get the job they go out and hire new people, never having intended to use the people they said they would."

Mr. Bennett said this practice is becoming rare and is close to being barred by all funding agencies. Bigger agencies such as the World Bank, he said, just won't stand for it at all now.

Foreign Exchange Rates

These nominal quotations may help exporters in checking prices, but they should consult their banks before making any firm commitments. When more than one rate is shown, the one to be used depends on the commodity traded. Information on the rate for any specific commodity may be obtained from the International Bureaux, Department of Industry, Trade and Commerce, Ottawa.

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

Rates used exclusively in non-merchandise trading are *not* included in this table.

Note: The following rates were current at Oct. 31. Because of unsettled market conditions exporters should consult their bankers for up-to-date quotations.

Country and Currency	foreign currency unit in Canadian dollars	Canadian dollar in foreign currency units
Algeria		
Dinar	.2380	4.20
Arab Republic of Egypt		
Pound (official)	2.5162	.40
Argentina		
Peso (financial)	.0980	10.20
(commercial)	.1969	5.08
Australia		
Dollar	1.2898	.78
Austria		
Schilling	.0536	18.66
Bahamas		
Dollar	.9846	1.02
Belgium and Luxembourg		
Franc	.0256	39.06
Bermuda		
Dollar	1.0397	.96
Bolivia		
Peso	.0492	20.33
Brazil		
Cruzeiro (official free)	.1368	7.31
Britain		
Pound	2.3005	.43
British Honduras		
Dollar	.6078	1.64
Burma		
Kyat	.2045	4.92
Chile		
Escudo (commercial)	.0008	1,250.00
(financial)	.0007	1,428.57
China, People's Republic of		
Yuan	.4188	2.39
Colombia		
Peso (fixed)	.0364	27.47
Costa Rica		
Colon	.1182	8.46
Cuba		
Peso		N.A.[10]
Czechoslovakia		
Koruna (fixed basic rate)		N.A.[10]
Denmark		
Krone	.1655	6.04
Dominican Republic		
Peso	.9846	1.02
Ecuador		
Sucre (official)	.0394	25.38
El Salvador		
Colon	.3938	2.54
Fiji		
Dollar	1.2308	.81
Finland		
Markka	.2603	3.84
France, Monaco, etc.[1]		
Franc	.2098	4.74
French Pacific[2]		
Franc	.0112	89.29
Franco-African Republics[3]		
Franc	.0040	250.00
Germany		
D Mark	.3819	2.62
Ghana		
New Cedi	.8533	1.17
Greece		
Drachma	.0333	30.03
Guatemala		
Quetzal	.9846	1.02
Guyana		
Dollar	.4444	2.25
Haiti		
Gourde	.1969	5.08
Honduras		
Lempira	.4923	2.03
Hong Kong		
Dollar	.1936	5.17
Hungary		
Forint (official)	.0869	11.51
Iceland		
Krona (official)	.0083	120.48
India		
Rupee	.1226	8.16
Indonesia		
Rupiah	.0024	410.00
Iran		
Rial	.0143	69.50
Iraq		
Dinar	3.3258	.30
Ireland		
Pound	2.3005	.43

Country and Currency	foreign currency unit in Canadian dollars	Canadian dollar in foreign currency units
Israel Pound	.2300	4.35
Italy Lira	.0015	666.66
Jamaica Dollar	1.0831	.92
Japan Yen	.0032	312.50
Kenya[4] Shilling	.1379	7.25
Korea, Republic of Won	.0024	404.38
Lebanon Pound (free)	N.A.[10]	
Libya Dinar	2.777	.36
Malawi Kwatcha	1.2280	.81
Malaysia Dollar	.4096	2.44
Mexico Peso	.0783	12.77
Morocco Dirham	.2332	4.29
Netherlands Florin	.3733	2.68
Netherlands Antilles Florin	.5501	1.82
New Zealand Dollar	1.2775	.78
Nicaragua Cordoba	.1407	7.11
Nigeria Naira	1.4700	.68
Norway Krone	.1790	5.59
Pakistan Rupee	.0988	10.12
Panama Balboa	.9846	1.02
Paraguay Guarani (free)	.0078	128.21
Peru Sol (free)	.0225	44.44
Philippines[5] Peso (free)	.1468	6.81
Poland Zloty (fixed basic rate)	.2577	3.88
Portugal & Overseas Provinces[6] Escudo	.0388	25.58
Saudi Arabia Riyal	.2850	3.50
Sierra Leone Leone	1.2371	.81
Singapore Dollar	.3358	2.98
South Africa Rand	1.4080	.71
Spain & Dependencies Peseta	.0170	55.55
Sri Lanka[7] Rupee	.1451	6.89
Sweden Krona	.2248	4.45
Switzerland Franc	.3433	2.91
Syria Pound (free)	.2711	3.69
Thailand Baht (free)	.0482	20.75
Trinidad & Tobago[8] Dollar	.4793	2.09
Tunisia Dinar	2.2624	.44
Turkey Lira	.0711	14.06
United States Dollar	.9846	1.02
Uruguay Peso (free)	.0008	1,250.00
Venezuela Bolivar (official free)	.2294	4.36
Yugoslavia Dinar (official)	.0569	17.57
Zaire, Republic of[9] Zaire	1.961	.51
Zambia Kwacha	1.3893	.72

1. Franc is also used in French Guiana, Guadeloupe and Martinique.

2. New Caledonia, New Hebrides, French Polynesia.

3. Chad, Central African Republic, Congo (Brazzaville), Dahomey, Gabon, Ivory Coast, Islamic Republic of Mauretania, Niger, Senegal, Upper Volta, Cameroon, Togoland, and Malagasy. Also Reunion, Comoro Islands, St. Pierre and Miquelon.

4. Rate also applies to Tanzania and Uganda.

5. Exchange rate in Philippines on floating basis with daily quotations by banks.

6. Approximately same for Portuguese territories in Africa.

7. Formerly Ceylon.

8. E. C. dollar, at same rate, used in Leeward and Windward Islands.

9. Formerly Congo (Kinshasa).

10. Rates not available at press time.

Wanted: Manufacturers

This information is intended to promote additional manufacturing in Canada. Further material on items listed is for prospective Canadian manufacturers only. No responsibility is assumed for claims or statements made. Address inquiries, quoting item numbers, to: Industrial and Trade Enquiries Division, Department of Industry, Trade and Commerce, Ottawa K1A 0H5.

Three-wheeled vehicle

American company is offering the rights to manufacture under licence in Canada its three wheeled vehicle. Available in electric or gasoline models, this vehicle can carry two people. It is equipped with a forward and a reverse gear, and can achieve 12 miles per hour with smooth acceleration because of a new, solid state variable speed control. It can also be pedalled jointly with, or independently of, the mechanical power source. Applications include industrial, domestic, commercial and recreational fields. Literature available. **Item 3075**

Dump trucks

British company is offering the rights to manufacture under licence in Canada its range of rear dump trucks. One has a 19 ton payload with 13½ to 15½ cubic yard capacity; another has a 28 ton payload with a 22 cubic yard capacity. Both have a short wheel-base for good manoeuvrability, a square body shape to facilitate loading, and a low center of gravity for stability on rough terrain. Additional standard design features include independent front suspension with rubber springing all around, full time power steering, heated cab and dual air over hydraulic braking system. Literature available. **Item 3076**

Portable battery charger

American company is offering the rights to manufacture under licence in Canada its portable, gasoline-operated battery charger designed to charge 6, 12, or 24 volt batteries with amperage output of 40A at 12V or 30A at 24V. The charger incorporates an automatic solid state limiting and regulating device. The device is particularly useful in remote locations and for emergency road service. Its claimed advantages are its light weight (less than 30 pounds), small size, and high output for emergency starting and charging. Literature available. **Item 3077**

Windows

German firm wishes to have its windows for industrial buildings manufactured under licence in Canada. The basic element used in the construction of the window is a standard commercial rectangular steel section galvanized inside and outside. Brass bolts are fastened to the rungs by means of an advanced bolt setting method. For windows installed in saw-tooth roofs or in walls running the length of the building a special pliable synthetic caulking is used to prevent rain penetration. It is claimed that the same method can be used to produce door units. Literature available. **Item 3078**

Air purification equipment

Liechtenstein firm seeks a Canadian licensee to manufacture its air purification equipment. These appliances are available in various models with evaporation filters or electric ventilators. The small model functions automatically, using the normal air circulation as a releasing agent. The machine uses a liquid chemical agent which has to be replaced every 8 to 10 weeks. It is claimed that germs are reduced by 30 per cent, and that the air is purified without oversaturation or masking of odours. Electrically driven odour neutralizers with vaporization pipes are available on larger models. The sale of replacement filling liquid is attractive as a repeat business to licensee. Literature available. **Item 3079**

Automatic translation device

French firm wishes to have its automatic translation device manufactured under licence in Canada. This new invention is claimed to accurately translate normal company correspondence. The system consists of cards containing sequences of words which have been correctly translated. The cards are sorted according to an analogical code. In order to translate an original text, the cards can be put together according to a chosen program. It is claimed that the time needed to complete a translation of a standard commercial letter would be 3 to 4 minutes. The system is presently using French, German and English, with a depth of 252 "conceptograms" giving the possibility of more than 40,000 different combinations. Literature available. **Item 3080**

Gate catch

British firm is offering the rights to manufacture under licence in Canada a new gate catch. This device is designed to retain a gate in a closed position and to release it when the gate is pushed open, without the need for manual operation of a latch. It is claimed to be potentially less expensive to manufacture, more effective in operation, and neater in appearance. The two injection-moulded components are made of nylon because of its toughness, resiliance and self-lubricating qualities. Literature available. **Item 3081**

Handcraft weaving loom

Norwegian inventor seeks a Canadian company to manufacture his unique design of hand weaving loom. This hand loom is constructed primarily of aluminum and plastic components which, combined with the loom's compact design, makes it relatively easy to transport and to store. Primary use would be by hobbyists, schools and institutions for producing tapestries and rugs. Literature available. **Item 3082**

Comforting toy

Canadian designer offers under licence the Canadian manufacturing rights to a child's toy designed to replace the traditional security blanket. It consists of a central portion made of a number of layers of blanket cloth with an outwardly bulging pocket portion bearing the outline of a face. At each end are strips of cloth representing hair and a beard. It can be placed upon the hand as a puppet, and is easily washed and dried. The design could be incorporated into clothing, pillow cases, pyjama bags and other items. Literature available. **Item 3083**

X-ray equipment

American inventor is offering the rights to manufacture under licence in Canada his improved x-ray film cassette positioning device. This device provides a film cassette clamping system which clamps all four sides of cassettes without obstructing the central region beneath them. This new arrangement is claimed to lock the cassette both transversely and longitudinally while still permitting Bucky phototiming. It also prevents partial exposure of film and false reading on the size of the film in the tray.

Literature available. **Item 3084**

Lounge chair

Canadian inventor wishes to enter into a licensing agreement with a Canadian firm for the manufacture of his new design of lounge chair for lawn and beach. This chair enables the user to read in complete comfort while lying face down. It is particularly appreciated by those who like to read while they sunbathe. The invention consists of a chair with a rectangular aperture for the eyes and two apertures for the arms which make it possible to turn the pages. This simple and inexpensive alteration can be made to most conventional garden lounge chairs. Literature available. **Item 3085**

Insulating material

German firm offers under licence the Canadian manufacturing rights to a new type of plastic coated foam insulating material. This material is claimed to be especially effective for heat and cold insulation. It does not absorb water and retains its insulating properties after many years of use. It is flexible, yet has high strength. It is translucent, flame resistant and can be thermally welded, sewn, nailed, screwed, glued or laminated. Applications include temporary coverings or enclosures, boat construction, building construction, swimming pool covers, etc. Literature available. **Item 3086**

Submersible pumps

Finnish company is offering the rights to manufacture under licence in Canada an extensive range of submersible pumps designed for specific conditions, e.g. building and building site drainage, normal sewage, abrasive sewage, thick slurry (up to a dry content of 12 per cent), aggressive media (submersible pumps in acid resistant steel, and pumps with explosion-proof motors). Every effort has been made to ensure that the pumps are waterproof. However, a relay cuts off the current if any minute quantity of water enters the motor enclosure, thereby preventing motor damage and expensive repairs. Also, the stator windings contain two thermal relays which cut off the current if the temperature reaches a level that might damage the motor. Several unique designs of impeller are available depending on the application. Literature available. **Item 3087**

Clean air equipment

Danish company is offering the rights to manufacture under licence in Canada its clean air equipment for use in hospitals, clincis, research laboratories . . . in fact, in every work area where clean air is required. The equipment is available in several sizes and models. Each unit consists of a work station provided with laminar air flow contamination control which performs to class 100 clean air specifications. In the laminar flow system, microfiltered clean air moves across the entire height and breadth of the work area at a constant flow velocity of 0.5 m/sec (100ft/min). It is claimed that this constant laminar flow velocity provides more complete air changes than is possible with conventional techniques. Literature available. **Item 3088**

Salted air dispersing unit

American firm is offering the rights to manufacture under licence in Canada its precision dispersing unit designed for salting the air within a room. This electrically powered device pulverizes coarse grain salt into sub-micron particles and then disperses them into the air. It is claimed that the salt, being a natural mucolitic agent, breaks down thick mucus congestion and aids in the restoration of free breathing. Literature available. **Item 3089**

Tube connecting device

Swedish firm seeks to licence a Canadian company to manufacture its general purpose all-metal tube connecting device which can be used with all types and thickness of tubing material. Locking and leak-proofing is accomplished by compressing a spring washer which squeezes a wedge against the tube thereby giving a very strong connection by friction. No flaring of the tube is required and no sleeves are forced into the tube. Accordingly, both the pipe and the connector are re-usable. Literature available. **Item 3090**

Metal working specialties

American company seeks a licensing arrangement with a Canadian firm for the production of its complete line of proprietary products. These products include corrosion inhibitors, rust preventives, cutting and grinding fluids, specialty cleaning compounds and other additives used in machining metal parts, as well as processing fluids for the electronics industry. Literature available. **Item 3091**

Swivel and tilt mechanisms for chairs

New Zealand firm offers under licence the Canadian manufacturing rights to its torsion bar swivel and tilt mechanisms for chairs. These mechanisms, because of their method of disposition of the forces in the torsion bar are claimed to reduce or eliminate the racking or strain on chair frames during use. Also, the housing for the torsion bar provides a strong support between the chair base and chair seat by directing forces from both ends of the torsion bar to substantially the same part of the seat. The units are constructed of simple pieces such as brackets, rods and hollow members that are easily produced and inexpensive to provide. Literature available. **Item 3092**

Retractable stairway

American inventor offers under licence the Canadian manufacturing rights to his motorized retractable stairway device for access to attics or similar upper levels of buildings. The stairs and the motor are fastened to a trapdoor which is flush with the ceiling, so that everything is concealed from view when the trapdoor panel is closed. The reversible motor permits the stairway to be raised or lowered on demand. Literature available. **Item 3093**

Drying of sewage sediment

Swiss company is offering the rights to manufacture under licence in Canada its sewage sediment drying equipment. Drying by heat of the sediment obtained from treating sewage is done in just one completely automatic pass. The sediment, which has a moisture content that can reach 94 per cent, is converted into a comparatively dry substance that can be bagged and has a moisture content of only 12 per cent or so. The nucleus of the plant is a 3-phase operation involving a drum equipped with three coaxial cylinders so constructed that, when the mixture to be dried passes through each tube, it is brought back up by the cells in the cylinders and, in falling again, is dried by the hot gases from the furnace. Literature available. **Item 3094**

Fibre optic dental unit

British firm seeks to licence a Canadian company to manufacture its fibre optic dental unit for intra-oral lighting for use in dental procedures. The dental unit consists of a light source using a 50 to 100 watt tungstenhalogen bulb and dichroic reflector. Three fibre optic light guides are attached to the light source, one terminating in a dental inspection mirror, one in a general use light probe, and one in the dental handpiece. This system provides bright light where required and eliminates shadows. Literature available. **Item 3095**

Hypodermic needle

Canadian inventor is seeking a Canadian company to manufacture under licence his hypodermic device which will permit the injection of fluids into humans or animals with a minimum of pain. The device consists of a disposable hypodermic assembler which combines a standard hypodermic needle with a micro-injector apparatus for anaesthetizing the skin area immediately prior to penetration by the larger hypodermic needle. Literature available. **Item 3096**

Export Opportunities

The inquiries listed below come from several sources, including various Branches of the Department in Ottawa and the Trade Commissioner Service posts abroad. Exporters should correspond directly with the companies or agencies mentioned, using the addresses given, and should send copies of the correspondence to the Trade Commissioner for follow-up. The Department of Industry, Trade and Commerce cannot assume any responsibility for trade negotiations that exporters may enter into with these firms, nor can it vouch for their commercial standing.

Chemicals

SINGAPORE — The chemical division of a Singapore company is seeking Canadian suppliers of the following products: polyethylene resin; polystyrene resin, phenolic moulding powder; melamine resin; polyster resin; expanded polystyrene; PVC emulsion resin and PVC compound for record; ABS resin; plasticizers; stabilizers; impact modifiers for PVC and other plastic; petrol resin; colour pigment powder; lithopone; synthetic red iron oxide; zinc dust; flavouring essence for food; sodium tripolyphosphate; sodium lauryl sulphate; sodium pentachlorophenate; asbestos fibre; phosphoric acid; citric acid; acetic acid; formic acid: Commercial Counsellor, Canadian High Commission, P.O. Box 845, Faber House, 7 & 8 floors, 230/236 Orchard Road, Singapore 9, Singapore.

Clothing

SWITZERLAND — Shirts, jeans and winter jackets: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Electrical and Electronics

SINGAPORE — Double bean/trace oscilloscopes for schools and technical colleges: Commercial Counsellor, Canadian High Commission, P.O. Box 845, Faber House, 7 & 8 floors, 230/236 Orchard Road, Singapore 9, Singapore.

SRI LANKA — Tender for the supply of equipment for the Bowatenne power project: Commercial Division, Canadian High Commission, P.O. Box 1006, 6 Gregory's Road, Cinnamon Gardens, Colombo, Sri Lanka.

SWITZERLAND — CATV-cables and components; semi-conductors: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Engineering and Construction

ARGENTINA — Tender for the construction of one or more tire factories in Entre Rios province to produce 800,000 tires per year.

Tender for the construction of one or more textile factories in Rio Negro province to produce flat fabrics and will be of the integrated type, i.e. including yarn and finishing processes: Commercial Counsellor, Canadian Embassy, Casilla de Correo 3898, Suipacha 1111, Buenos Aires, Argentina.

Equipment and Machinery

BRAZIL — Instruments used in topography, geodetics and land surveying.

Equipment to produce disposable, transparent plastic cups through injection process.

Interested in agreement to manufacture under licence industrial scales, bagging, weighing, and lifting equipment: Consul and Trade Commissioner, Canadian Consulate, Caixa Postal 6034, Edificio Scarpa, Avenida Paulista, 1765, 9 andar, Sao Paulo, Brazil.

CZECHOSLOVAKIA — Concrete

mixers mounted on trucks, capacity 3 m^3, maximum height 3.8 m. Gravel pit equipment, capacity 60,000 m^3/year, consisting of gravel washing machine, crusher, separator, set of belt conveyors. Telescopic auto-cranes mounted on trucks. Road making machines. Log skidders, woodworking machinery and sawmill equipment. Packaging machines. Machines for production of plastic covers. Vending machines. Hotel and restaurant equipment. Mobile boilers to supply hot water. "Clean laboratory tables" (air-filtered rooms). Separators of SO_2 to be built in stacks: Commercial Secretary, Canadian Embassy, Mickiewiczova 6, 125 33 Prague 6, Czechoslovakia.

GREECE — Various kinds of knives and related cutting equipment used in the pulp, paper and woodworking industries.

A distributor of agricultural machinery and equipment is interested in manufacturing under licence high density wire type pick up balers.

Plastic pipe threading machines and hand tools in general including power driven hand tools: Commercial Secretary, Canadian Embassy, 4 Ioannou, Ghennadiou Street, Athens 140, Greece.

INDIA — Five bilingual time speaking clocks.

Tender for eight pieces of trailers with pulling units of three different capacities: Counsellor (Development and Commercial), Canadian High Commission, P.O. Box 5208, Shanti Path, Chanakyapuri, New Delhi 21, India.

SPAIN — Tantalum tubes (or apparatus employing Ta); metal tanks with inner lining of teflon; plastic centrifugal pumps (vertical or horizontal).

Olive oil producer and exporter requires leak detection equipment and equipment to open, pack and seal cases. The firm is also interested in any new systems for packaging olive oil: Commercial Counsellor, Canadian Embassy, Apartado 117, 35, Nunez de Balboa, Madrid, Spain.

SWITZERLAND — Log debarkers.

Vices, mechanical/pneumatic/hydraulic spanning tools:

Machinery for plastic industry and packaging machinery: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Foodstuffs

PORTUGAL — Hake, cod and halibut fillets; frozen peas: Commercial Counsellor, Canadian Embassy, Rua Rose Araujo, 2-7°, Seventh Floor, Lisbon 2, Portugal.

SWITZERLAND — Perch fillets; Alaskan cooked peeled prawns; North Atlantic cooked peeled prawns; North Atlantic whole cooked prawns: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Furniture

DENMARK — Semi-manufactured articles, fittings and accessories for the furniture industry: Trade Commissioner, Royal Danish Consulate-General, Suite 1525, 1245 Sherbrooke St. West, Montreal 109, Quebec.

Furs

SWITZERLAND — Raw and tanned fur skins, mink, beaver, fox and others. Also finished fur garments: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Marine

DENMARK — Aluminum fishing rods, 20-30 feet long for commercial use: Commercial Counsellor, Canadian Embassy, Prinsesse Maries Allé 2, Copenhagen V, Denmark.

SRI LANKA — Tender for the supply of fishing vessels, fishing gear, jeeps, etc. for a Department of Fisheries project: Commercial Division, Canadian High Commission, P.O. Box 1006, 6 Gregory's Road, Cinnamon Gardens, Colombo, Sri Lanka.

Materials

ARGENTINA — Tender for supply of 200,000 metric tons of hot rolled strip steel in thicknesses of from 1.60 to 25.4 mm. in sheets or in rolls.

Coke manufacturer requires 5,000 tons/month of coking coal and 3,000 tons/month of coal tar pitch: Commercial Counsellor, Canadian Embassy, Casilla de Correo 3898, Suipacha 1111, Buenos Aires, Argentina.

SINGAPORE — Welding electrode rods in coil form suitable for welding mild steel structures: Commercial Counsellor, Canadian High Commission, P.O. Box 845, Faber House, 7 & 8 floors, 230/236 Orchard Road, Singapore 9, Singapore.

SWITZERLAND — Gelatine and animal glue.

Pocketing fabrics.

Brake disc pads and filters.

Raw materials for paper, chemical, pharmaceutical and plastic industries; semi-finished plastic products: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

UNITED STATES — New England garment manufacturer is seeking hardwood hangers in quantity of 40,000-50,000 per year: Consul and Senior Trade Commissioner, Canadian Consulate General, 500 Boylston Street, Boston, Mass. 02116, U.S.A.

Metals

SINGAPORE — Engineering company requires moderately large quantities of steel, alloy aluminum, copper and bronze materials of international standards:

Miscellaneous

BRAZIL — Animal hair used in the manufacture and repair of bows for musical string instruments: Consul and Trade Commissioner, Canadian Consulate, Caixa Postal 6034, Edificio Scarpa, Avenida Paulista, 1765, 9 andar, Sao Paulo, Brazil.

MALAYSIA — Penang firm is interested in going into joint venture with a Canadian manufacturer with knowhow in manufacturing polystyrene insulation for building industries: Commercial Secretary, Canadian High Commission, P.O. Box 990, A.I.A. Building, Ampang Road, Kuala Lumpur, Malaysia.

SINGAPORE — Inflated plastic buildings — that is buildings made of a flexible plastic skin and held up by pumping air at a low pressure continuously into the building: Commercial Counsellor, Canadian High Commission, P.O. Box 845, Faber House, 7 & 8 floors, 230/236 Orchard Road, Singapore 9, Singapore.

Pulp and Paper Products

BRITAIN — Wood-free exercise paper in reels 60 gsm, width 16⅛" inside core 3" outside diameter 33¾"; duplicating paper 70 gsm machine trim 93" x 98" 26.5 x 33.5" long grain 28 per cent short grain 72 per cent; art paper white coated 105 g 600(640) x 900 mm in reams; Kent paper sub 118 G size 940 x 900 mm reams; wood free printing paper

70/60/80 gsm size 27" x 34"/22½" x 35"; Manila boards coloured; newsprint 15/17/18/30/36/34" widths, weight 52 gsm/m2 and 48.8 gsm on reels inside core 3" and 40" outside diameter; chipboards white lined; ivory boards for cigarette cases; kingdom cloth lined paper; Kraftliners and Kraft paper: Minister (Commercial), Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

IVORY COAST — 3,000 metric tons of newsprint to be shipped at rate of 500 tons every two months. Usual weight of 52 to 64 grs, width 86 cm.: Commercial Secretary, Canadian Embassy, P.O. Box 21194, Le General Building, Cor. Avenue du Commerce et Bottreau-Roussel Plateau, Abidjan, Ivory Coast.

SINGAPORE — Kraft paper, printing paper and packaging paper: Commercial Counsellor, Canadian High Commission, P.O. Box 845, Faber House, 7 & 8 floors, 230/236 Orchard Road, Singapore 9, Singapore.

Recreation

SWITZERLAND — Curling and golf equipment: Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Toys

DENMARK — High quality educational toys and hobby articles: Commercial Counsellor, Canadian Embassy, Prinsesse Maries Allé 2, Copenhagen V, Denmark.

International Projects

CHILE — HYDROELECTRIC EXPANSION

The Inter-American Bank has approved a $75.3 million loan to help Chile expand its hydroelectric generating capacity by a total of 560,000 kilowatts by 1982.

The loan, which was extended to the Empresa Nacional de Electricidad S.A., (ENDESA), Chile's national electrification agency, will help construct a hydroelectric generating plant with a capacity of 300,000 kilowatts at Antuco in the Laja River Basin and prepare the preliminary design of Stage 1 of the Colbun hydroelectric plant with an eventual total capacity of 520,000 kilowatts on the Maule River.

The total cost of the project is estimated at $262.1 million, of which the Bank loan will cover 28.7 per cent and the balance will be financed mainly by local sources.

Implementing Organization: Empresa Nacional de Electricidad, S.A.

Procurement: International public bidding on goods and services imported with resources of the Bank loan. National public bidding on domestic purchases.

JAMAICA — AIRPORT IMPROVEMENTS

The World Bank has approved a $12.5 million loan to help finance expansion and improvement of Jamaica's two international airports — the Norman Manley and Donald Sangster airports — serving respectively Kingston and Montego Bay, the island's main business and tourist centres. Jamaica must rely on air service for passenger transport from and to foreign countries because practically no regular scheduled sea transport service exists.

Both tourist and business air travel to Jamaica has grown impressively in recent years and the airports have had difficulties to keep pace with this increase in traffic. The project, when completed in 1977, will help to relieve capacity constraints to continued growth of international air traffic and tourism, an important source of foreign exchange earnings estimated at US$115 million in 1973.

The project is designed to improve the institutional base for operating the Manley Airport (Kingston) and the Sangster (Montego Bay) and will provide passenger and aircraft service to meet forecast traffic until 1980. Among the main features of the project are: (a) improvement of airport ground handling and passenger processing; (b) improvement of air traffic control and navigation facilities; and (c) technical assistance to help organize and establish the Airport Authority of Jamaica (AAJ).

Implementing Organization: The physical aspects of the project will be implemented by the Ministry of Works. A project team to co-ordinate and supervise the project, and a steering committee will be formed.

Procurement: Major civil works and equipment procurement contracts other than navigational equipment will be awarded through international competi-

Foreign Tariffs and Trade Regulations

GUATEMALA

Effective October 12, 1974, the legalization fee for every set of six copies of commercial invoices and bills of lading covering shipments of Cdn.$200 or more to Guatemala is Cdn.$15. Shipments by air as well as parcel post shipments do not require consular legalization.

JAMAICA

The Jamaican authorities announced by Notice to Importers No. 2917 of October 9, 1974, that import licences will be issued freely, within reasonable limits, for the following commodities:

1) Parts for tools, non-electric, for artisans and for use in agriculture;
2) Buttons;
3) Buckram;
4) Hooks, loops and press-studs;
5) Buckles (other than jewellery and imitation jewellery);
6) Ribbons — assorted widths up to 6 inches;
7) Thread;
8) Branded labels of textiles.

MALAYSIA

Effective October 1, 1974, polystyrene primary forms other than in emulsion, (heading No. 39.03 220) entering Malaysia are subject to specific licensing and quantitative restriction. Malaysian importers must obtain an import licence prior to placing orders.

Importers and exporters in Malaysia, including Principal Customs Area, Penang, Sabah and Sarawak, are notified that effective October 1, 1974, they are required to state the metric equivalent (to the nearest two decimal points) alongside units specified in the Malaysian Tariff Code in all applications for imports and exports permit.

PANAMA

The Direccion Consular y de Naves of the Panamanian Ministry of Finance and Treasury has informed our Trade Commissioner in Costa Rica that Consular legalization of shipping documents is not required for shipments from Canada originating in places where there is neither a Panamanian Consul nor a Consul of friendly nations. In these instances it is sufficient to have commercial invoices certified by the local Chamber of Commerce or by two local reputable businessmen whose signatures are authenticated by a Notary Public. This certification must state that there is no Panamanian Consulate in the community involved.

The original and four copies of both the commercial invoice and bill of lading must be sent by the shipping agency to the importer in Panama. The importer or the customs clearance agency must then present this documentation to the Ministerio de Hacienda y Tesoro for certification that there is no Panamanian Consul in the home location of the Canadian exporter.

SPAIN

The temporary 10 per cent, across-the-board reduction in import duties (operative July 11-October 10) is no longer applicable.

Effective October 18, 1974, certain liberalized goods returned temporarily to the system of global quotas. The list of items includes perfumes, some plastic raw materials and clothing, porcelain tableware, ceramic goods and other giftware, artificial jewellery, electronic products, firearms, toys and games.

URUGUAY

The Uruguayan Ministry of Economy has instructed the Central Bank to lift all present restrictions on hard currencies transactions. The price of the dollar and the rest of the strong currencies will be set by the laws of supply and demand. All transactions, however, will be handled exclusively through the banks. The exchange houses will remain closed. The Central Bank will act as a moderator in order to prevent speculation.

VENEZUELA

Decree No. 338 of August 13, 1974, introduced a new Import Customs Tariff adopting the Common Import Tariff Nomenclature (NABANDINA) of the Andean Common Market which is based on the Brussels Tariff Nomenclature. The new customs tariff came into force on September 30, 1974, except for goods shipped by ocean freight on or before August 13.

Information regarding the rates of duty applicable on specific products may be obtained from the Latin America Division, Western Hemisphere Bureau, Department of Industry, Trade and Commerce, Ottawa K1A 0H5.

The Ocean Freight Market

Prepared by the Office of the Transportation Policy Adviser, October 29, 1974

In the dry cargo voyage market, the drop in rates first evidenced in June had relaxed in intensity during the summer to register only modest further declines — bordering almost on stability — from August through October. Compared to all-time peaks recorded by April -May 1974, many rates were halved by October, and had returned to levels existing in the summer of 1973.

The heavy grain trade from the Great Lakes to Belgium/Holland/Germany was representative of the great fluctuations in rates over the past 15 months. Rates in July-September 1973 ranged between U.S. $15 and $22 per ton, and had reached a high of $41.93 per ton for a small shipment to Europoort in May 1974. Rates subsequently had fallen off to as low as U.S. $12.50 in early October, although other October rates ranged between $14.50 and $21.00. Another key indicator of trends in the dry cargo voyage market is the Hampton Roads/Japan coal trade. Following the same pattern as shown in Great Lakes grain trades, October 1974 rates ranged between U.S. $12.75 and $19.50 depending upon vessel size, compared with fixtures between $11.75 and $18.00 in July-September 1973, and a peak of $28.50 in May 1974.

During October there was considerable inquiry for ships for time charters of up to 12 months. For example, during the first three weeks of October there were six recorded fixtures for dry cargo vessels between 20,000 and 30,000 tons deadweight, compared with totals of as low as two or three during the preceding months. For shipowners, October rates generally were favourable in comparison with summer fixtures.

In the tanker market, after remaining at low levels throughout the summer, rates for crude oil from the Persian Gulf to Western options dropped to as little as Worldscale 37.5 for very large crude carriers (VLCC) in mid-September. Rates subsequently rose, probably reflecting anticipated winter fuel requirements, and by mid-October VLCC's were being fixed at Worldscale 71.25 to 77.5. Although these rates have advanced, they were still approximately one-fifth to one-half the rates paid from July to September 1973.

CHARTER RATES FOR REPRESENTATIVE CANADIAN AND WORLD TRADES

Trading	Month	Rate	Fixture Tonnage
		(Cdn.$per long ton)	
Voyage Charters			
Heavy Grain			
Great Lakes to Belgium/Holland/Germany			
	October 1974	12.28 to 20.62	13,000 to 19,500
	September 1974	15.29 to 17.75	6,00 to 22,000
	August 1974	16.17	13,600
	July 1973	15.00 to 18.00	13,500 to 25,000
Coal			
Hampton Roads to Japan			
	October 1974	12.52 to 19.15	20,000 to 52,000
	September 1974	12.58 to 19.63	23,000 to 52,000
	August 1974	13.23 to 23.32	23,000 to 60,000
	July 1973	11.75 to 12.98	30,000 to 55,000
Crude Petroleum			
Persian Gulf to Western options (Worldscale rates, not dollars) (1)			
	October 1974	64.0 to 85.0	67,000 to 280,000
	September 1974	37.5 to 100.0	33,000 to 278,000
	August 1974	40.0 to 90.0	34,000 to 275,000
	July 1973	140.0 to 225.0	30,000 to 275,000
Time Charters			
Dry cargo ships of 20,000 to 30,000 tons deadweight for up to 12 months chartering			
	October 1974	6.87 to 9.60	6 fixtures
	September 1974	6.60 and 7.69	2 fixtures
	August 1974	6.86 to 9.80	3 fixtures
	July 1973	6.00 to 7.50	3 fixtures

(1) Actual rate in dollars depends on specific ports of origin and destination of cargo. "Worldscale" rates are utilized as percentages of base rates (termed Worldscale 100) as published in the tariff "Worldwide Tanker Nominal Freight Scale". "Western Options" refers to Britain, Northwestern Europe, Scandinavia and the Atlantic Coast of North America.

Market Facts for Decision Makers

Analysis of Canadian imports of a variety of products are available, free, from the Import Analysis Division, Department of Industry, Trade and Commerce, Ottawa K1A 0H5. The following list details the latest available. If you would like the Branch to prepare an analysis for you, write to its Chief or to the Industry Sector Division that handles the product you are interested in.

Report No.	Class No.	Subject	Period
54-74	524-14	Chain saws	January to March, 1974
55-74	452-85	Copper alloy tubing	October to December, 1973
56-74	452-75	Copper alloy shapes	October to December, 1973
57-74	755-52	Hammers	December 1973 to February, 1974
58-74	496-99	Pet litter	April to June, 1973
59-74	529-49	Metering, mixing & dispensing machinery (plastics industry)	October 1973 to March, 1974
60-74	867-12	Trays	October to December, 1973
61-74	503-66) 503-67) 503-69)	Electric motors	October & November, 1973
62-74	621-15	Tractor & implement tires	October to December, 1973
63-74	621-20	Industrial tires	October to December, 1973
64-74	621-29	Bicycles & motorcycle tires	October to December, 1973
65-74	697-58) 730-99)	Compactors	February to May, 1974
66-74	454-15) 454-69) 454-76) 454-85) 454-99)	Nickel & nickel alloy	October to December, 1973

Highway 400 and 401 interchange, Toronto, Ontario

Project proposals are important. Good ones cost $15,000 to $25,000, including travel, printing and presentations. They run to about 200 pages, including maps, charts and photographs, and they must be printed in the language of the country in which they are being presented. Mr. Bennett said: "If you don't use the language of the country, you might as well throw the proposal away."

He said that Delcanda works in three languages: Spanish, French and English. He said the firm prefers to write proposals from scratch in the language in which they will be used but sometimes translators are used in rewriting material from one language to another.

Mr. Bennett has also found it valuable to work closely with the Department of Industry, Trade and Commerce. About the Department's Trade Commissioners, he said: "We couldn't operate without them — well, I suppose we could but they're second to none. I'm in a position to make comparisons and the Department really does have a fine calibre of officer.

"The Trade Commissioners are my first stop in every country I visit. If I have time, I let them know my plans and, when I arrive, everything's laid on." He expressed appreciation also of the Department's financial support programs because "they encourage smaller Canadian companies to go overseas and promote themselves properly."

Joint ventures — Mr. Bennett told *Canada Commerce* that he believes joint ventures will have to be resorted to by more Canadian companies, if they hope to compete successfully on the international scene. For some companies, he said, this is the only way to get needed personnel, financing or promotion — by sharing resources with other firms.

Delcanda occasionally participates in joint ventures, even with companies not directly involved in the type of work it is doing. Mr. Bennett explained: "There may be a company doing hydro-electric work in a particular country and it may have established an office. I may know there's a highway project coming up in that country in which we will be involved, so I'll phone them up and ask them if they'd like to join with us. What they provide is not any highway expertise, because they're not interested in highways, but they will provide an administrative base in the country and they'll have a lot of contacts valuable to us."

There may be other reasons for going into a joint venture but the point is, he said, every project has to be treated as a unique case. □

India as a market for electronics

Indian technicians install telephone cable, part of the $40 million worth provided through CIDA.

R. LOCKHEAD, Assistant Commercial Secretary, New Delhi

The electronics industry in India is of relatively recent origin. On the eve of independence (1949), there was hardly any production of electronic items and it was only in the Fifties that a start was made, with the establishment of two government-owned companies — Indian Telephone Industries and Bharat Electronics Limited. Government participation has increased and today public undertakings account for a little over 40 per cent of the total value of electronics production.

After a humble beginning, the electronics industry has shown marked progress, achieving a level of production worth about $250 million in 1972-73. During the past decade, it has progressed at a rate of 30 per cent a year, compared with the growth records of 20 to 25 per cent a year achieved by developed countries like Japan. None the less, India's total turnover represents only 0.65 per cent of the total world business in electronics.

In spite of this expansion and the level of sophistication achieved, India's electronics industry has suffered from lopsided development that has favoured non-essential items. In 1971-72, output of consumer goods contributed to more than 50 per cent of the total value of electronic equipment produced. This situation, coupled with inadequate investment in research and development, has neglected defence production as well as industrial, scientific and medical electronics. To alter this situation, the Government has undertaken various programs to supplement research and development and to eventually make the country self-sufficient in its growing requirements for essential electronic equipment. But until these programs achieve any tangible results, India will have to rely substantially on imports, especially for the more sophisticated items.

Components — The value of total production of indigenous electronic components has grown from $5 million in 1964-65 to $55 million in 1973-74. Almost 90 per cent of India's total component requirement was met by import in 1960, but it is estimated that approximately 80 per cent of this now comes from indigenous sources. But the more sophisticated components still must be imported, and items like keyboards, calculator kits, MOS's, LSI's, subfractional motors, LED's and discrete components, magnetic recording heads, communication crystals, precision potentiometers, relay micro switches, miniature microphones, multi-layer printed circuit boards, microwave com-

ponents and hardware, black and white guns for picture tubes, glass envelopes and even paper cones for loudspeakers have excellent potential in this market. Unfortunately, because of the country's present licensing system which imposes restrictions on the total production of a company, the quantity involved is usually rather small.

In an effort to reduce its dependence on imports and at the same time develop its own computer technology, the Government has approached various parties and is negotiating with them for the outright purchase of semi-conductor and ferrite-core memory technology. If successful, it hopes to produce computers and also to offer design facilities at home and to neighbouring markets. This program will lead to large capital investments for the import of computer and peripheral equipment required to start production. Final arrangements have not been worked out but the Government has already established a company, Semi-Conductor Production Corporation, to implement this project.

Industrial, scientific and medical — Production of various types of medical electronics equipment has just begun, but does not yet meet the country's requirements. X-ray equipment forms a major portion of current production but the following are also produced: ECG machines, intensive cardiac care units, cardiac pacemakers, electro encephalographs, and defibrilators. Production of medical electronics equipment in 1970-71 and 1971-72 was about $2 million and $3 million respectively, whereas the imports totalled about $2 million for each of those fiscal periods. The electro-medical equipment industry is also growing but at a slower rate. The five existing manufacturers achieved production levels of $600,000 in 1972 and $1 million in 1973, while imports were worth about $3.1 million and $3.5 million for these two years.

India's total requirement for industrial instruments is large and diversified. Of the three major categories of industrial instruments — electrical measuring, process control, and electronics — production of the first has had the most impressive growth. Slower expansion of production control instruments results from the need to diversify and to add new types of equipment. Design, development and the small series requirements are other factors contributing to this slower rate of growth. As far as electronic instruments and systems are concerned, production started just a few years ago and has reached $8.9 million a year. Imports total approximately $2.5 million in this category. Generally speaking, the country is still dependent on imports to a sizeable extent both in terms of volume and types of instruments required.

Electronic test and measuring instruments covering a wide range of types, specifications and applications are being manufactured also, with current production worth around $7 million a year. Production of low-frequency equipment and simpler types of instruments is satisfactory but precision instruments, high-frequency signal generators, oscilloscopes, sweep generators, microwave power meters, precision LRC bridges, meters, high-frequency impendence bridges, precision sound-level meters, cable-testing instruments, vibration meters and bridges, capacitor comparitors and other similarly sophisticated items are being imported.

Communications — India has been active in developing the various facets of its telecommunications industry. The Indian telephone industry manufactures 250,000 line exchanges annually and a recent expansion program should increase this capacity by another 300,000 lines a year. Efforts are being made to introduce electronic systems and the Telecommunication Research Centre has developed an electronic exchange system using a special-purpose digital computer. Tests are being carried out and commercial production should begin within a few years.

Microwave communication has not been left untouched by this evolution. The Telecommunication Research Centre has designed and developed a variety of equipment which is being manufactured by the Indian telephone industry. At present, the Ministry of Posts and Telegraphs is evaluating the current microwave program to determine whether existing manufacturing facilities are capable of meeting the country's requirements during the Fifth Five Year Plan.

India is moving also into the field of television satellite development and the Satellite Instructional Television Experiment (SITE), undertaken jointly by the Indian Department of Space and the National Aeronautical Space Administration of the United States should start by the middle of 1975. The experiment will last one year and study the feasibility of direct reception of television programs from a satellite, as well as receiving and rebroadcasting to conventional TV receivers with the help of UHF transmitters. For direct reception of TV signals from the satellite, an augmented TV receiver with front end converter will be used. Transmissions will be through one video channel and two audio channels — this imposes limitations on the experiments because the programs would be broadcast to more than half a dozen language groups.

Unfortunately, there is no indication whether India intends to establish a permanent satellite system after the experiment is completed. No mention has been made in the Fifth Five Year Plan of any future development intentions. Nevertheless, there will be some requirement for studio equipment for the experiment.

Data processing — There are more than 200 computers in use in India. In addition there are about 800 punch card data processing installations supplementing the task of processing information required by today's business and industry. Most of the computer installations in operation have been provided by IBM and International Computers Limited (ICL). ICL is to assemble a number of its 1900-series computers, some of them in collaboration with Bharat Electronics Limited. The Indian Statistical Institute and Jadavpur University have built a medium-size computer of their own design and the Bhabha Atomic Research Centre, Bombay, recently brought into operation a 12-bit, 2-microsecond real-time machine after years of research and development. This is being produced commercially by the Electronics Corporation of India.

A number of private companies have started developing mini-computers. This industry is still in its infancy and consequently most of the components are imported and assembled in India. This

situation might change if the Government is successful in its negotiations and becomes able to purchase the needed memory technology from abroad.

Furthermore, this new industry depends on imported peripheral equipment and components. Except for the low-speed paper tape reader and punch teletype manufactured in India, everything has to be imported. If they wish to offer complete packages to their customers, manufacturers must shop around for equipment compatible with their systems.

Two recent additions to this country's data processing systems have been desk and hand-held calculators. Design and development, although based on imported components, are strictly Indian. Already a number of these manufacturers are successfully exporting their products to Europe.

Sub-assembly and R&D — Labour and engineering costs in India are low enough for foreign companies to consider having sub-assembly and research and development done locally. The Indian Government has recognized this fact and is currently promoting the Santa Cruz Electronics Export Processing Zone. This free trade zone is being set up entirely for exports and no sales will be permitted within India. Entrepreneurs establishing a unit in the zone will be permitted to import the required captial equipment, raw materials and components free of import duty. Other incentives also are offered to manufacturers.

All services are provided within the zone — from administrative offices to service infrastructure, telecommunications, foreign post, customs, foreign trade control, free warehouses, canteen and municipal services. Clearing and forwarding can be handled by the zone administration. Water and power are available and transport is not a problem because the Bombay airport is only six km and the docks 20 km away.

Some Indian companies are in a position to offer sub-assembly services to foreign manufacturers. India, with its vast human resources, can offer inexpensive labour to an industry that is labour-intensive. For similar reasons, research and development can be carried out at a much lower cost by large public and private electronic companies with engineering staffs that have been trained, in many cases, in North America.

Canadian companies interested in this admittedly limited market should be aware of import restrictions. Only the end user can obtain an import licence from the Government and it is not possible to stock any parts or components for sales afterwards through an appointed distributor. If your company is doing business with India for the first time, it is advisable to establish contact with the Canadian Government Trade Commissioner's Office, which can recommend various agents. □

Lo and behold—a boat shortage in Detroit!

JOANNE KIRBY, Commercial Officer, Detroit

The November '73 to May '74 period of business uncertainty occasioned by the energy crisis has whipped up a storm for the entire boat business. Those dealers who reacted with some degree of panic by cancelling or refraining to place orders during last winter's fuel shortage are now reaping a bitter harvest. The stalwart ones who refused to "abandon ship" are cashing in on a lucrative market while the weak of heart are able to supply but a trickle of the rebounding demand for leisure craft.

The result — a confused sales picture in the Michigan boat market — the number one State in the U.S. for boat registrations.

Sales in every category are up over last year. The dealers who kept the faith and purchased any boat available are having a sales heyday; it matters little whether they are offering a 19-foot runabout or a 73-foot yacht. Their competitors who attempted to reorder after the crunch had subsided, found they had "missed the boat" because U.S. manufacturers had cut back production schedules in accordance with the mass cancellations.

It defies comprehension, but in many areas the public is buying larger boats despite the combined deterrents of inflated price tags and higher gasoline prices. Power boat enthusiasts, additionally, are faced with stringent anti-pollution regulations applicable on all area waterways. However, these factors are having no apparent effect on sales figures.

With pricing on cruisers up 10-20 per cent over last year, the psychology of the entire consumer demand, particularly at this level, is, to say the least, difficult to appreciate. Surprisingly, average working people are walking in and buying up to 33 or 35 footers.

Another growth area is aluminum canoes and aluminum fishing boats. Sales of these boats are up 15 per cent. The petro-chemical situation has affected the supply of fiberglass boats because of the shortage of resin. Volume in sail boats remains about the same as last year, possibly slightly better, but they are not enjoying the boom many people predicted.

Notwithstanding prevailing shortages and the shrinking purchasing power of the dollar, Michigan residents, as creatures of habit, continue to allocate high priority to leisure time expenditures. A conclusion that may be drawn from this is that people have decided to "float their troubles away". Another is that people see sheer pleasure in the summer scene of a boat on the water in the sun — a penchant for escape. This provides a golden opportunity for Canadian suppliers. □

Hawaii- the untapped market

Waikiki Beach with Diamond Head in the background. (Hawaii Visitors Bureau photo)

DERRIS McMILLAN, Commercial Officer, San Francisco

Hawaii — that beautiful tropical playground, where the grass skirts swing to the rhythm of steel guitars, where the visitor is greeted with leis, where you have to wear dark glasses against the brilliance of the tourist shirts. What a place for business.

Yes, for business. Hawaii has excellent market opportunities, particularly in the consumer goods area. The number one industry is tourism (three million visitors were expected this year), but the local population of 850,000 permanent residents also represents an attractive market.

One of the main features of the Hawaiian economy is its increasing reliance on imported goods. The total projected value of imports for 1974 was $345 million, compared with $300 million in 1973, an increase of 15 per cent.

To illustrate the retail potential in the Hawaiian Islands, let's look at the clothing industry. Hawaii produces Island-style sportswear, but very limited quantities of other categories of clothing. Unlike the tourist in Waikiki, the local residents don't normally spend all their time in aloha shirts, muumuus and bikinis — they need business suits and dresses, shoes, socks and hose, sweaters, belts, under garments, all of which must come from outside the State. Apart from the printing of some imported fabrics, there is no textile manufacturing in Hawaii.

Officials of one of Honolulu's major department stores estimate that 25 per cent of women's apparel and 8 per cent of men's and children's clothing sales are locally manufactured; the rest of their merchandise is brought in from the U.S. mainland or foreign sources.

The most obvious physical evidence of the scope of the Hawaiian marketplace is the number, size and diversity of retail outlets. Small country stores, ethnic specialty shops and one of the largest shopping centres in the world — the Ala Moana Center — all are part of modern Hawaii.

The Ala Moana Center covers 50 acres midway between downtown Honolulu and Waikiki, with a total of 155 stores, several restaurants, and parking facilities for about 8,000 cars. The Center accounts for 8.1 per cent of all

RETAIL SALES IN HAWAII, 1973

	Honolulu	Rest of State
	U.S. $'000	
Food	251,825	330,716
Eating and drinking places	170,365	188,427
Apparel	73,210	83,623
Furniture and appliances	41,074	49,168
Automotive	149,370	181,818
Gas stations	77,255	93,519
Lumber and hardware	17,574	31,116
Drug stores	49,962	53,278
Miscellaneous	250,420	283,593
Total	**1,888,093**	

Above does not include estimated $104,439,000 in sales to military.

Source: 1973 *Survey of Buying Power*

retail sales in the State and, according to its general manager, had a record volume of approximately $200 million in 1973.

An expansion of the Ala Moana is planned, involving a total of 100,000 square feet of new stores, to be called Ala Moana Plaza. The Plaza will contain five levels — three for retailing and two for restaurants, service outlets and banking. In addition, 20,000 square feet of retail space, to be called Sky Mall, will be built as a new level on the existing 15-year-old Center, connecting it to the Plaza. Sky Mall will assign 7,500 square feet to women's ready-to-wear; 4,500 square feet to men's apparel; 3,000 square feet to jewellery, and 5,000 square feet to boutiques.

The Liliha Square shopping complex on the main Island of Oahu was finished recently and several neighbouring and community shopping centres are scheduled for completion this year, including the $7 million, 140,000 square feet Lanihau Commercial Park in Kailua-Kona on the Island of Hawaii and the 150,000 square feet Temple Valley Shopping Center in Kahaluu, Oahu. Sears, Roebuck & Company's second Hawaiian outlet, in the Pearl Ridge Shopping Center, is due for completion March 1975.

Not all Canadian businesses have been overlooking the Hawaiian market. In 1973, Canadian exports to the Islands were valued at $17,590,065 and included food and livestock, raw materials, manufactured goods, machinery and transportation equipment, and miscellaneous manufactured articles such as jewellery and fur clothing. But this is less than 6 per cent of total foreign imports into Hawaii.

Canadian citizens have invested considerable amounts in the Islands. Six Canadian insurance firms have invested more than $35 million, primarily in mortgages and public utility securities. Two Canadian firms have invested more than $400,000 in state and county bonds. It was Canadian capital which gave Hawaii its only steel mill and Canadians own a $1.3 million resort hotel in Maui as well as other Maui tourist-related enterprises.

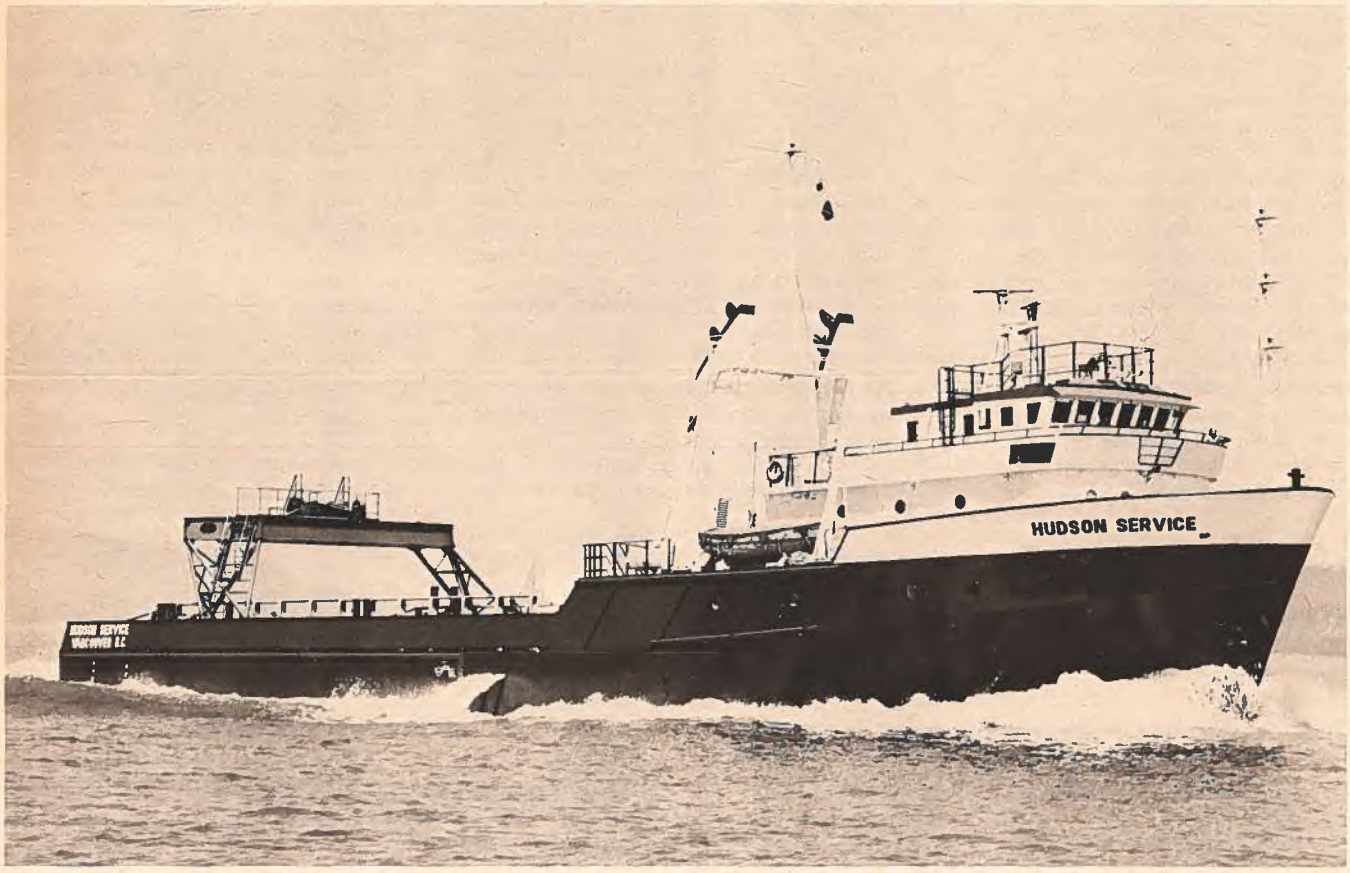
Unquestionably, there is great potential in the Hawaiian market for the sale of Canadian goods. Canadian businesses have easy access to Hawaii by both ship and air (CP Air, for example, operates a daily service out of Vancouver). A final point to remember is that many Canadian firms are as close to the Hawaiian Islands geographically as suppliers on the U.S. mainland. □

READERSHIP SURVEY

In this issue is a card which we ask you to fill out and return to us. We want to find out what our readers think of *Canada Commerce*, what improvements they want to see, the type of reports they would like to read. If you are too busy to answer a brief questionnaire that will be sent to those who fill in the right-hand part of the card, then do please fill in the left-hand part.

Oil market for shipyards

Hudson Service, first of six tug/supply vessels built by Vancouver's Bel-Aire Shipyard, Ltd. for Zapata Marine Service Inc. of Houston, Texas, undergoes sea trials in Vancouver Harbour.



PETER W. BELANGER, Vice Consul and Assistant Trade Commissioner, Dallas

The continuing boom in offshore oil exploration offers increased opportunities for Canadian shipyards to win lucrative contracts for the construction of offshore supply vessels, drilling rigs and drill ships. The headquarters of more major oil drilling contractors and offshore supply vessel operators are located in the territory of the Canadian Consulate in Dallas than in any other region of the world. These companies, which have building programs running into the billions of dollars, increasingly are being forced to build foreign, because U.S. shipyards cannot keep up with demand.

To date, two Canadian shipyards have won contracts from U.S. firms in this area. Bel-Aire Shipyards of North Vancouver is under contract to build four offshore supply vessels for the Zapata Corporation of Houston, Texas, and Halifax Shipyards, a division of Hawker-Siddeley, is finishing its sixth semi-submersible drilling rig for the Southeastern Drilling Company (Sedco) of Dallas. This is lucrative business because supply vessels usually cost from $2 million to $3 million each, drilling rigs from $20 million to $45 million apiece and drill ships anywhere from $15 million to $40 million. Not only do individual Canadian shipyards benefit from this business, but also many Canadian manufacturers break into new markets by supplying deck machinery and other related items to Zapata and Sedco.

All interested — The Canadian Consulate in Dallas has been keeping in close contact with drilling contractors and supply vessel operators in Texas and Louisiana in order to get information on their current and proposed building programs and to determine whether these companies would be interested in building rigs or vessels in Canada. Without

That survey card — please help us to make *Canada Commerce* better.

exception, all the firms we have contacted have expressed interest in doing business with Canadian shipyards, but they must be approached if the Canadian companies expect to do business with them.

The demand for offshore supply vessels, drilling rigs and drill ships is extremely high and will probably remain so, but competition among the world's shipyards to obtain contracts to build these vessels is equally strong. European, Japanese, Australian and Singapore yards are actively cultivating the United States market for contracts and Canadian yards must follow suit if they hope to obtain any orders.

The U.S. companies are willing to deal with yards that have had little or no previous offshore experience. But they do need to be fully informed of the yards' facilities, and most of the major drilling contractors in this area maintain active files on shipyards throughout the world, including their shipbuilding capabilities, composition of their labour forces, their location, the number of cranes, yard space, and so on. Therefore, it is extremely important for any Canadian shipyard wishing to have an opportunity to tender on vessel and rig business to get to know the supply vessel operators and drilling contractors in this area.

Accompanying this article is a list of the major U.S. drilling contractors and supply vessel operators located in our territory. We have visited most of these firms and have compiled information on them which any interested Canadian company can have.

Another excellent source of information on the drilling contractors and supply vessel operators in our area, as well as elsewhere, is available in the *Worldwide Directory of Offshore Contractors and Equipment*, published by the Petroleum Publishing Company, 211 S. Cheyenne, Tulsa, Oklahoma. This is available for $30 and is recommended for any company interested in the offshore oil industry.

If your firm would like to explore market possibilities in our territory, contact us and we will be more than pleased to help you in setting up a suitable itinerary and introducing you to the right people in the offshore field. The amount of business to be obtained is substantial, and in our opinion many more Canadian companies should take advantage of the opportunities which exist. Visit Texas and Louisiana and see for yourself — you could be agreeably surprised. □

MAJOR SUPPLY VESSEL OPERATORS IN THE U.S. SOUTHWEST

Acadian Marine Service
225 Baronne Street
New Orleans, Louisiana 70112
504 - 581-7880
Prieur J. Leary, Jr., President
Capt. Rudy Vorenkamp, Executive Vice President

Dearborn Marine Service Corp.
P.O. Box 1031
Freeport, Texas 77541
713 - 233-7261
Ronnie Kutzer, Vice President — Construction

Gulf Mississippi Marine Corp.
Pere Marquette Building
New Orleans, Louisiana 70112
504 - 529-7685
Laval Isbell, Executive Vice President

Jackson Marine Corporation
(Subsidiary of Halliburton Corporation)
P.O. Box 1087
Aransas Pass, Texas 78336
512 - 758-3295
Ralph D. Meyer, Vice President and Assistant General Manager

Zapata Marine Service Inc.
(subsidiary of Zapata Corporation)
1601 Houston Club Building
Houston, Texas 77002
713 - 222-6661
Ken Waldorf, Vice President, Technical Services and New Construction

Arthur Levy Boat Service Inc.
213 Everett Street
Morgan City, Louisiana 70380
504 - 821-5840
Arthur Levy, Jr., Executive Vice President and General Manager

Offshore Logistics Inc.
Box 5-C OCS
Lafayette, Louisiana 70501
318 - 233-1221
Kenneth M. Jones, Executive Vice President

Theriot Overseas Service Inc.
706 Odeco Building
1600 Canal Street
New Orleans, Louisiana 70112
504 - 524-6361
Robert J. Alario, Vice President and Secretary
C.R. Sanders, President

Tidewater Marine Service Inc.
600 Tulane Building
3308 Tulane Avenue
New Orleans, Louisiana 70119
504 - 822-1740
Damon B. Bankston, Executive Vice President
William E. Bright, Senior Vice President

MAJOR DRILLING CONTRACTORS

Atwood Oceanics
10555 Katy Freeway
Houston, Texas 77024
713 – 467-7900
B.C. Stroud, Manager of Engineering

Diamond M Drilling Company
4615 Post Oak Place Drive
Houston, Texas 77027
713 – 623-8660
Don E. McMahon, President

Dixilyn Corporation
1012 First City National Bank Building
Houston, Texas 77021
713 – 228-9661
L.A.J. Monroe, President
Allen Faircloth, Manager of Engineering

Field International Drilling Company
930 Milam Building
San Antonio, Texas 78205
502 – 226-4371
Geoff B. Bloodworth, Supervisor — Construction

Ocean Drilling and Exploration Company (ODECO)
1600 Canal Street
New Orleans, Louisiana 70130
504 – 529-2811
George H. Troxwell, Jr., Senior Vice President, Design and Engineering Dept.
W.B. Weaver, Manager, Drilling Engineering
George Jackson, Engineering Administrator

Offshore Company
3411 Richmond Avenue
Houston, Texas 77001
713 – 622-5670
F. Tim Pease, Vice President and General Manager of Engineering
F.W. Sharpe, Jr., Manager of Construction and Engineering Department

Penrod Drilling Company
3333 First National Bank Building
Dallas, Texas 75202
214 – 651-0187
J.C. Craft, General Superintendent
D.W. Gaddy, Chief Engineer
S.L. Henley, Drilling Superintendent

Reading and Bates Drilling Company
United Gas Building
1200 Milam Street
Houston, Texas 77002
713 – 228-0131
W.D. Kent, President
J.N. Biron, Operations Coordinator
H.H. Ward, Manager, Projects and Construction

Rowan International, Inc.
1900 Post Oak Tower Building
5051 Westheimer
Houston, Texas 77027
713 – 621-7800
C.R. Palmer, President
James B. Davis, Project Engineer

Sedco, Inc.
Cumberland Hill, 1901 N. Akard
Dallas, Texas 75201
214 – 748-9281
E.H. Sheridan, Manager, Construction Engineering
Martin Oudshoorn, Project Engineer, Construction

Storm Drilling Company
9545 Southwest Freeway
Houston, Texas 77027
713 – 461-7300
C.R. Delay, President
R.L. Ritchey, Manager of Construction

Transworld Drilling Company
113 Robert S. Kerr Avenue
Oklahoma City, Oklahoma 73125
405 – 236-1313
J.W. Greely, Vice President, Marine Engineering and Construction
T.S. Moore, Manager, Offshore Construction

Western Oceanic Division
Western Company of North America
200 West Loop South, Suite 2222
Houston, Texas 77027
713 – 621-9761
J.M. Sisk, Staff Construction Engineer
Bill Keyes, Vice President - Operations

Zapata Offshore Company
1701 Houston Club Building
Houston, Texas
713 – 222-9051
P.J. Fronterhouse, Executive Vice President
L.C.S. Kobus, Vice President and Manager of Engineering
Dan Kitt, Senior Naval Architect
Ken Waldorf, Vice President, Technical Services and New Construction

Burma- the Golden Land

GEOFF LEWIS, Assistant Commercial Secretary, Kuala Lumpur

As the daily Burma Airways 727 flight from Bangkok approaches Rangoon, travellers invariably are awed by the striking and beautiful form of the Shwe Dagon Pagoda, with its picturesque 326 foot golden spire dominating the skyline. This spire of gold against a sky of deep tropical blue is symbolic of Burmese culture and the largest of thousands of pagodas and temples which serve as focal points for almost every town and village.

Burma is a land of contrast. Although not much larger than Alberta, it runs some 1,300 miles from lofty snow-capped mountains almost 20,000 feet above sea level in the north, through tropical rain-forests and arid dry zones to the vast, flat granary of the delta. Golden Buddhist statues and ornate temples exist side by side with subsistence level agricultural communities in a land whose population of 29 million have a per capita income of less than $80 a year.

Yet Burma is potentially a wealthy land. It is well endowed with natural resources, from paddy land ideal for growing rice (traditionally the principal export) to as yet undeveloped but extremely promising offshore oil and gas which appears to hold the key to future economic growth. Burma has sizeable deposits of minerals and gems including tin, tungsten, lead, silver and famous Burmese jade. The country also has large reserves of prime hardwood forests and is particularly noted for teak, estimated to constitute 80 per cent of the world's total.

Declining exports — Developing these resources will require large investments and significant imports of machinery and equipment. Consider, for example, rice cultivation which now employs 4.4 million families using 2.1 million pairs of oxen. In spite of development efforts there are still only about 6,000 tractors available for farming, about 3,000 of which are officially classed as unserviceable, largely because of lack of spare parts. Of the total area under cultivation, only 11.3 per cent is irrigated. How critical the situation has become is highlighted by declining rice exports which were 1.7 million tons in 1961-62, less than 600,000 tons in 1971-72 and ceased altogether in 1973.

A similar situation is also noted in other industries. Of particular interest to some Canadian firms is the timber industry which uses 14,900 buffaloes and 3,400 elephants but only 132 tractors in its logging operations. Production rates have not attained targets and output has even declined in some cases, highlighting the urgency for improving equipment and techniques.

In general, the Burmese economy in recent years has been marked by declining export earnings necessitating reductions in imports. The Revolutionary Council, in power since 1962, has adopted a cautious policy about accepting foreign economic assistance. However, there has been some relaxation recently, and multilateral and bilateral assistance

The Canadian International Development Agency has provided Burma with a $1.05 million grant for a logging equipment and repair maintenance centre at Pyinmana. Here, a Canadian supervises Burmese workers in repair methods.

programs are increasing rapidly. Burma has accepted long-term loans from Japan, the People's Republic of China, France, U.S.A., U.S.S.R. and Germany and has short-term loans from these and others such as Britain, Italy, Czechoslovakia and Yugoslavia. United Nations agencies are active and both the World Bank and the Asia Development Bank are financing development projects.

Opportunities for Canadian firms are developing in several sectors. Consultants and equipment suppliers will find the market potential for selective goods and services in projects ranging from transportation and communications to industrial development in mines, timber and other fields.

Canadians little known — The Canadian presence in Burma has been minimal in the past. Understandably, our exports have been largely as a result of programs under the Canadian International Development Agency (CIDA), for example annual shipments of wheat and flour in the region of 1½ to 2 million dollars have been supplied as a grant food aid. Specialized machinery has also been imported by CIDA in connection with projects such as diamond drilling for investigating mineral potential, to modernize hospitals, or to establish maintenance facilities for logging trucks and heavy equipment.

Commercial transactions have usually reflected Canada's key position as a world supplier of commodities such as asbestos and paper, but individual sales contracts for items such as fountain pens ($380,000) and 40 log skidders ($578,000) are indicative of the diversity of products capable of being sold by Canadian firms in response to government tender notices.

These tenders are the normal method of procurement for all imported goods and are forwarded by our High Commission in Kuala Lumpur to Ottawa for distribution to interested suppliers. Unfortunately, tender lead times are often tight; companies with sizeable continuing business therefore find it advisable to register with the Myanma Export Import Corporation, (MEIC), the government agency which originates most requests for quotations.

As well as letting you get tenders direct, representation by MEIC also facilitates contact with government corporations and departments and provides feedback on procurement decisions. Full details on agency agreements and procedures can be obtained by writing to the Agency Division, Myanma Export Import Corporation, 71 Sule Pagoda Road, Rangoon, or to the Commercial Division of the Canadian High Commission in Kuala Lumpur.

Take brochures — Interested firms are also advised to plan a preliminary visit of a few days to Rangoon to review the market potential at first hand and establish personal contact with key officials. A seven-day visa is readily obtainable and a warm welcome awaits the visiting businessman. Interest in technical literature is particularly keen and plenty of brochures should be carried because lack of knowledge of Canadian products has often led to purchase specifications that exclude equipment that could have been ideal.

Since the election of the new People's Government with massive public support in March of this year, the Socialist Republic of the Union of Burma has re-emphasized economic growth as a priority objective. The target of average annual growth of 4.5 per cent (GDP) and per capita output increase of 2.4 per cent are modest but realistic and, together with the new four-year and 20-year plans, represent a serious effort to introduce effective planning and control. The new plans have been praised by international experts as generally well thought out and the Government is clearly determined to succeed in implementing the projects required to meet their targets.

Top priority will be given to agriculture, forestry, mining, transport, and communications, with average annual public sector investments of about $210 million. The Burmese hope not only to reverse their recent declining economy but also to win back the ground lost in the last few years and double their per capita income to the level of K752 ($160) by 1994.

Adoption of a pragmatic approach to development and careful planning characterizes all aspects of Burmese government operations. There are no illusions of instant transformation or becoming wealthy overnight but, with help from international institutions and friends abroad, the country can grow and regain its historic position as a leading nation in the region; the Golden Land of bountiful harvests and happy people. The Burmese have a sound base of resources on which to build and are optimistic that economic progress will be obtained while still preserving their prized Burmese Way to Socialism. The market potential for Canadian firms will not be spectacular but growing opportunities do exist and Burma clearly should not be overlooked by the businessman planning to penetrate the Asian market. □

A Tale of Four Cities

Toledo, with the Maumee River flowing into Lake Erie.

J.E. LANCASTER, Consul and Trade Commissioner, Detroit

Any number of Canadian-based industrialists and suppliers experiencing the magnetic appeal of the U.S. market with its 212 million domestic consumers and high purchasing power have backed down at the verge, awed by the production and services capabilities and financial resources required to enter a market of such magnitude and competitive strength. Conditioned by the size and the frenetic pace of business in U.S. metropolitan centres, many have concluded that the wisest course is to steer clear of direct involvement in the U.S. market.

But methods have been successfully devised to point the way for Canadian firms thinking of exporting to the U.S. market. A logical and tried method is to approach the market on a piecemeal basis, as by market region.

A method suggested in this article is to bypass the major U.S. metropolitan centres and probe the relatively untouched "middle America" represented by the numerous medium-sized communities — all stable, progressive and prosperous. Many are within easy reach of Canadian business centres and offer environments similar to those found in Canada. A number of such U.S. cities are located in the commercial territory covered by the Detroit post (the States of Michigan and Indiana — less the five counties contiguous to Chicago — and Metropolitan Toledo, Ohio). In this article we discuss a representative grouping of four such cities.

TOLEDO

"It's a pleasant place to live and to do business", commented a European-born executive, resident of this northwestern Ohio city. A 4 p.m. business call on the president of a Toledo-based corporation revealed that he had gone out for a "quick nine holes" at the golf club adjacent to his firm's suburban headquarters (the business call was completed at 6 p.m.).

Canadian television signals are easily picked up in Toledo from Canadian TV stations across Lake Erie. A Canadian television channel is usually advertised fare. "Yet", explained a Chamber of Commerce official, "we see so few Canadian businessmen". Why?

Toledo is close at hand, particularly to southwestern Ontario. It is an attractive city of moderate size, with a city population 400,000 and regional of better than 700,000. The Toledo business community has actively tackled the Canadian market with direct sales. Large tonnages of soft coal are shipped annually through Toledo to Ontario steel mills and Ontario Hydro thermal plants located on the lower Great Lakes. Members of the six or seven largest U.S. in-

dustrial concerns home-based in Toledo have established branch plants in Canada. What prospects exist for a balancing of trade and investment programs from Canada?

Metropolitan centre — A glance at the map shows Toledo located just south of Canada's southern tip in the southwest corner of Lake Erie, 66 freeway miles south of Detroit. Toledo is the metropolitan centre of northwestern Ohio and the neighbouring counties of Michigan. Economically it is absorbed into Detroit's economic vortex, according to claim: Toledo being the automotive parts production centre of the U.S. The city is home to three of the largest U.S. glass firms and is a major petroleum refining centre and port of shipment for the grain trade.

Among Toledo's many advantages is its geographical location midway between major eastern and midwestern centres. Its distribution and transportation assets include major port facilities serving the Great Lakes — St. Lawrence Seaway system; 120 motor transport firms linking Toledo, which is at a crossroads of the interstate freeway system, with markets the length and breadth of the U.S.; a major rail centre embracing eight railroad systems, and the $90 million city expressway system serving both local and long distance traffic. A domestic airport provides air services to various U.S. centres, and the Detroit International Airport, one hour by freeway, serves the Toledo region with international air services.

The Canadian visitor would be quick to sense similarities to medium-sized Canadian cities, with the checkerboard grid layout of modest-width streets, the cluster of 20- to 30-storey office buildings, the department stores and civic buildings, the leafy residential streets and spacious shopping malls. In Toledo's case, determined efforts are being directed to preserve and revive the central core. Several new office buildings and green spaces complete with fountains have made their appearance. With its medium size and splendid freeway network it is easy to get about Toledo to make business calls.

The public-spirited aspect of the Toledo business community is demonstrated by the well-endowed museum and art centre providing depth and meaning to community life. Toledo is home to two universities as well as numerous colleges and schools.

GRAND RAPIDS

Almost equidistant by freeway between Detroit and Chicago, three hours by car from Detroit, Grand Rapids has developed into the major financial and distributional centre of western Michigan. It is also a leading industrial city with 1,100 plants turning out a wide variety of industrial products, including machinery (not electrical), fabricated metal products — burning and plating; printing and publishing; furniture, particularly office furniture, and foodstuffs. Unlike the majority of Michigan cities, the automobile and auto parts industries are not predominant although there is a substantial output of auto parts, particularly bumpers.

The famous Grand Rapids furniture industry, while still important, now accounts for only 8 per cent of the region's industrial output and features office furnishings, including steel equipment. With a city population of 197,000 and a metropolitan population of 415,000, Grand Rapids is Michigan's second city in size and in business.

More industry sought — Despite its relative prominence as a financial and distribution centre Grand Rapids' economic base is underpinned by secondary industry. With a projected steady increase in the labour force, civic authorities, the Chamber of Commerce and the business community alike are seeking ways to strengthen and enlarge the industrial base to provide the jobs needed in the future.

Canadian industrial firms seeking branch plant outlets to serve the U.S. national or adjacent regional markets would be welcomed by Grand Rapids authorities. In listing the area's advantages, these authorities would include excellent highway transportation facilities based on the extensive state and interstate freeway systems; the advanced financial and civic services available; the stable regional labour-management relationships and the quality of the regional living environment which embraces cultural, educational and exhibition facilities.

LANSING

Although somewhat smaller than Toledo and Grand Rapids, Lansing, with 145,000 city dwellers and an outer ring population of 400,000, is the State capital of Michigan. It has expansive educational and service industry considerations, besides secondary manufacturing, and offers an economic background differing from that usually found in Michigan cities.

Lansing's major economic feature is its diversified economy, which is often spared the economic fluctuations experienced by more heavily industrialized centres. About 27 per cent of the region's total employment is covered by local, state and federal government payrolls, and a large percentage is employed in education and the service industries. Neighbouring East Lansing is the home of Michigan State University, the State's largest institution of higher learning with more than 40,000 students.

Secondary industry is represented primarily by the Oldsmobile and Fisher Body divisions of General Motors and the Diamond-Reo Truck Division of the White Motor Corporation. Numerous medium and smaller industrial firms are located in the area.

Lansing is centrally located in southern Michigan about 83 miles west of Detroit. As befitting a capital, there is considerable redevelopment activity, a major feature being a 22-block section of the downtown area including the State Capitol grounds where several new structures housing various state agencies have been built. The business community is responding with plans and active development which is doing much to retain the character of the central city and at the same time provide definitive prospects for urban redevelopment.

ANN ARBOR

Forty miles west of Detroit by freeway, Ann Arbor suggests a different mode of life to that of the automotive capital. Site of the prestigious University of Michigan and a major midwest centre for research, the city has a population of 100,000, and another 250,000 live in the immediate economic region.

Ann Arbor, whose unique name stems from the garden site where two pioneer women both named Ann were wont to meet, has been considered as one of the best cities to live in in the United States. It is recognized as a key research centre for industry, education and government, with 183 industrial research firms and government research laboratories in the vicinity. A fully serviced research park has been developed and made available for industry and research organizations. The University of Michigan, over and above its educational research programs, annually absorbs multi-million dollar research contracts for secondary industry, including advanced engineering research.

A number of industrial firms have been attracted to the region for research and study because of the opportunities afforded by the extensive research facilities and technical personnel available — the pleasant environment may also have had something to do with it. Major industrial corporations include those relating to computers, lasers, ball bearings, laboratory equipment, machine tools and "people-movers", the latter illustrating the renewed interest in the developing area of mass transit.

Canadians welcome — These representative cities and other regional centres located in the Detroit post's commercial territory are provided with up-to-date services and facilities required by the modern businessman seeking new markets or looking for locations for a new branch plant venture.

Canadian businessmen travelling individually or in trade groups would find themselves welcomed and at home in the environments of any one of these cities. All represent regional markets in their own right and are connected physically with markets throughout the United States by excellent transportation networks, including the extensive freeway systems.

The business communities would welcome business approaches from Canada. Why not give them a try? The Canadian Consulate in Detroit is ready to help by making recommendations and providing business contacts. □

The European hardware market

BARRY OAKLEY, Machinery Branch, IT&C

In last month's issue of *Canada Commerce* an article "Finding the key to exports" described the efforts and successes of Dominion Lock Company in its export promotions to Europe. Because U.S. manufacturers are exporting hardware to Europe while at the same time Canadians are selling similar products to the U.S., Canadian manufacturers should be able to emulate Dominion Lock's achievements in the European market.

The following article outlines market conditions in three of the major European countries — West Germany, France and Britain. But before starting any marketing program get additional information on the prospects for your specific product, get all the literature you can, get in touch with the Canadian Trade Commissioners in the areas you want to sell to. The Trade Commissioner can give you details on the local market conditions, can give you lists of potential buyers and agents and distribute your own literature. He can also tell you the best time to visit the area and arrange meetings for you, because a visit will be essential to your efforts.

FEDERAL REPUBLIC OF GERMANY

Although the energy crisis placed a temporary damper on the growth of the West German economy, the latest indicators point to an increase in economic activity and a favourable balance of trade for the year 1974. (For the manufacturing industries as a whole, order backlog in March 1974 amounted to 3.2 months of production, compared with 3.3 months in March 1973.) Partly because of this economic boom and partly because of the relatively free trade policies of the West German Government, West Germany is now Europe's largest importer and is one of the most competitive markets in Europe.

In the hardware trade, several developments have recently emerged that promise continued demand for hardware products:

- The home craft and do-it-yourself market has continued to grow, due partly to the high price and shortage of skilled trade labour which has made the home handyman take on many home improvement tasks himself. Increased affluence and greater leisure time has also contributed to this trend.
- Financial aid is being provided by the West German Government for refurbishing older buildings. This too has resulted in an expansion of demand in both the professional and home hobbyist markets.
- The Government is offering tax allowances for people building their own homes and this again should expand hardware demand.
- Although the West German construction industry recently suffered a slight recession, it is expected that the Government will provide additional incentives to maintain high construction levels because of the importance of the industry to the economy. For example, there has recently been an increase in orders for public buildings which has partly offset the decline in orders in the private sector.

In Germany, hardware manufacturers sell directly to major accounts such as original equipment manufacturers, mail order houses and department stores, and through buying co-operatives to wholesalers. The latter then distribute to the smaller retail outlets and construction companies. Some of the large hardware buyers such as department stores maintain buying offices in foreign countries. For example, four department stores have offices in New York: Karstadt AG (130 outlets in West Germany); Hertie Waren-und Kaufhaus G.m.b.H. (94 outlets); Kaufhof AG (136 outlets); and Horten AG (45 outlets). One of the largest of the German

mail order houses is Grossversandhaus Quelle Gustav Schickedanz KG: in 1971 more than 50 per cent of its sales was made up of hardware articles. This company also maintains offices in foreign countries, including one in Montreal (Mail Order House Quelle Reg'd.).

Trade Show — Perhaps one of the best ways to get a feel for the West German market is by a visit to the International Hardware Fair in Cologne, which takes place next year between February 13 and 16. The Cologne show is probably one of the best of its kind in the world. This year there were about 920 exhibitors, more than a third of whom were non-German. There were also 21,500 trade visitors from 56 countries.

In conducting business in Germany, Canadian exporters should correspond in German. Although top German business executives are usually multilingual, buying decisions are often made by people who do not know any other language than German. Additionally, prices quoted c.i.f. port of destination should be submitted to enable the buyer to compare Canadian prices with products he may be more familiar with.

Canadian exporters should also know German standards. Generally, DIN industrial standards are used and, although they are not compulsory, many customers prefer products that adhere to these specifications. Safety requirements are mandatory for some products, an example being the VDE standard for electrical goods. As in most European markets, measurements in metric units are preferred.

A useful guide to the West German market has been prepared by the Department of Industry, Trade and Commerce entitled Markets for Canadian Exporters, Federal Republic of Germany. Copies are available free from the Department's Regional Offices or from the Information Services Branch, 112 Kent Street, Ottawa K1A 0H5.

Table I

U.S.A. EXPORTS TO SELECTED EUROPEAN MARKETS, 1973

	Britain	France	W. Germany
		U.S.$'000	
Hacksaw blades, hand and power	31.1	95.6	36.6
Wrenches and parts, N.E.C.	989.8	156.8	540.8
Pliers, pincers and other similar hand tools and parts, N.E.C.	1,246.2	851.4	578.8
Screwdrivers	121.9	-	49.9
Hammers, except ball peen	14.7	91.2	-
Doorlocks and locksets of base metals, except automotive	352.3	96.4	419.3
Locks, N.E.C. inc. lock keys, of base metals, and parts, N.E.C.	426.0	98.9	158.0
Casters and parts, of base metals	60.0	17.8	108.1
Furniture hardware and parts, except casters, of base metals	215.2	41.4	218.5
Builders hardware and parts, of iron and steel	801.7	280.6	288.2
Builders hardware and parts, of base metals, N.E.C.	2,108.1	200.9	202.6
Hinges and butts, except auto and other transportation, of base metals	82.0	114.3	32.9
Curtain, drapery and window shade fixtures and hardware, N.E.C., of base metals	683.7	-	134.9
Hardware, N.E.C., of base metals, and parts N.E.C.	875.8	323.5	566.4

FRANCE

France has Europe's most dynamic economy, including one of the highest rates of growth in the industrialized West. Within 10 years it may surpass Germany to achieve the strongest economy in Europe in terms of total production (see *Canada Commerce*, January 1974). Contributing to this growth has been a building boom that has expanded the market for hardware products. Another side effect of the rapid growth of the economy has been an increase in personal income, which has resulted in higher personal expenditures on many items, including home hardware and do-it-yourself products. As in Germany, high labour costs and scarcity of professional craftsmen have encouraged this trend towards do-it-yourself.

Retailing in France has undergone some major changes over the last 10 years. Most significant of these has been the introduction and expansion of hypermarkets (stores over 25,000 square feet of selling area). At the end of 1972, there were 209 of these, accounting for nearly 5 per cent of all retail sales; a year later there were 250. Parallel with the growth of the number of hypermarkets has been a large increase in the number of supermarkets (4,000 to 25,000 square feet) which has corresponded with a decline in the number of small retailers, including hardware stores. As of January 1972, there were just over 2,000 supermarkets in France, with an annual turnover of 19 billion francs. By the end of 1973, there were nearly 2,600 supermarkets.

Decline of the independents — There are now an estimated 20,000 sales outlets stocking products for the home craftsman. Of these, 8,000 are hardware stores which together account for about 30 per cent of all French homecraft equipment sales. These specialty hardware stores will have an estimated annual sales growth of approximately 4 per cent up to 1976, whereas the growth of sales of all homecraft products is expected to average about 30 per cent over the same period. These figures emphasize the decline of the independent hardware retailers.

Table 2

CANADIAN EXPORTS TO SELECTED EUROPEAN MARKETS, 1973

	Britain	France	W. Germany
		Cdn.$'000	
Locks, keys and parts	921	40	39
Basic hardware n.e.s.	1,101	67	101
Power driven hand tools and parts	82	3	–
Files and rasps	350	–	3
Hand saws, saw blades and saw parts	151	3	–
Hand tools n.e.s., inc. sets	857	49	25

Table 3

1973

BRITISH HARDWARE STATISTICS, 1973

Products	Imports (£'000)	Imports* ($'000)	Exports (£'000)	Exports* ($'000)
Hardware				
Locks for trunks, suitcases, etc.	255	588.7	717	1,655.2
Padlocks and parts	415	958.0	317	731.8
Rim and mortice locks, etc.	381	879.5	1,721	3,972.9
Hinges	2,246	5,184.9	640	1,477.4
Tools				
Axes, hatchets, adzes, matchets	–	–	1,434	3,310.4
Picks and mattocks	–	–	114	263.2
Shovels and spades	–	–	499	1,151.9
Forks	–	–	228	526.3
Hoes	–	–	978	2,257.7
Scythes, sickles and hooks	–	–	84	193.9
Grass shears	205	473.2	231	533.3
Saws and blades	2,299	5,307.2	6,409	14,795.2
Files and rasps	764	1,763.7	593	1,368.9
Pliers, pincers, nippers	1,744	4,026.0	1,242	2,867.2
Wrenches and spanners	5,067	11,697.2	1,856	4,284.6
Clamps and cramps	430	922.7	598	1,380.5
Cold chisels, case opener and nail pullers	–	–	239	551.7
Hammers	322	743.3	909	2,098.4
Planes (wood or metal)	–	–	1,345	3,104.9
Screwdrivers	833	1,923.0	560	1,292.8
Spokeshaves, shavehooks, scrapers	–	–	258	595.6
Vices	–	–	1,051	2,426.2
Wood chisels and gouges	–	–	389	898.0
Lawnmowers				
Hand mowers	–	–	1,851	4,273.0
Power mowers (cylinder)	–	–	2,056	4,746.3

* Based on conversion rate $2.3085 to pound sterling (effective rate as of Dec. 11/73). Figures reproduced from "Hardware Trade Journal".

Another development of note is the cash-n-carry wholesale system, serving retailers and professional buyers, etc. At the end of 1971 there were 340 such outlets, 43 of which handle hardware products. This system, however, has not had the same acceptance as in Germany and Britain.

Generally, hardware manufacturers sell direct to major specialized hardware/houseware stores, such as the B.H.V. group in Paris and the Catena-Obi group of hardware and specialty stores, major department stores, cash-n-carry co-operatives, large mail order companies (the largest in France handling hardware products is Manufrance S.A.), major building contractors, and indirectly to the general professional trade via stocking agents or wholesalers such as the cash-n-carry co-operatives.

French buyers should be supplied with c.i.f. prices; literature in French; products complying with DIN standards wherever possible, and with dimensions in metric units.

BRITAIN

The rate of duty applicable to Canadian hardware products exported to Britain will increase over the next few years up to the level of the EEC external tariff. This tariff, however, is relatively low and should not seriously deter Canadian exports. Although Britain has its own well-developed hardware manufacturing industry, imports play an important part in supplying the home market (see Table 3). EEC membership is unlikely to affect substantially this import trade.

The most noticeable effect of the economic problems plaguing Britain has been the increase in prices of materials and finished products. Additionally, partly because of the shortened work week, some material shortages have occurred. These shortages and higher prices obviously offer the best opportunity for Canadian hardware producers to enter the market.

The growth in cash-n-carry outlets (over 600 in the early 1970's) has been one of the most noticeable developments in wholesaling in Britain. These outlets help to serve the estimated 26,000 (1970) independent retail stores (or ironmongers) selling hardware products. To

date, however, cash-n-carry has been used primarily for convenience purchases rather than as an established and permanent way of buying. One of the recent entries into the hardware cash-n-carry market is the Dutch-owned Makro-Metro group of Manchester. This group had five outlets in early 1974 and they expect to add another seven by the end of 1975. Of the 37,000 lines carried by Makro, approximately 3,000 are for do-it-yourself accounts.

Retail groups — Voluntary retail groups are another recent development. Retailers band together to buy as a group and, perhaps, follow a recommended store layout. An example is the Golden Link group which has been established to serve the hardware trade.

Despite these recent developments, the role of the traditional hardware wholesaler is still a major one. But, because of increasing overheads, these wholesalers are having to seek ways of trimming costs and are cutting off small, uneconomical accounts which, in turn, are forced to seek supplies from alternative sources, including cash-n-carry outlets. Mergers between wholesalers is another way of increasing efficiencies of buying and distributing and a trend towards fewer large wholesaler groups is expected.

Some of the giant multiple chain stores maintain buying offices in foreign countries and buy direct from foreign manufacturers, some for brand name (referred to as "own label") products.

Some British distributors have avhieved excellent results for foreign manufacturers. L.J. Hydleman & Company Ltd., for example, have a 42,000 square foot warehouse in Yorkshire from which they distribute on an exclusive basis foreign-made products. The appointment of such a distributor could be very beneficial for a Canadian manufacturer, as the distributor has the contacts and market expertise necessary to move Canadian goods in the market place.

Among other recent developments in Britain are the mail order houses, which now have a 4 per cent share of the retail market, and discount stores. Latest of these is the Argos chain that handles a wide range of durables including hardware products. This chain, owned by Green Shields, has plans for 300 stores within the next two or three years, featuring catalogue selling. Hypermarkets also are starting to appear.

As in Germany, one of the best ways of sounding out the market is by visiting, or exhibiting at, the Hardware Trades Fair, which is an annual event and the largest of its kind in Britain. The next one starts on January 26, 1975. In 1974 this show attracted 700 exhibitors of which about a third were non-British.

Conclusions — Currency revaluations over the past several years have helped to make Canadian products more competitive in the European market. When combined with the fact that materials and labour shortages in Europe are generally even more severe than in Canada, it would appear that now is an ideal time for Canadians to try this market. Although the Canadian market is buoyant now it may not continue so indefinitely, and manufacturers such as Dominion Lock Co. Ltd. who ship to several markets are better able to withstand a slackened demand in any one market. And the European market, an increasingly affluent one, has tastes and demands similar to our own.

Something To Think About
A Meaningful Sabbatical

E.C. BUTTON, Managing Editor

We want to talk about the creative process. Now, before you hastily check the cover to see if somehow you have picked up a copy of *Arts Canada* instead of *Canada Commerce*, stay with us for a minute. We do not mean the creative process as it applies to the artist or the writer, but as it applies to the business world — the day-to-day problem-solving, marketing, accounting, production, labour, legal problems.

The day-to-day problems *Canada Commerce* readers face may well fall into two categories — those to which you can bring, out of your experience and education, a tried and proven solution; and those where the solution must be created, by the creative process.

How does the creative process work? There are several stages. Usually it starts with fact gathering: defining the problem and doing some research, sometimes formal research but often not. Often we merely search our own experience. Perhaps we discuss our problem. But it is still research. Then we hit the often slow and frustrating period of incubation. Just like Lieutenant Colombo of television fame, the problem and the clues incubate in the mind. Incubation takes time, needs time, demands time.

Finally, one day, usually at some inopportune and illogical time, creation happens. The idea flows — the light goes on. The clues, the facts surrounding the problem have been shuffled and analyzed in the mind and suddenly we see some meaningful relationship, some correlation between our collection of facts. What are the ingredients of this creative process? What brought us to what is, hopefully, this brilliant and dynamic solution?

First of all, information. Information about the problem — very detailed information — the type of information we obtain from our modern computerized information systems. Then there is another level of information: general knowledge and insight into our particular world collected over time from experience, our experience and the experience of others. Finally there is time — time for it all to gel.

Consider the last two ingredients: experience, and time. How often have you, the pressured executive, felt the urge to get away and sort it all out? How often have you felt that there is a lot of new knowledge, new information, new techniques, new experience that you haven't had the time to look into? How often have you felt the need to step out of the woods, sit on some high windy mountain and, guru-like, view the forest below?

With this in mind, *Canada Commerce* presents a look at some of the executive development programs offered by Canadian universities and colleges. Not the one-, two-, or three-day seminars, but the residential programs that last two or more weeks. Programs that should be weighed not only for their academic content, not only for the opportunity to spend time with fellow executives from across the country, but also for time to be that guru on the mountain.

And perhaps more. You may have noticed in the last few issues of *Canada Commerce* some articles that are concerned with change — the questions surrounding global models and their predictions, the growing role of women in the labour force, the changing work week and its implications, a means of becoming more conscious of these changes through awareness services. More will follow — articles dealing with some of the rapid social and economic changes of the 70's — and, of more import, ways that Canada's business decision-makers can become more aware of these changes and the implications for the future.

Our program selections have been based on a combination of factors. We looked for academic programs of general rather than specific interest that will bring to the executive an awareness of his or her role in the technology of modern management and its application, and of the role of his or her company in the national and global scene. We also looked at the environment — one that would provide an interesting variety of colleagues and recreation facilities probably not commonplace in your daily routine. In all, an opportunity for a meaningful sabbatical.

Guide to Programs

Dalhousie University — Program, lasting three and a half weeks and costing $1,350, includes human behaviour in organization, labour relations, business policy, financial administration and marketing. It is intended for middle and upper middle management. Contact: John Dougall, Director, Advanced Management Center, Institute of Public Affairs, Dalhousie University, 6209 University Avenue, Halifax, Nova Scotia. Tel: 902 – 424-2526.

Universities of Alberta, British Columbia, Manitoba, Saskatchewan — The course lasts six weeks, costs $1,600 and covers three major areas: management of the enterprises, financial management and the business environment. It is intended for middle and upper middle management. Contact: R. Victor Henning, Executive Director, School of Management, Banff, Alberta T0L 0C0. Tel : 403 – 762-4014.

School of Management Studies, Banff — A two-week course for middle and lower management, costing $700, on organizational behaviour and management, marketing management, problem solving and decision making, financial management and industrial relations. Contact J.G. Buck, School of Management Studies, Banff Centre, Banff, Alberta. Tel : 403 – 762-3391.

McGill University — Two weeks, costing $1,200, for middle and upper middle management. Program covers organizational behaviour, computers, economic environment, managerial economics, operations research and decision theory for management. Contact: Mrs. J.E. Peters, Administrative Assistant, Management Institute EDI, McGill University, 1001 Sherbrooke St. West, Room 401, Montreal, Quebec H3A 1G5. Tel : 514 – 392-5870.

University of Western Ontario — A five-week course, costing $1,800, for middle to top management. The course covers organizational behaviour, cost and financial administration, marketing, policy, management sciences, labour relations. Contact: Prof. C.B. Johnston, Director, Management Training Course, School of Business Administration, University of Western Ontario, London, Ontario. Tel : 519 – 679-2971.

York University — A two-week course, costing $800, covering corporate strategy, behavioural sciences, business-government interaction, management sciences, leadership styles, management of time, management of change, managerial economics, marketing management, marketing communications, social environment for management. It is intended for middle and upper middle management. Contact: Prof. Elmer S. Phillips, Director, Division of Executive Development, Administrative Studies Building, York University, 4700 Keele Street, Downsview, Ontario M3J 1P3. Tel : 416 – 667-2386 or 2432.

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That survey card — please help us to make *Canada Commerce* better.

Canadian equipment to the rescue

When cooling equipment started to fail at the Shahpur Chemical Company's plant in Iran, the company was caught off guard. The plant, which produces 1,300 tons a day of sulphuric acid, was due for conversion in 1975 and officials had already placed orders for new equipment, confident that existing cast iron coolers would last until the new ones arrived. But the situation became critical as almost daily shutdowns occurred — sulphuric acid is an essential ingredient in the manufacture of ammonium phosphate, an important fertilizer, and agriculture is a key part of Iran's development plans.

An urgent call from the plant to Chemetics International Limited in Montreal, a subsidiary of Canadian Industries Limited, resulted in a rescue operation that is probably a record in the acid industry.

Within one month of receiving the call, Chemetics delivered a 15-ton, 40-foot acid cooler via a chartered aircraft out of Toronto. Normal delivery time from date of receipt of a cooler order is approximately one year.

Shown here is the cooler being loaded into the aircraft at Toronto before leaving for Iran.

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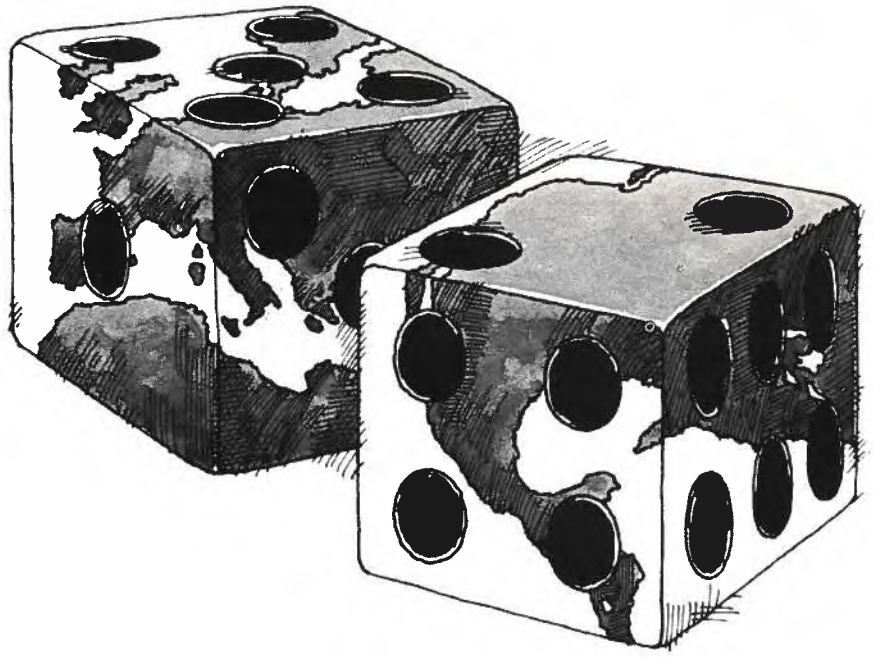

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