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# ALUMINIUM LIMITED

THIRTY-SECOND ANNUAL REPORT 1959

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*On pourra se procurer le texte français de ce rapport  
en s'adressant au secrétariat de la Compagnie,  
case postale 6090, Montréal 3.*

*Cover Photo: (By Malak)*

New Alcan Tri-Lok ingot en route to markets  
of the world from the Kitimat smelter.

# ALUMINIUM LIMITED THIRTY-SECOND ANNUAL REPORT

FOR THE YEAR **1959**

## DIRECTORS AND OFFICERS

### DIRECTORS

FIELD MARSHAL EARL ALEXANDER OF TUNIS, K.G.  
DANA T. BARTHOLOMEW                      PAUL LAROCHE  
FRASER W. BRUCE                              EDWIN J. MEJIA  
DR. DONALD K. DAVID                        R. E. POWELL  
NATHANAEL V. DAVIS                         H. H. RICHARDSON  
JAMES A. DULLEA                              M. B. DE SOUSA PERNES  
RT. HON. C. D. HOWE, P.C.                 JOHN L. SULLIVAN  
N. BAXTER JACKSON

### OFFICERS

NATHANAEL V. DAVIS, *President*  
R. E. POWELL, *Senior Vice President*  
JAMES A. DULLEA, *Senior Vice President, Secretary and Chief Secretarial Officer*  
DANA T. BARTHOLOMEW, *Vice President and Chief Financial Officer*  
EDWIN J. MEJIA, *Vice President and Chief Sales Management Officer*  
H. H. RICHARDSON, *Vice President and Chief Technical Officer*  
M. P. WEIGEL, *Director of Operations*  
J. F. EVANS, *Treasurer*  
PAUL LAROCHE, *Ass't. Secretary and Ass't. Treasurer*  
K. C. BALA, *Assistant Secretary*  
A. A. BRUNEAU, *Assistant Secretary*  
D. CASSELMAN ROSS, *Assistant Secretary*  
O. E. COLLING, *Assistant Treasurer*  
D. M. KERTLAND, *Assistant Treasurer*

### AUDITORS

PRICE WATERHOUSE & CO.

### TRANSFER AGENTS

NATIONAL TRUST COMPANY LIMITED, *Montreal, Toronto and Vancouver*  
MELLON NATIONAL BANK AND TRUST COMPANY, *Pittsburgh*  
THE FIRST NATIONAL CITY BANK OF NEW YORK, *New York City*  
MORGAN GRENFELL & CO. LIMITED, *London, England*

### REGISTRARS

THE ROYAL TRUST COMPANY, *Montreal, Toronto, Vancouver, London, England*  
PITTSBURGH NATIONAL BANK, *Pittsburgh*  
THE HANOVER BANK, *New York City*

# ALUMINIUM LIMITED *AND CONSOLIDATED SUBSIDIARIES*

## THE YEAR 1959 AT A GLANCE

	For Year Ended 31st December	
	1959	1958
<b>RESULTS</b>		
Sales and operating revenues . . . . .	\$ 448.7 million	\$ 422.9 million
Income before income taxes . . . . .	\$ 48.1 million	\$ 42.0 million
Depreciation and reserve for future income taxes . . . . .	\$ 54.1 million	\$ 48.9 million
Net income . . . . .	\$ 24.1 million	\$ 22.5 million
Common shares outstanding . . . . .	30,357,552	30,283,289
Net income per share . . . . .	79c	74c
Dividends paid . . . . .	\$ 16.0 million	\$ 22.0 million
Dividends per share . . . . .	(U.S.) 55c	(U.S.) 75c
	As at 31st December	
	1959	1958
<b>BALANCE SHEET ITEMS</b>		
Net current assets . . . . .	\$ 220.8 million	\$ 200.5 million
Lands, plants, facilities (gross) . . . . .	\$1,452.4 million	\$1,396.0 million
Additions to fixed capital . . . . .	\$ 62.3 million	\$ 102.9 million
Shareholders' equity . . . . .	\$ 436.0 million	\$ 426.5 million
	1959	1958
<b>OTHER</b>		
Sales of aluminum products . . . . .	643,328 tons	581,195 tons
Number of employees (year-end) . . . . .	44,000	44,454
Number of shareholders (year-end) . . . . .	65,267	49,315

# ALUMINIUM LIMITED *AND CONSOLIDATED SUBSIDIARIES*

## REPORT

TO THE SHAREHOLDERS OF

## ALUMINIUM LIMITED

The 32nd Annual Report of Aluminium Limited covering the affairs and the financial results of the Company for the year 1959 is submitted on behalf of the Board of Directors. The financial statements of Aluminium Limited and its consolidated subsidiaries for the year ended December 31st, 1959, together with the report of the auditors, Price Waterhouse & Co., form a part of this report.

### SUMMARY OF RESULTS

Over the past two years, Aluminium Limited has passed through a period of reduced demand for its main product — primary aluminum — and difficult and changing competitive conditions. While the results have been trying to shareholders, employees and management, the Company has unquestionably gained strength, ability and confidence to meet the conditions which lie ahead.

Over this period, the basic facilities needed for long-term expansion of primary aluminum production have been carried through to completion, the Company's markets have been materially diversified, and sales to independent and affiliated fabricators have increased in amounts more than offsetting the diminished sales to other producers. Perhaps of greater potential importance, the Company's personnel have been realigned into a more tightly knit and widespread international organization placed to serve customers most effectively and to unearth opportunities which show promise of enhancing the Company's position.

It is pertinent that the Company, oriented to meet changing competitive conditions, has continually looked with confidence to a return to improving markets for primary aluminum. While it is foolhardy to assume that the expected long-range growth in consumption will not be interrupted frequently and sometimes painfully, a turning point was reached in mid-1959.

The consumption of aluminum in the free world, which had declined slightly in 1957 and 1958, once again showed substantial growth during 1959 and particularly in the latter half of the year. In the early months of the year, Aluminium Limited's sales of primary aluminum and its smelter production in Canada were at reduced levels and earnings were low but, as the year progressed, sales and production rates increased and earnings improved.

For the year as a whole Aluminium Limited's net income, after all charges, including dividends on preferred shares of subsidiary companies, was \$24,090,720 or 79 cents per share on the 30,357,552 shares outstanding at the year end. These earnings were a modest improvement over the previous year's net income of \$22,464,510 or 74 cents per share on the 30,283,289 shares outstanding at the end of 1958.

Consolidated sales of aluminum in all forms were 643,328 tons compared with 581,195 tons in 1958. The progressive increase in sales during the year is vividly emphasized by a record 200,000 tons of sales during the fourth quarter. The Company believes, however, that this level of sales reflects some inventory buying in anticipation of a price rise which occurred on December 15th, 1959.

In 1959 sales of semi-fabricated products by the Company's subsidiaries were at an all-time high,



with dollar value about equal to dollar value of ingot sales.

Sales and operating revenues in 1959 amounted to \$448,691,506 compared with \$422,884,184 the previous year. Cost of sales and operating expenses were \$292,380,796 compared with \$276,724,241.

The year's earnings were somewhat above those in 1958 despite the increase in depreciation and interest charges associated with expanded but idle facilities. The earnings were also affected by a lower average realization per pound of aluminum sold, reflecting the price reduction in 1958, although in the closing weeks of 1959 prices firmed with improving demand. The Company again experienced a loss on its shipping activities with, however, some improvement in the latter part of the year.

Cash generation in 1959, comprising net income, depreciation and reserve for future income taxes was \$78 million or \$2.58 per share. This compares with \$71 million in 1958.

During 1959 quarterly dividend payments, in U.S. currency, were at the rate of 17½ cents per share in the first quarter and 12½ cents per share in the succeeding three quarters. Total dividend disbursements were the equivalent of \$15,994,535 in Canadian funds compared with \$22,038,072 in 1958. In January 1960, in response to the improved volume of sales, the directors increased the quarterly dividend to 15 cents per share.

According to preliminary estimates, the consumption of aluminum in the free world in both primary and secondary forms reached a level of about 4,200,000 tons in 1959 — an increase of about 20% over the previous record level in 1956. The growth was well distributed in all geographic areas but was particularly noticeable in Western

Europe, the United Kingdom and Asia. Consumption in Canada and the United States also showed impressive gains. The more important categories of increased use of aluminum were in the fields of transportation, construction and packaging in a variety of forms.

While there was a welcome resurgence in demand during the year and the Company expects continuing growth in the years ahead, total free world demand at current levels is still below free world production capacity. It is of interest to note that while production facilities in North America were not fully utilized in 1959, producers in the rest of the free world have been operating substantially at capacity. At the present time the total level of idle capacity in North America is believed to be about 500,000 tons per annum. The Company's Canadian smelters are currently operating at approximately 90 percent of their rated capacity.

Aluminium Limited, being basically a producer of primary aluminum largely for international markets, is subject to greater fluctuations in demand than most other producers which are more fully integrated and largely organized to serve national markets. During the year the Company's sales to other aluminum producers decreased by 45,000 tons as compared to 1958 but shipments to independent fabricators and to the Company's subsidiary and affiliated fabricating plants increased by more than 100,000 tons.

As a means of creating greater stability in the Company's position as a seller of primary aluminum, steps were taken during the year to strengthen its sales organization in all markets and to expand its own fabricating activities in selected areas.

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

In Europe, Africa and the Far East the Company's sales and technical development forces have been expanded and new offices have been opened. It is expected that as a result of a realignment of its international marketing subsidiaries, the Company will be able to render greater sales, technical and promotional services throughout the world.

In the United States, the Company entered into an agreement with Apex Smelting Company, a leading secondary smelter, to acquire its assets, payment to be made in shares of Aluminium Limited stock. Acquisition of the Apex facilities should improve the Company's position in the United States market.

A new joint venture, Chryslum Limited, was also undertaken in 1959 with Chrysler Corporation of Canada to produce and supply aluminum alloys for Chrysler automobile plants in the United States and Canada.

During the year, expansion of the Company's existing fabricating facilities proceeded in thirteen countries, the largest single program being undertaken in the United Kingdom where sheet facilities are being augmented through a program involving a capital cost of the order of \$25 million. Other fabricating projects — many of a pioneering nature — are either being undertaken or actively studied in twelve new areas.

During the year the Company expended \$62

million on new plants and facilities — a decrease from capital expenditures of \$103 million in 1958. Reduction in capital outlays reflects the near completion of the Company's new hydroelectric and raw material facilities which will provide a basis for easy and rapid expansion of smelter facilities in Canada from a present rated capacity of 750,000 tons to approximately one million tons per year. As expenditures for these facilities were completed, larger outlays have been provided for the Company's expanding fabricating activities.

Aluminium Limited enters the new decade well equipped to participate in the growth that lies ahead. In the past ten years the Company has invested more than one billion dollars in new facilities to provide an economic base for larger production as demand develops.

In a world growing rapidly smaller and more interdependent, Aluminium Limited has a unique asset in its loyal body of 44,000 employees, of whom the majority are resident outside North America. The Company's staffs are drawn from many races and nationalities, and together they represent an accumulated experience in international operations and sales which underlies all our planning for future progress. To them, on behalf of the Board of Directors, I express my sincere thanks for their effective contribution to the ongoing of the Company in 1959 and the decade just closed.

Respectfully submitted,  
Nathanael V. Davis, *President*

Montreal, Canada  
March 16th, 1960.



*OPERATIONS*

**ALUMINUM INGOT**

The Aluminum Company of Canada, Ltd. produced 503,500 tons\* of primary aluminum in 1959, compared to 600,400 tons during 1958 and 556,700 tons in 1957. (Production after July 1, 1959 excludes the output of the Beauharnois smelter as explained below.) Alcan's production rate had been reduced during 1958 and further reductions to about 66% of capacity were made in the first half of 1959 in order to bring production more closely into balance with sales.

Following the upturn in business in the early summer, successive increases in Alcan's production were made and in the early months of 1960 new production schedules for the year were established which, if maintained, will give the Company from its Canadian plants a primary aluminum supply of approximately 650,000 tons in 1960. It is presently expected that this supply, together with production

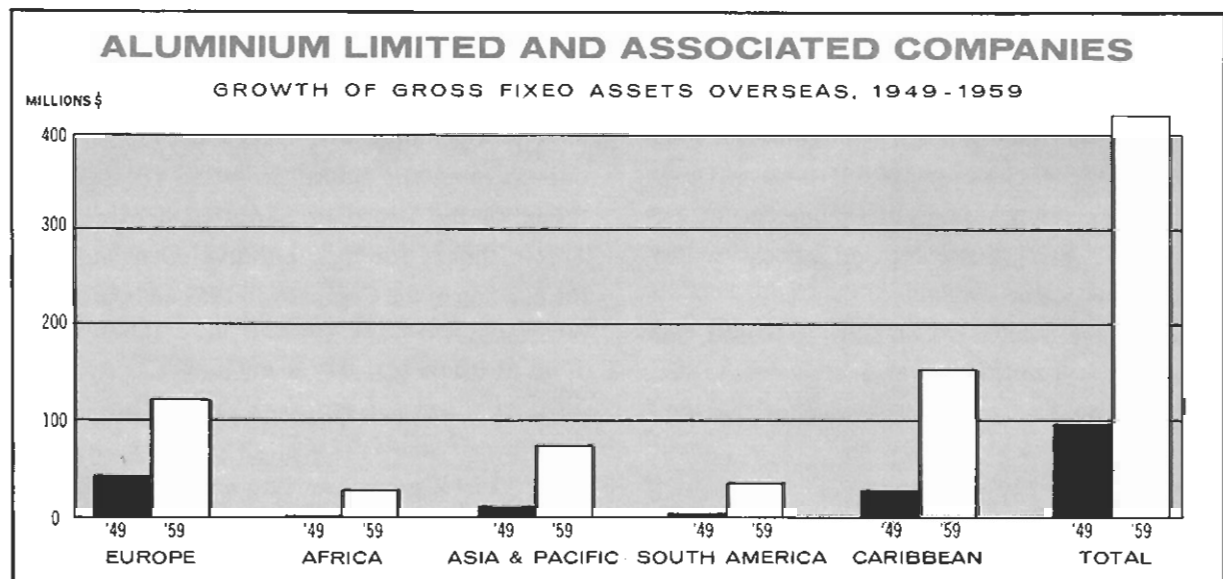
\*Short tons of 2,000 lbs. each.

from other consolidated subsidiaries and acquisitions from other sources, will permit the Company to fill present bookings, as well as build reasonable stocks against further possible sales increases.

In June, a new Canadian company, Chryslum Limited, was formed by Aluminum Company of Canada, Ltd. in a joint venture with Chrysler Corporation of Canada to produce and supply aluminum alloys for Chrysler automobile plants in Canada and the United States. The new company has leased the aluminum smelter at Beauharnois, Quebec, which has an annual rated capacity of 38,000 tons.

To reflect the leasing of the Beauharnois smelter to Chryslum Limited as well as certain increases in the rating of other plants, the present total smelter capacity rating of Aluminum Company of Canada, Ltd. has been revised from the former figure of 770,000 tons to 750,000 tons per annum.

In 1959 Aluminium Limited's smelting subsidiaries and affiliates other than Alcan (including Chryslum Limited in Canada and those in Brazil,





# ALUMINIUM LIMITED *AND CONSOLIDATED SUBSIDIARIES*

India, Italy, Japan, Norway and Sweden) produced a total of 155,000 tons of primary aluminum.

As the year opened, Indian Aluminium Company, Ltd. brought into production its new 11,200 ton aluminum smelter at Hirakud in the State of Orissa. Within recent weeks the same company has completed an agreement with the State government for the supply of sufficient power to permit doubling of the capacity of this smelter. Construction will start shortly and when completed the production capacity of Indian Aluminium Company, Ltd., including its pioneer smelter built in 1943, will be 30,000 tons. A corresponding increase of its bauxite and alumina production is also involved.

In Japan, the Nippon Light Metal Company is engaged in an expansion program involving increased capacity at its Kambara smelter. This company's annual smelter capacity is to be increased to approximately 100,000 tons by 1963.

In Norway, A/S Norsk Aluminium Company completed an expansion program in 1959, bringing its total smelter capacity to about 14,000 tons per year.

Employee relations at all the Company's smelting subsidiaries and affiliates were satisfactory in 1959. At Alcan's Canadian smelters, the three-year collective labour agreements which date from 1957 reach their separate expiry dates in the summer and autumn of 1960.

## APEX SMELTING COMPANY

In December 1959 it was announced that the boards of directors of Aluminium Limited and Apex Smelting Company had authorized, subject to a definitive agreement, the purchase by the Company of the assets of Apex Smelting Company in exchange for shares of Aluminium Limited. This

proposal has now been approved by the shareholders of Apex Smelting Company, and provided certain remaining formalities and clearances are obtained, it is expected that the transfer of assets will be made in April of 1960.

Under the definitive agreement Aluminium Limited will issue, in exchange for the net assets of Apex Smelting, up to 340,524 shares of its capital stock, having a quoted market value of some \$10.2 million when the acquisition offer was made in December.

Apex Smelting Company is one of the larger long-established secondary aluminum enterprises in the United States. It operates secondary smelting plants in Chicago, Cleveland and Los Angeles where aluminum scrap and primary aluminum are remelted into a large variety of foundry alloys and into billets. Apex had been since 1953 a distributor of Alcan primary alloys produced in Canada. In addition to its aluminum activities, Apex is also important in the supply of zinc casting alloys and magnesium alloys. It also operates for its own supply a silicon smelting plant in Oregon.

Aluminium Limited expects that if the purchase of Apex is finalized, it will improve the Company's ability to supply and service customers in the United States by permitting it to offer a broader range of alloys to the foundry trade and to handle fabricating scrap from buyers of other forms of primary aluminum. In the United States market the Company has been at a disadvantage vis-à-vis the American primary producers because of its lack of facilities for handling customers' scrap.

## HYDROELECTRIC POWER

The end of 1959 marked the completion of a ten-year program of construction of hydroelectric facilities for aluminum production in Canada which



has constituted the largest element in the Company's expansion effort in this period. It is particularly significant that in the past decade the Company has more than doubled its installed generating capacity from 2,040,000 h.p. in 1950 to 4,650,000 h.p. today.

At the latest project, the Chute-des-Passes hydroelectric station on the Peribonca River, the first generator went on power in September of 1959. With the turning of the fifth generator in March 1960, a total of 1,000,000 h.p. has been added to the Company's installed capacity in the Saguenay Region. The turbine-generator units, each of 200,000 h.p. rated capacity, are the most powerful hydro generating units built to date and are operating to full satisfaction.

Construction of the Chute-des-Passes project over a three-year period was a major engineering feat, including eight miles of tunnel, an underground powerhouse and a 90-mile transmission line. The cost of the project to the end of 1959 is \$142 million, with the finishing expenditures to be made mainly in 1960.

The Chute-des-Passes station, when operated in conjunction with the other plants of the Saguenay system, increases the Company's supply of firm power by 700,000 h.p. This ensures a reliable year-round power supply for all aluminum smelters dependent on it, and for anticipated outside power sales. It will also permit the installation, when required, of more than 100,000 tons of additional aluminum smelting capacity.

The hydroelectric power station at Kemano, British Columbia, has an installed capacity of 1,050,000 h.p., sufficient to support aluminum production at Kitimat of 300,000 tons per annum. With recent increases in production, Kitimat is now operating at its present capacity of 192,000 tons per annum. Another 80,000 tons of annual capacity

has been partially built at Kitimat and awaits completion when business warrants.

## RAW MATERIALS

Bauxite production from the Company's principal mining operations in British Guiana, Jamaica and Guinea, continued at reduced levels in 1959, reflecting the curtailment in aluminum schedules at the Company's plants. Third party sales of bauxite and alumina showed increases over 1958.

In September the Ewarton Works of Alumina Jamaica Limited was brought into production, its annual capacity of 270,000 tons supplementing the 540,000 tons of the earlier Kirkvine plant. Construction work progressed on the 245,000 tons per annum alumina plant in British Guiana which Demerara Bauxite Company, Ltd. expects to complete in 1960. Alumina expansion in the Caribbean area undertaken in the 1950's thus amounts to a total annual capacity of over 1,000,000 tons. This new capacity, together with that of the older Canadian plants of over 1,200,000 tons, will be sufficient to support 1,000,000 tons of the Company's smelter capacity in Canada.

In 1959 substantial alumina shipments were also made to aluminum smelters in Scandinavia and to Canadian British Aluminium Company, Ltd. under long-term exchange agreements by which alumina is bartered for aluminum. Late in 1959 the latter company exercised its right to cancel its present schedule of alumina takings from the Company as from December 31st, 1961. Cancellation charges of \$3,600,000 will be payable to the Company.

As mentioned in earlier annual reports, Aluminium Limited's French subsidiary, Bauxites du Midi, has for several years been planning the establishment of an export bauxite and alumina industry in the Boké

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

region of the Republic of Guinea in West Africa. Bauxites du Midi has been mining bauxite in another area of Guinea for several years. Construction of harbour and railroad facilities to serve the Boké project was started in 1957 and continued in 1958 and 1959.

The Boké project is a large undertaking requiring a heavy investment in an undeveloped country. The bauxite reserves available to the Company, under a long-term convention signed with the Guinea government, are vast in extent and will be of major importance to the world aluminum industry for decades to come. In the belief that an undertaking of this magnitude and complexity requires a combination of strengths and resources, Aluminium Limited is actively negotiating with other North American and European aluminum producers the formation of a consortium to complete the project.

## FABRICATING

The upsurge in industrial activity, especially in Europe and Asia, and the demand for semi-fabricated products, mainly sheet, increased sharply during the second half of 1959, and in many areas exceeded available capacity.

Total shipments from the 29 fabricating plants in which Aluminium Limited has a complete or partial equity throughout the world were approximately 265,000 tons, an increase of 15% over 1958. This was, in turn, an increase of 10% over 1957. While prices in major markets were somewhat firmer late in the year, competition in many areas continued keen, and profit margins were low.

The majority of the Company's current sheet expansion projects in the United Kingdom and European area, totalling some 50,000 tons per annum, will be largely completed by the latter part of 1960 and the balance in 1961.

During 1959 the further strengthening of many of Aluminium Limited's wholly and partially owned fabricating subsidiaries was initiated, with authorization being given for another 50,000 tons of new capacity representing an investment of some \$22 million.

Developments in fabricating, by areas, were as follows:

### *North America*

Expansion of Aluminum Company of Canada's sheet-rolling facilities at Kingston by 10,000 tons per year was undertaken, also the installation of an additional 2,250-ton extrusion press. Improved drawing and stranding equipment was installed in the Shawinigan plant and a line at Kingston Works to produce baked-enamel coated strip for home and industrial siding was authorized.

At Aluminum Goods Limited, Toronto, a continuous rotary casting and rolling plant with a capacity of 6,000 tons per annum was brought into operation.

Aluminio Industrial Mexicano has underway an expansion of sheet and extrusion facilities totalling 3,300 tons. It is expected that this will be completed and in operation during 1960.

### *The United Kingdom and Europe*

At Banbury, England, most of Northern Aluminium Company, Ltd.'s 5,500 tons per annum of new sheet capacity came into production during the year. Work is well advanced on the new 27,500 tons of sheet capacity at Rogerstone to be completed in 1960 and 1961.

At Birmingham, a rod-casting and rolling installation was put into production. On the other side of the world, construction of Northern Aluminium's branch plant in New Zealand was begun with a planned initial sheet capacity of 4,000 tons.



In France, Aluminium Méridional put a new plant into operation, installing a medium size extrusion press.

In Germany, Aluminiumwerke Göttingen took first steps in a long-term program to increase its sheet capacity. The immediate addition will amount to about 4,000 tons per annum.

In Norway, a new aluminum jobbing plant was installed by Nordisk Aluminiumindustri, Holmestrand.

In Spain, Aluminio Iberico made progress toward bringing its new 13,000-ton per annum sheet mill into production and started installing a second extrusion press.

In Switzerland, Aluminiumwerke A.-G. Rorschach made important improvements to its foil finishing and printing equipment.

*South America*

In Brazil, rod casting and rolling equipment was installed and cable stranding facilities were also brought into operation. Extensive improvements to foil finishing equipment were initiated and a 3,300-ton extrusion press was being installed at the year's end.

*Asia*

In Japan, an affiliate, Nikkei Aluminium, is extending its sheet and extrusion capacity by 7,000 tons per year. Toyo Aluminium is installing an additional 4-high mill to increase foil capacity.

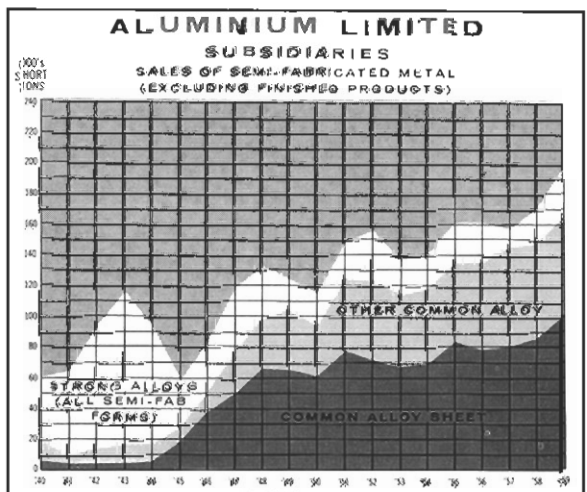
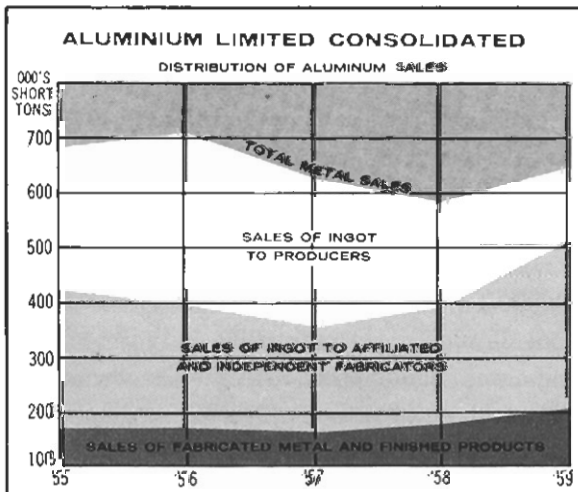
Indian Aluminium Company embarked on an 8,000-ton sheet mill expansion and prepared to install a second extrusion press.

*Australia*

Australian Aluminium Company, Ltd., an affiliate, began 9,000 tons of sheet mill extension and that company's newly formed subsidiary, Aluminium Foils (Australia) Pty. Limited, started building a 3,000-ton-per-year foil mill.

*Other*

In a new program to initiate local fabricating and expand markets, subsidiaries were formed to build modest-sized plants in Ghana, Nigeria, Jamaica and Trinidad. In their initial operations all of these plants will shear and corrugate aluminum building and roofing sheets which are well adapted to tropical markets. The plant in Ghana opened for business in 1959.



# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

## MARKETS & SALES

In 1959, as the majority of industrialized nations achieved new peaks of economic activity, consumption of aluminum in such areas reached record levels. Aluminum usage lagged only in those countries where economic difficulties or a shortage of foreign exchange produced limiting factors.

Estimated total consumption in the free world, comprising some 3,600,000 tons of primary metal and 600,000 tons of secondary aluminum, was almost 25 percent ahead of 1958. Despite the absence of growth in total consumption in 1957 and 1958, and the drop in demand for defence uses, it appears certain that the decade of the Fifties closed with free world aluminum consumption in 1959 about double that at the outset in 1950.

The large increase in tonnage consumed in 1959 was principally attributable to the economic recovery in the United States, but the booming economies of Britain, Western Europe, Asia and Australia also required about 15% more aluminum than in 1958.

The recovery in the United States had its greatest effect in the first seven months of the year, before the advent of the steel strike. In other markets the improvement continued at a steady or accelerating rate throughout the year.

At the end of 1959 effective primary aluminum capacity in the free world stood at approximately 4,200,000 tons per annum. Of this, a total of about 500,000 tons, mainly in the U.S. and Canada, is still out of production.

In these circumstances producers in many countries, particularly the U.S.A., increased their efforts to obtain export orders and trade in aluminum was very competitive during most of 1959, both in semi-fabricated products and in primary form. In the closing months, however, the strong demand in Western Europe, combined with a drought and power shortage in that area, brought a tighter supply situation and a move towards somewhat firmer prices.

In December the Company increased its basic price in Canada and in all export markets, except the United States, by  $\frac{3}{4}$  cents per pound. Shortly

### ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES Analysis of Consolidated Sales

	*Ingot and Ingot Products		Semi-Fabricated Products		All Other Products \$'000	Operating Revenues \$'000	Total \$'000
	Short Tons	\$'000	Short Tons	\$'000			
1954.....	435,238	159,957	157,080	120,836	17,290	29,565	327,648
1955.....	511,683	207,895	169,627	145,064	18,372	40,815	412,146
1956.....	533,528	240,915	171,530	161,404	22,449	57,867	482,635
1957.....	450,030	207,193	164,180	156,430	22,060	67,799	453,482
1958.....	401,270	173,124	179,925	163,837	20,914	65,009	422,884
1959.....	435,776	185,461	207,552	181,586	27,382	55,162	448,691

\*Excluding ingot supplied to Company's fabricating plants.



thereafter, the Company increased its price in the United States by 1.3 cents per pound to correspond with the new quotations which had been announced there and which restored the U.S. price to the level of early 1958.

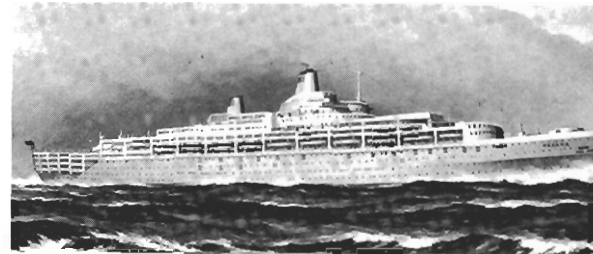
The Company believes that greater sales volume through new applications of aluminum is of paramount importance to the industry. Because many of the significant new mass uses involve keen price competition with other materials, constant attention must be paid, not only to the price of primary aluminum, but also to methods of reducing the cost of fabricating the aluminum products required.

In 1959 competition from aluminum exports from the Soviet Union and its satellites was less significant than in earlier years, although they continued to depend on reduced prices to market their metal.

In the second half of 1959 the Company made spot sales to satellite countries where an apparent shortage had arisen. The Company also made some spot sales to aluminum producers of Western Europe.

Aluminium Limited believes that free trade in aluminum is in the best interests of the industry and has consistently urged a liberal trading policy for aluminum among the Western trading nations. The Company has observed closely the move towards the establishment of regional trading blocs in Europe. It seems clear that Western Europe will be increasingly dependent on aluminum imports from outside the area and that the interests of consumers and the industry in general will be best served if aluminum supplies are available in ample quantities at prices which will ensure a continued growth in consumption.

Sales of aluminum in all forms and from all sources by Aluminium Limited's consolidated subsidiaries amounted to 643,328 tons in 1959 compared to 581,195 tons in 1958 and 614,210 tons in 1957.



British-built "Oriana"—Orient liner with a 1,000-ton welded aluminum superstructure



Headquarters of two West German steel companies in Dusseldorf use aluminum window and wall systems.

Left: Mannesmann A.G., Right: Phoenix-Rheinrohr A.G.



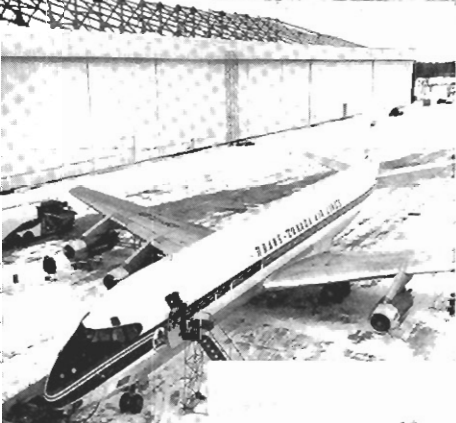
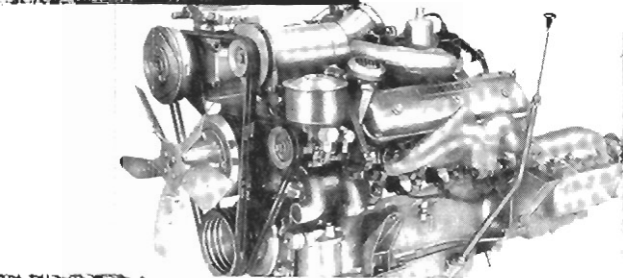
Aluminum barns have low annual cost, and being cooler, improve animal yields



Aluminum heavy duty truck body built in Montreal permits 30% extra payload



Carefree boat — the 14 ft. 126 lb. "Fisherman" by Aluminum Goods Limited. Aluminum boats are popular



Rolls-Royce's new car engine largely aluminum —27% more displacement, no more weight

Aluminum siding on T.C.A. hangar for DC-8 jets has 58-foot vertical sections



Aluminum refrigerator car developed by Alcan, C.N.R. and National Steel Car. Rolling stock is major new aluminum outlet



Dual ACSR transmission lines still an important factor in electrical uses of aluminum

The geographical distribution of consolidated sales of aluminum in all forms and from all sources has been as follows, in short tons:

	1955	1956	1957	1958	1959
Canada . . . . .	77,700	86,000	72,000	78,000	75,500
United States*	195,200	233,000	221,000	180,000	180,000
United Kingdom . .	278,200	262,000	176,000	152,000	128,500
All Others . . .	130,200	124,000	145,200	171,000	259,300
	<u>681,300</u>	<u>705,000</u>	<u>614,200</u>	<u>581,000</u>	<u>643,300</u>

\*The U.S. figures do not include aluminum under contracts for delivery at customers' option, against which partial payments have been made.

As in previous years, the principal markets for the Company's consolidated sales were the United States, the United Kingdom, Canada and West Germany. Other major markets were Benelux, Japan, Brazil, Australia, India and South Africa.

In Canada business in 1959 began slowly in tune with the economy but improved as the year progressed and final figures were about level with 1958. Semi-fabricated sales, with the exception of rod and cable, showed satisfactory gains.

A noteworthy feature of consolidated sales in 1959 was the increase of 51% over 1958 in total deliveries in the markets other than the U.S., the U.K. and Canada. The Company accounted for over half of all the imports into the European Common Market area and for almost three-quarters of all the imports into Japan.

Another significant fact in Aluminium Limited's sales record in recent years is the decreasing proportion of shipments to other producers of primary aluminum or their fabricating affiliates, chiefly in the U.S. and the U.K. Whereas in 1956 this ratio was 43 percent of total sales, in 1959 it was 20 percent.

#### United States

In the United States market in 1959 the Company's sales to independent fabricators increased substantially in spite of the difficult business condi-



tions in which many of these customers found themselves in a readjustment year. The Company firmly believes that it has a growing and significant role to play as a natural supplier to the United States market.

Early in 1960 Aluminium Limited and Aluminum Company of America reached an agreement whereby approximately 59,000 tons of aluminum under contract for delivery over the two years 1960 and 1961 to the latter company were cancelled against payment by Aluminum Company of America in 1960 of a fee of approximately \$9 million. The cancelled quantity represents about 10 percent of the total tonnage which Aluminium Limited contracted in 1953 to sell to Alcoa over a period of years.

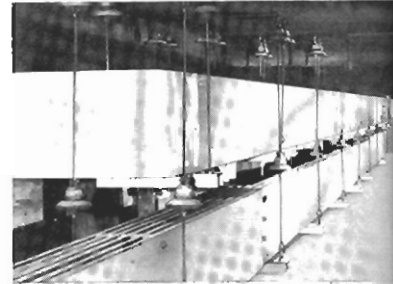
*United Kingdom*

The United Kingdom aluminum market witnessed rapid changes in 1959 and into 1960 as the three largest U.S. producers acquired interests in the established aluminum industry. Due mainly to the economic difficulties of recent years and the changing emphasis in defence expenditures, aluminum consumption in the United Kingdom had slowly declined since 1955. In 1959, however, the industrial resurgence in the U.K. was accompanied by a 15% increase in aluminum consumption. Aluminium Limited's business in the U.K. itself did not benefit proportionately although its sales of semi-fabricated products, domestic and export together, were up more than 20 percent.

The year marked the 50th anniversary of the establishment of the Company's British subsidiary, Northern Aluminium Company, Ltd. This company is a leader in the United Kingdom fabricating industry and expects to improve its position through the completion in 1960 and 1961 of its major expansion program, involving the installation of a 144-inch wide continuous sheet mill. Among other



Chrysler's 1960 Valiant, showing 60 lbs. of aluminum parts which save 102 lbs.

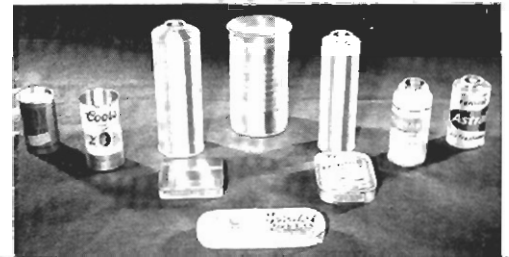


Electrical: Aluminum bus conductors carry power for one Kitimat potline



Foil packaging represents a large, growing market

Products take on a new look in aluminum cans. These are for fish, beer, oil, and other products



Train load of aluminum highway trailers riding "piggy-back" between distribution centres



Aluminum pipe for water injection, Pembina oilfield, Alta. Inset: Alcan portable pipe welder in use



things, the new facilities will be able to supply heavy plate in greater widths to the British ship-building industry.

## MAGNESIUM

The Company has been for several years a producer and seller of primary magnesium and has participated in the development of this light metal which, in many ways, is complementary to aluminum.

One of the largest uses of magnesium is as the main alloying element in a new range of aluminum strong alloys whose growth rate is expected to exceed that of aluminum in general. Important uses in the automotive and engineering fields are also growing rapidly. The Company's subsidiary, Magnesium Company of Canada, Ltd. (Magcan) is an important seller in world markets.

In 1959 it was decided to suspend the operation of the Company's 4,400-ton magnesium plant at Arvida and to obtain Magcan's magnesium requirements through agreements made in Canada and the United States. Under the U.S. arrangements, Magcan obtains a portion of its magnesium requirements from the Dow Chemical Company, delivering to them Alcan's aluminum ingot in exchange. It is expected that Dow's fabricating division, The Dow Metal Products Company, will become an increasingly important consumer of Alcan aluminum. Separate arrangements provide for a portion of Magcan's requirements to be supplied by the Canadian company, Dominion Magnesium Limited.

## TRANSPORTATION

In the Annual Report for 1958 it was mentioned that steps were being taken which, in conjunction with the expiry of some high rate ship charters,

should reduce the size of the Company's ocean shipping fleet to the then foreseen needs, thus lowering fixed charges. This has resulted in an important reduction in fixed charges, although losses continued during 1959 due largely to a decline in revenue from third party business.

The forward situation is much brighter for 1960 in that the reduction in the size of the fleet, combined with an increase in the movement of supplies and materials, is expected to place our shipping operations on a much improved basis.

## CAPITAL EXPENDITURES AND FINANCING

While 1959 expenditures on plant were appreciably lower than in previous years, they totalled some \$62 million of which \$31 million was devoted to completion of the Chute-des-Passes power project, \$13 million to fabricating facilities in the United Kingdom and elsewhere, and \$8 million to Caribbean bauxite and alumina facilities.

Aside from drawings of U.S. \$27 million under Aluminum Company of Canada, Ltd.'s intermediate-term credit line with U.S. and Canadian banks, funds for these expenditures and for the reduction of other Aluminum Company of Canada, Ltd. long-term debt by some \$14 million, were provided out of cash income.

The only other new debt incurred in 1959 arose through the sale in December by Indian Aluminium Company, Ltd. of Rupees 30 million (equivalent to some \$6 million) of 6¼% debenture stock, due 1970/75, designed to contribute to the financing of that company's impending expansion program and the delivery by Northern Aluminium Company, Ltd. of £1,125,000 of 6% debenture stock representing the balance of £3 million of such stock sold in 1958.



Capital projects envisaged in the next few years, as outlined in the foregoing sections of this report, are presently expected to involve the expenditure of about \$80 million during 1960. Of this amount, a large part will be devoted to the expansion or establishment of fabricating plants in the United Kingdom, Canada, New Zealand, Africa, India, the West Indies, South America and Europe.

A capital expenditure of \$8 million is provided in 1960 for facilities associated with the completion of the Chute-des-Passes hydroelectric project, including enlargement of the switching station at Isle Maligne to handle the larger quantities of electrical energy in the Saguenay system as a whole.

Other expenditures in 1960 will be made for the alumina project in British Guiana, smelter and alumina expansion in India, and general improvement and replacement in existing plants to increase productivity and efficiency.

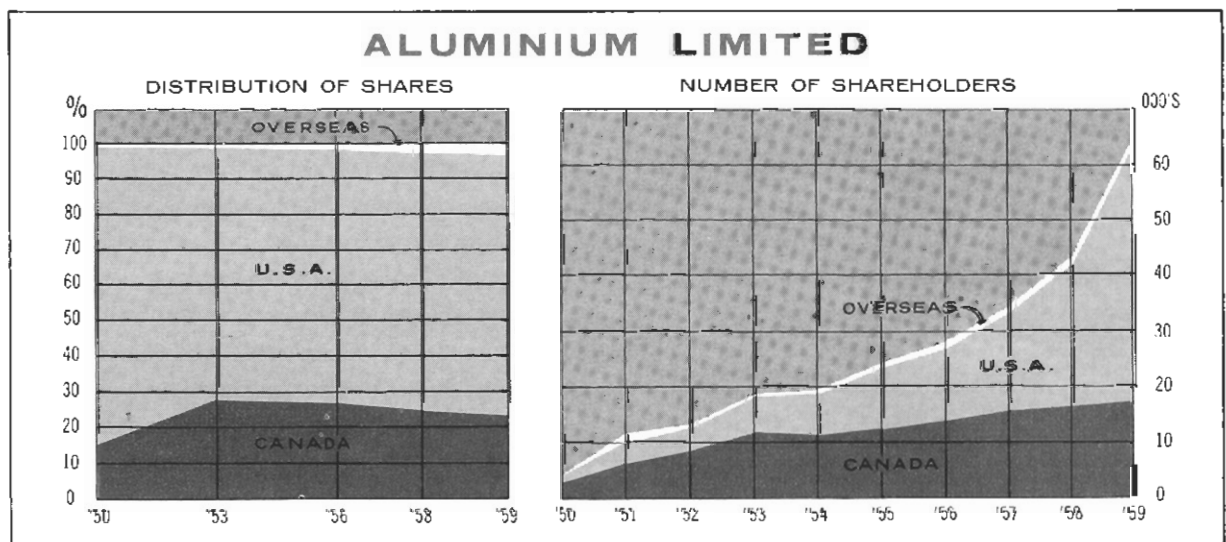
It is presently anticipated that funds for 1960 capital outlays will be found from cash income and

from the intermediate-term credit line — on which \$8 million has been repaid since December — without recourse to long-term financing.

### RESEARCH AND EXPLORATION

In the metallurgical field our research organization was required to increase, during 1959, its emphasis on short-term projects in support of sales. The growing variety of fabricated products offered by our group companies and customers also created an increased demand for short-term research results. Substantial progress was made with experimental and production equipment in the continuous-casting of narrow and medium-width slabs suitable for rolling into a variety of strip sheet products. Basic research in the alloy field and on ore refining and smelting was continued with significant results.

Our geological staff devoted a major portion of its time during 1959 to the development of ore reserves acquired during recent years.





## THE DECADE OF THE FIFTIES

For aluminum — “The Metal of the 20th Century” — the decade of the Nineteen Fifties was the most significant thus far.

Free world consumption doubled between 1950 and 1959. New mass markets in building, transportation, packaging and household goods were successfully developed.

Today’s ready availability of aluminum, and the greatly increased production potential, enhance the metal’s opportunities to penetrate still more major markets, not only in the older industrial nations but also the newer ones.

In the Decade of the Fifties, Aluminium Limited played its share in the progress of the industry. Some of the highlights of the Company’s work in the decade are summarized below and illustrated in the pages which follow.

**Power:** Installed hydroelectric power in Canada more than doubled from 2,040,000 h.p. to 4,650,000.

**Primary Aluminum:** Effective aluminum capacity of Canadian smelters doubled to 750,000 tons per annum with the foundation laid for expansion to 1,000,000 tons.

New smelting subsidiaries or affiliations established in Brazil and Japan; expansion in India, Norway and Sweden.

**Raw Materials:** New bauxite-mining activities in Jamaica, Guinea, Malaya and Sarawak; alumina production capacity substantially doubled with new undertakings in Jamaica and British Guiana; proven bauxite reserves increased severalfold, in keeping with smelter expansion accomplished and contemplated.

**Fabricating:** Aluminum fabricating capacity of subsidiaries and affiliates in 17 countries substantially doubled.

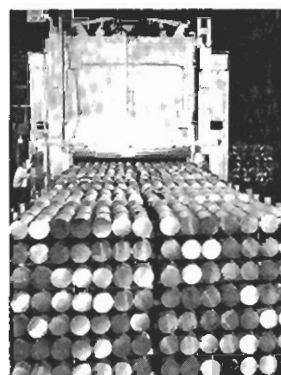
**Sales:** Sales and operating revenues doubled.

**Plants and Facilities:** Gross fixed plant of subsidiaries increased threefold.

**Research:** Research facilities extended in Canada and the United Kingdom.



The Company’s research centre at Banbury, England, showing the new section built during the 1950’s. In this laboratory are developed and advanced the knowledge and techniques of fabrication of the metal



Cast in a continuous type of process, these extrusion ingots are emerging from a homogenizing furnace

The Arvida, Quebec, laboratory was built by the Company early in the 1950’s for research into smelting and ingot techniques

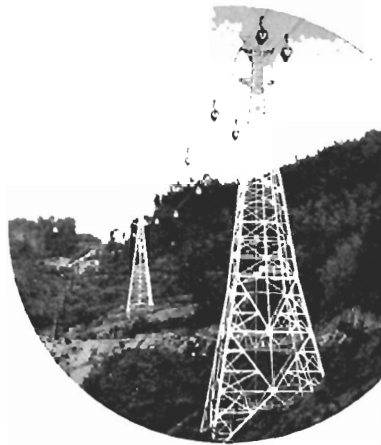


Alcan’s newly-developed tri-lok ingot being cast from high-purity aluminum



# BAUXITE AND ALUMINA

Providing supplies of the ore, bauxite, for an annual production capacity of one million tons of aluminum has been an important phase of Aluminium Limited's expansion during the past decade. Three plants to process bauxite into alumina were undertaken. Alumina Jamaica Limited opened its first plant in 1953 and its second in October, 1959, bringing the Company's total investment in the island to over \$100 million. A new alumina plant is under construction by the Demerara Bauxite Company at Mackenzie in British Guiana in addition to recent expansion of the ore beneficiating plant. In Guinea, an outstanding new source of the ore is being developed, and bauxite deposits are being mined elsewhere.



Bauxite is carried by aerial ropeway to Alumina Jamaica Limited's second plant at Ewarton



Alumina Jamaica Limited's new ore refining plant at Ewarton has a capacity of 270,000 tons of alumina per year



Kirkvine Works of Alumina Jamaica Limited has a capacity of 540,000 tons of alumina per year. The bauxite is mined nearby



Port Esquivel, built on the south coast of Jamaica by the Company, discharges 1,000 tons of alumina per hour into the ships' holds



Open-pit mining of bauxite in Jamaica. The ore is transported by carry-all vehicles to the Kirkvine plant

Removing overburden at Montgomery mine in British Guiana. This walking dragline has a 220 foot long aluminum boom, scoops 13 tons each time

A train load of 100 cars of bauxite en route to Mackenzie from the mines in British Guiana

Giant kilns at the Mackenzie, B.G. ore plant dry the bauxite. Three kilns also calcine the ore for the abrasive and refractory industry

Precipitation tanks tower over Demerara Bauxite Company's new alumina plant under construction



British Guiana surveyors at work on the new alumina plant project

Smatan Bauxite Limited's bauxite washing plant in Sarawak



Bauxite storage pile at Bauxite du Midi's plant in Los Islands off the coast of Guinea



(extreme left) Loading bauxite at the South East Asia Bauxites Limited plant in Malaya



(top centre) Unloading caissons for Rio Nunez bridge foundation under construction in Guinea



(right) Earthworks for the railway route from Port Kakandé on the coast of Guinea to the Boké bauxite deposits in the interior



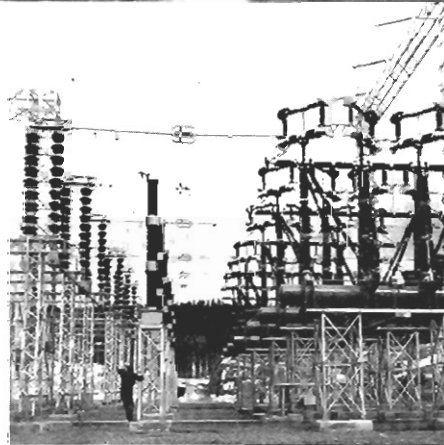
(bottom centre) Loading bauxite at the Morro do Cruzeiro mine near the Aluminio Minas Gerais S.A. smelter at Saramenha in Brazil



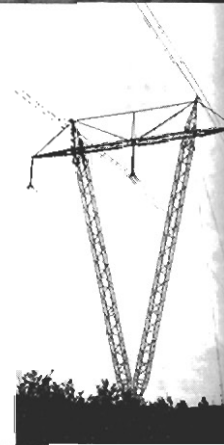
**CHUTE-DES-PASSES.** Inside the six mile main water supply tunnel showing the entrances to the penstocks on the left leading to the five turbines. This photo was taken prior to the opening of the control gates, and watering of the tunnel

Outdoor sub-station uses aluminum bus bars to carry the current from the powerhouse 500 ft. below ground

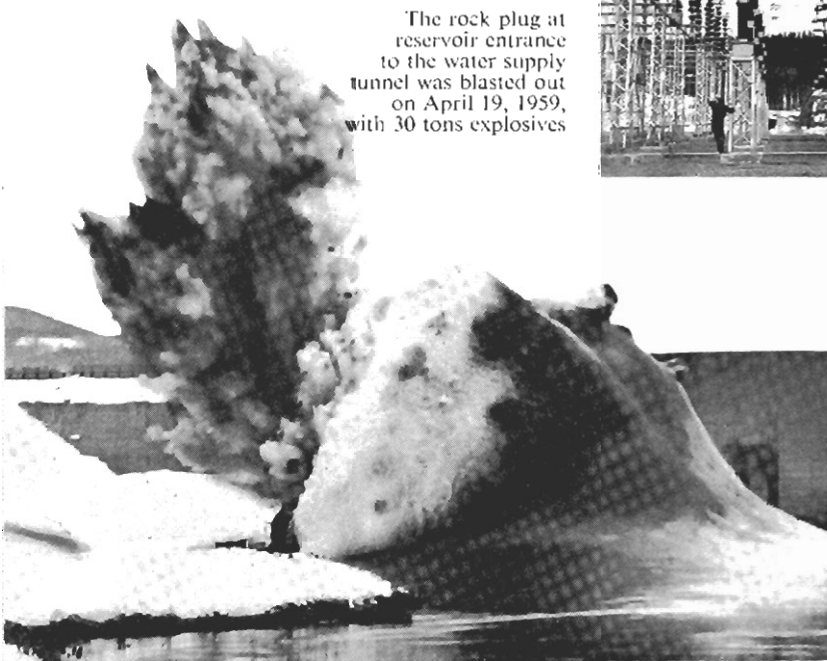
The rock plug at reservoir entrance to the water supply tunnel was blasted out on April 19, 1959, with 30 tons explosives



Made of aluminum, this new type guyed tower carries transmission line with power at 345 K.V.

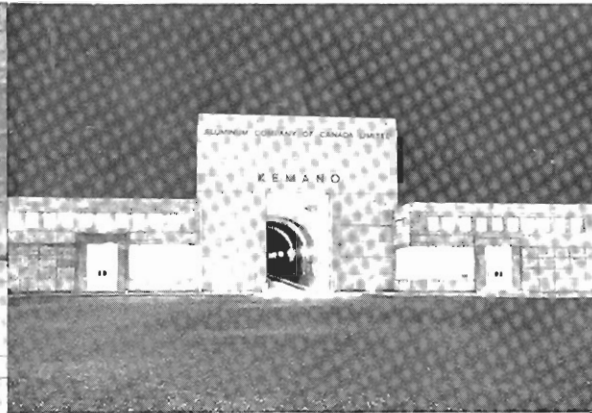


The Chute-des-Passes underground powerhouse has five generators with a total capacity of 1 million h.p. Three generators went on power in 1959



# POWER

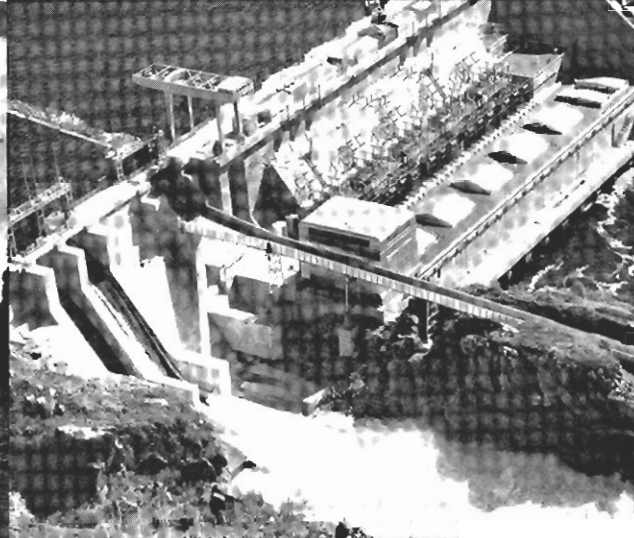
Power is vital to aluminum smelting. As hydro power is the most economical method of producing electrical energy, it is a major factor in the primary aluminum industry. Construction of the Kemano power section of Alcan's B.C. project was started early in 1951 and power was delivered to Kitimat in 1954. Meanwhile, two other new hydroelectric stations were under construction on the Peribonca River in Quebec. Finally, in 1959, the Chute-des-Passes project further up the river was inaugurated, bringing the total capacity of the Company's hydroelectric system in Canada to 4,650,000 h.p.



Aluminum towers carry one set of transmission lines over Kildala Pass from Kemano to the Kitimat smelter

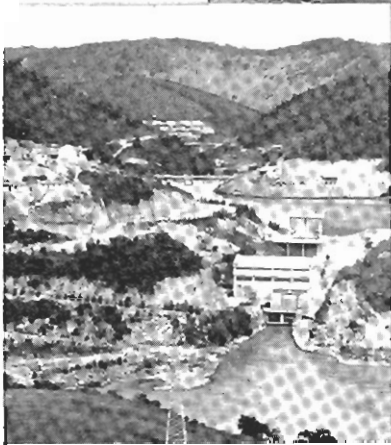
Entrance to Kemano powerhouse which is located a quarter of a mile inside a mountain

Kemano powerhouse has seven generators in operation with a capacity of 1,050,000 h.p. This supplies Kitimat smelter



Chute-à-la-Savane powerhouse on the Peribonca River has a capacity of 285,000 h.p. for Alcan smelters in Quebec

Chute-du-Diable, built at the same time as Chute-à-la-Savane, just down stream, first entered service in 1952 with a capacity of 275,000 h.p.



Brazil. The Brecha powerhouse near Ponte Nova began generating power in October 1958 for the Saramenha smelter of Alumínio Minas Gerais S.A.

# SMELTING

Unprecedented demand for aluminum at the start of the 1950's led to the greatest expansion of primary facilities in history. For Aluminium Limited, Kitimat smelter was the largest single project, adding 190,000 tons. At Isle Maligne, Quebec, new potrooms were added. The new smelter at Hirakud doubled India's aluminum production, is being expanded again. In these years also, the Company acquired major smelting interests in Japan and opened a smelter in Brazil.



Interior view of Isle Maligne, Quebec smelter showing two rows of smelting pots

Interior view of Kitimat smelter showing crucible containing molten aluminum tapped from the pots



(Below) Brazil. Aluminio Minas Gerais S.A.'s aluminum smelter at Saramenha near Ouro Preto in production since 1951

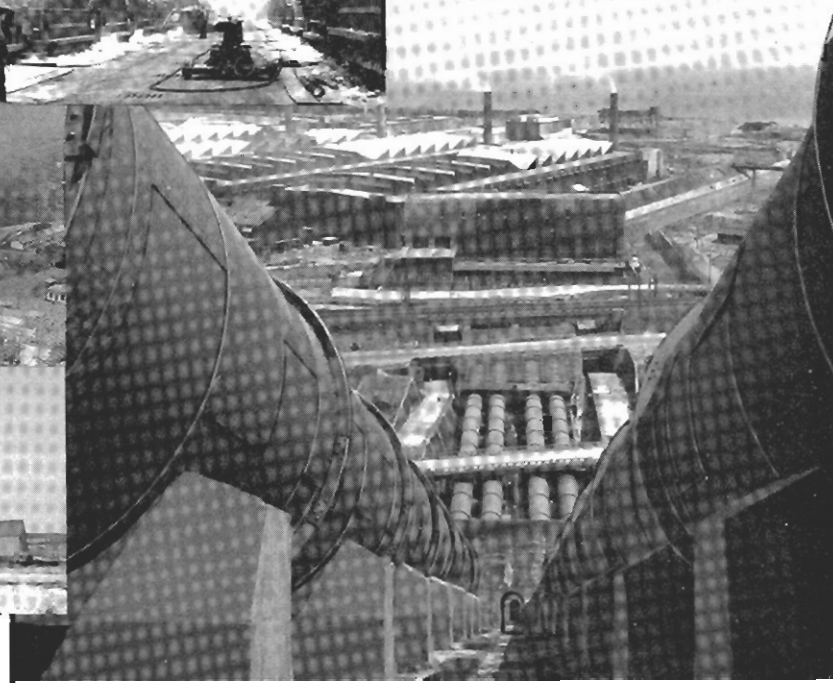
(Bottom) India. Indian Aluminium Company Limited's new 11,000-ton annual capacity smelter at Hirakud



Alean's Kitimat, B.C., smelter at the head of the Douglas Channel. Foreground shows the uncompleted expansion



Japan. Penstocks in the foreground lead to Nippon Light Metal's powerhouse and Kambara aluminum smelter in the background. Annual capacity is 35,000 tons of aluminum

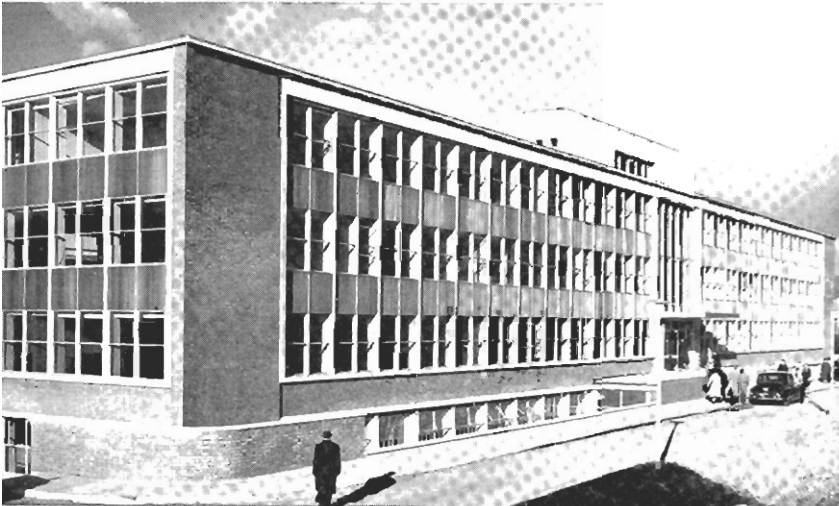




# FABRICATING

Aluminium Limited's fabricating subsidiary in the U.K., Northern Aluminium Company Limited, was especially active during the decade. The largest aluminum rolling mill in the Commonwealth began operations at Rogerstone and is being expanded again. New equipment was installed at the Banbury and Birmingham Works, producing sheet, castings and forgings. New techniques were developed and new larger ingots up to three tons were rolled in continuous processes.

Northern Aluminium Limited's new office building at Rogerstone, England, opened in 1958

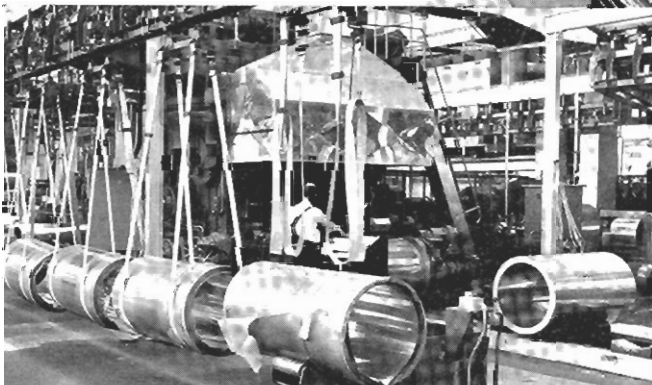


The continuous strip mill at Rogerstone showing the 700 ft. long runout table and hot finishing mill



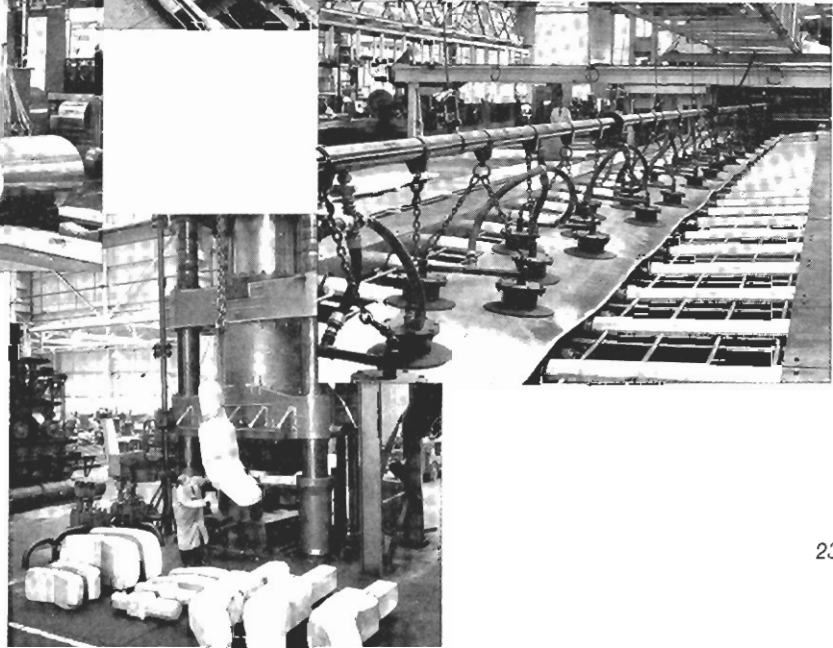
The new 4,000-ton stretcher at Rogerstone has been in operation for the past year

Transferring an aluminum slab on to the newly installed cold roughing mill table at the Banbury Works



Coils of aluminum on the conveyor of the cold-finishing mill at Banbury Works

Forgings weighing 1,500 lbs. produced on the Birmingham Works' 4,000-ton hydraulic press



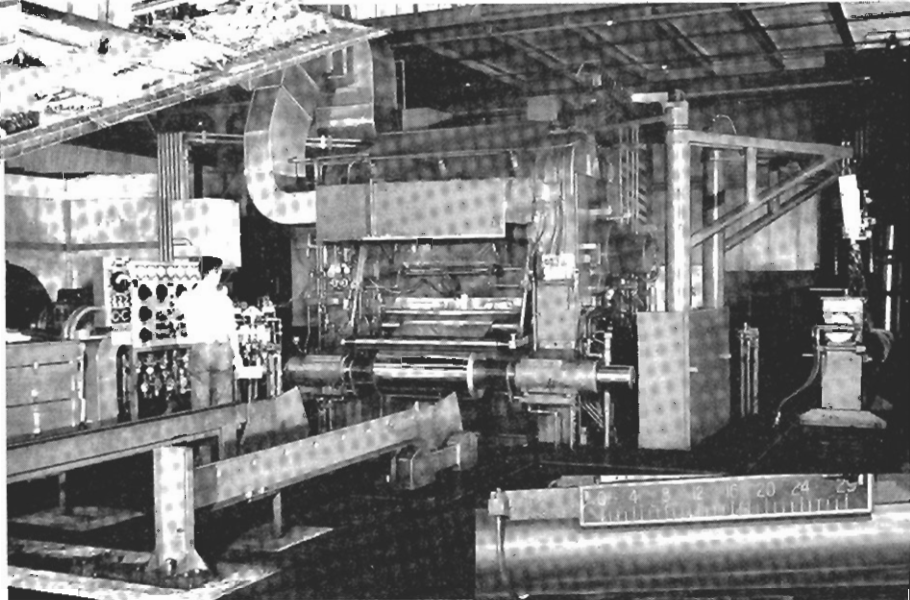




New interests in fabricating companies in many countries were created in the period 1950-1960. Older established operations were expanded and pioneer work began in Africa with modest plants to produce corrugated roofing sheet. Some typical expanded fabricating operations in which Aluminium Limited has interests on every continent are illustrated on these two pages.



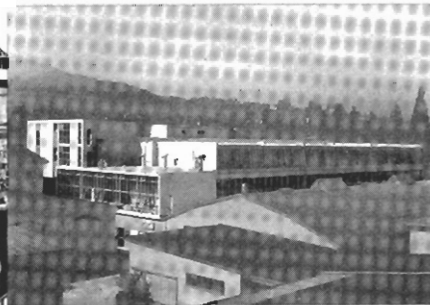
Vancouver Works, newest fabricating plant of Aluminum Company of Canada, Limited, produces rod, cable and extrusions



Canada. New 62-inch 4-high foil mill at Kingston Works is largest outside U.S.A.

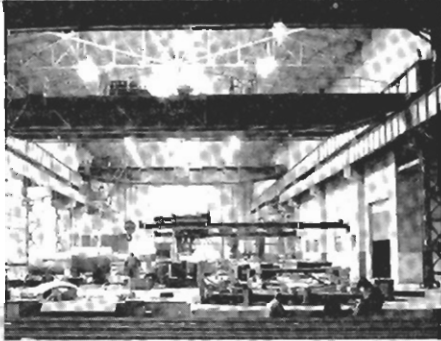
Aluminium Foils (Australia) Pty. Limited's administration building and plant will be ready in 1960

Extrusion ingot being charged in one of the extrusion presses at Kingston Works, Ontario



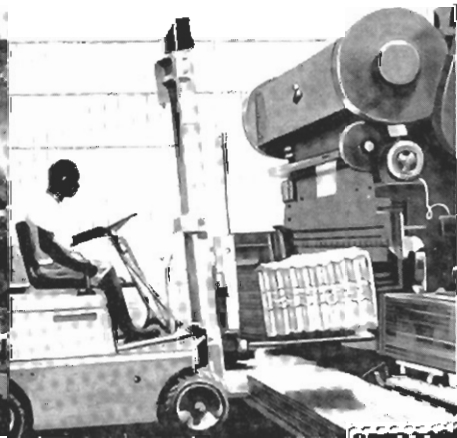
Japan. Toyo Aluminium K.K.'s 4-high foil mill, a modernization feature

Switzerland. Aluminiumwerke A.-G. Rorschach's foil finishing building seen from the roof of the sheet mill



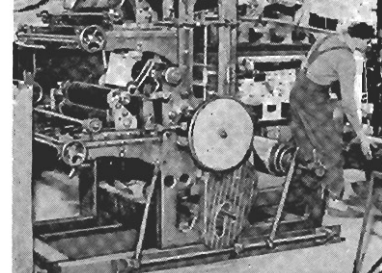
Norway. At Holmestrand, sheet, rod, utensils and castings are produced by A/S Nordisk Aluminiumindustri

Ghana Aluminium Products' pioneer plant is corrugating sheet for roofing and siding

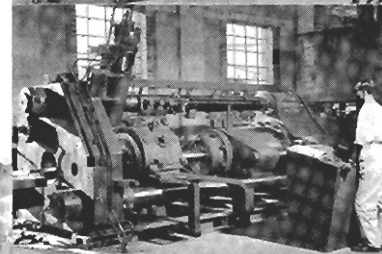




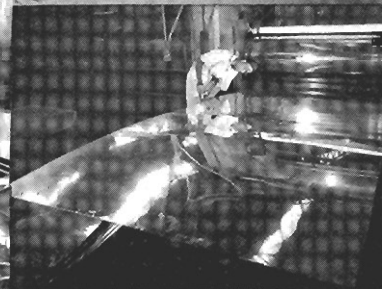
*Uruguay.*  
Foil printing  
equipment at  
Aluminio Del  
Uruguay S.A.'s plant



*India.* The first  
extrusion press  
producing aluminum  
sections was installed  
in 1955 by  
Indian Aluminium  
Company Limited



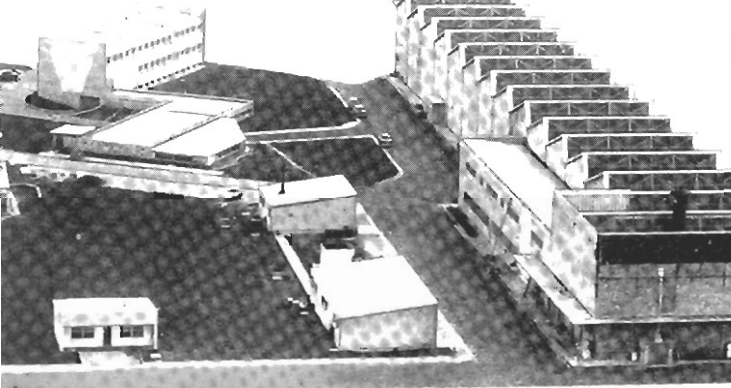
*Spain.* At Alicante, Aluminio  
Iberico S.A. fabricates sheet,  
extrusions, rod and cable  
Hot mill run-out table  
in the new Alicante plant



*Germany.* Slugs for containers  
emerging from the annealing furnace  
on the conveyor in the plant of  
Aluminiumwerke Göttingen G.m.b.H.



*India.*  
A 6-foot  
wide sheet  
being rolled  
at Belur



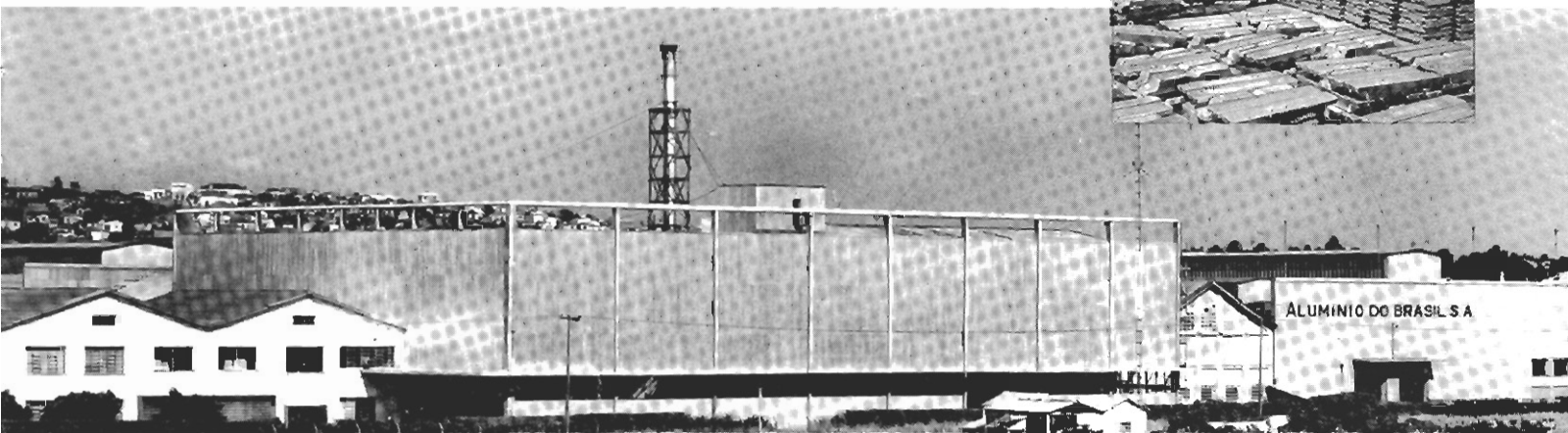
*France.* Aluminium Méridional  
opened its new extrusion plant at  
Lucé near Chartres at the end of 1959

*South Africa.* Hot rolling sheet  
in the Pietermaritzburg plant  
of Aluminium Company of  
South Africa (Pty.) Limited



*Brazil.* This new plant of Aluminio do Brasil S.A.  
was completed in 1960 as part of the expansion program there

*Mexico.* Aluminum ingot ready  
for production of sheet, foil,  
extrusions and paste at the  
plant of Aluminio  
Industrial Mexicano S.A.



*SOURCE AND APPLICATION OF FUNDS*

IN MILLIONS OF CANADIAN DOLLARS

	<u>1959</u>	<u>1950-1959 Inclusive</u>
<b>Cash and Marketable Securities</b>		
(beginning of period) . . . . .	\$ 51	\$ 63
 <b>Source of Funds:</b>		
Net income . . . . .	24	372
Straight-line depreciation . . . . .	47	266
Reserve for future income taxes . . . . .	7	125
<b>Sales of securities:</b>		
Aluminium Limited shares . . . . .	1	105
Aluminum Company of Canada, Ltd. preferred shares . . . . .	—	60 <sup>(1)</sup>
Aluminum Company of Canada, Ltd. abatable notes . . . . .	—	67
Aluminum Company of Canada, Ltd. fixed debt . . . . .	—	310
Other fixed debt . . . . .	10	59
Aluminum Company of Canada, Ltd. intermediate-term bank loans . . . . .	27	111
Net increase in short-term borrowings . . . . .	—	35
Other . . . . .	3	30
	<u>119</u>	<u>1,540</u>
	<u>\$170</u>	<u>\$1,603</u>
 <b>Application of Funds:</b>		
New plant . . . . .	\$ 62	\$1,040
New investments . . . . .	2	22
Redemption of debt and preferred shares . . . . .	18	123
Dividends paid on common shares . . . . .	16	186
Increase in working capital (excluding cash, marketable securities, short-term borrowings and funded debt payable within one year) . . . . .	(3)	157
	<u>95</u>	<u>1,528</u>
 <b>Cash and Marketable Securities</b>		
(end of period) . . . . .	75	75
	<u>\$170</u>	<u>\$1,603</u>

(1) After deducting \$30 million applied to redemption of previous issue.

## COMPARATIVE FINANCIAL STATISTICS

AS ADJUSTED

Year	Total Assets before Reserves	Sales and Operating Revenues	Net Income before Depreciation and Income Taxes			Number of Common Shares <sup>(2)</sup>	Per Common Share		
			Current Income Taxes	"Cash Income" <sup>(1)</sup>			Capital Stock and Surplus	Net Income	Cash Dividends
Millions of Canadian Dollars						Millions Canadian Dollars			
1929	\$ 75	\$ 30	\$ 4	\$ 0	\$ 4	18.9	\$ 1	\$ .13	\$ 0
1930	75	26	3	1	2	18.9	1	.03	0
1931	81	22	1	1	0	19.5	1	— .08	0
1932	81	13	1	0	1	19.6	1	— .08	0
1933	84	14	2	0	2	19.6	1	— .05	0
1934	83	21	2	0	2	19.6	1	— .02	0
1935	84	26	2	0	2	19.6	1	.01	0
1936	88	32	4	0	4	20.7	1	.09	0
1937	98	49	13	2	11	22.3	2	.36	0
1938	144	66	20	5	15	22.3	2	.49	0
1939	158	92	28	8	20	22.3	3	.69	.14
1940	209	82	38	22	16	22.3	3	.49	.27
1941	324	132	53	15	38	22.3	3	.65	.33
1942	446	198	75	12	63	22.3	4	.69	.33
1943	528	290	96	14	82	22.3	4	.52	.33
1944	523	259	81	11	70	22.3	4	.49	.27
1945	480	114	26	8	18	22.3	4	.52	.27
1946	490	111	28	10	18	22.3	5	.54	.30
1947	514	153	38	15	23	22.3	5	.72	.33
1948	587	209	56	20	36	22.3	6	1.22	.44
1949	612	199	57	20	37	22.3	6	1.21	.43
1950	698	227	73	26	47	22.3	7	1.56	.59
1951	809	284	92	36	56	24.6	9	1.51	.62
1952	972	333	95	35	60	24.6	9	1.44	.65
1953	1,124	336	96	26	70	27.0	10	1.41	.66
1954	1,180	328	94	21	73	27.1	11	1.29	.65
1955	1,310	412	123	26	97	29.9	12	1.61	.71
1956	1,468	483	137	31	107	30.0	13	1.85	.77
1957	1,629	453	112	8	104	30.2	14	1.37	.84
1958	1,734	423	80	9	71	30.3	14	.74	.73
1959	1,820	449	91	13	78	30.4	14	.79	.53

(1) 1950 and thereafter is before reserve for future income taxes — see note 6 to financial statements.

(2) Outstanding at end of each year, adjusted for stock dividend in 1939 and stock splits in 1948, 1952 and 1957.

**ALUMINIUM LIMITED** AND CONSOLIDATED SUBSIDIARIES

*CONSOLIDATED BALANCE SHEET ASSETS*

31st December 1959

IN CANADIAN DOLLARS

	<i>31st December 1959</i>	<i>31st December 1958</i>
Current Assets:		
Cash . . . . .	\$ 62,043,661	\$ 38,899,860
Government of Canada securities (quoted value \$13,223,303) . . . . .	13,222,934	11,651,095
Receivables . . . . .	90,795,965	76,822,455
Inventories of aluminum, materials and supplies (note 3) . . . . .	155,521,434	169,118,964
	<hr/>	<hr/>
	321,583,994	296,492,374
Deferred receivables . . . . .	11,945,472	9,722,229
Prepaid expense and deferred charges . . . . .	12,579,008	11,895,280
Investments in companies not consolidated, at cost (note 4) . . . . .	21,927,753	19,924,166
Lands, plants, riparian rights, and facilities, at cost (note 5) . . . . .	1,452,417,810	1,396,046,722
<i>Less: Accumulated amortization, depreciation and depletion (note 6)</i>	503,198,830	460,355,006
	<hr/>	<hr/>
	949,218,980	935,691,716
	<hr/>	<hr/>
	<u>\$1,317,255,207</u>	<u>\$1,273,725,765</u>

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

## CONSOLIDATED BALANCE SHEET LIABILITIES

31st December 1959

IN CANADIAN DOLLARS

	<i>31st December 1959</i>	<i>31st December 1958</i>
<b>Current Liabilities:</b>		
Payables . . . . .	\$ 51,813,783	\$ 47,758,044
Short-term borrowings (principally in foreign currencies) . . . . .	36,006,367	35,914,392
Income and other taxes . . . . .	12,298,084	9,955,755
Other debt payable within one year (note 7) . . . . .	630,000	2,414,000
	<u>100,748,234</u>	<u>96,042,191</u>
Debt not maturing within one year (note 7) . . . . .	578,199,595	555,304,049
Reserve for future income taxes (note 6) . . . . .	125,138,826	118,019,229
Preferred shares of consolidated subsidiaries, etc. (note 8) . . . . .	77,160,039	77,888,448
<b>Capital Stock and Surplus:</b>		
Shares without nominal or par value (note 9) 30,357,552 shares outstanding . . . . .	138,879,361	137,438,881
Capital surplus . . . . .	5,783,100	3,886,875
Earned surplus (note 10) . . . . .	291,346,052	285,146,092
	<u>436,008,513</u>	<u>426,471,848</u>
	<u>\$1,317,255,207</u>	<u>\$1,273,725,765</u>

*Signed on behalf of the Board:*

NATHANAEL V. DAVIS, Director  
DANA T. BARTHOLOMEW, Director

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

## CONSOLIDATED STATEMENT OF INCOME

For the year ending 31st December 1959

IN CANADIAN DOLLARS

	<u>1959</u>	<u>1958</u>
<b>Sales and Revenues:</b>		
Sales .....	\$393,529,551	\$357,875,616
Operating revenues (transportation services, power sales, etc.) .....	55,161,955	65,008,568
Income from marketable securities .....	686,773	248,316
Income from investments .....	1,059,619	1,085,378
Gain on disposal of surplus fixed assets .....	1,082,243	1,249,990
Other income .....	1,885,260	1,411,973
	<u>453,405,401</u>	<u>426,879,841</u>
<b>Costs and Expenses:</b>		
Cost of sales and operating expenses .....	292,380,796	276,724,241
Provision for depreciation and depletion (note 6) .....	47,019,754	42,240,134
Selling, general and administrative expenses .....	39,726,831	40,658,972
Interest on debt not maturing within one year .....	23,007,468	20,727,259
Other interest .....	2,013,998	2,757,476
Exchange adjustment arising in consolidation .....	1,129,442	1,797,760
	<u>405,278,289</u>	<u>384,905,842</u>
Income before income taxes .....	48,127,112	41,973,999
Provision for current income taxes (\$4,328,457 Canadian; \$1,810,130 in 1958)	13,108,358	9,346,042
Reserve for future income taxes (note 6) .....	7,119,597	6,675,777
	<u>20,227,955</u>	<u>16,021,819</u>
Income after income taxes .....	27,899,157	25,952,180
Dividends on preferred shares of consolidated subsidiaries, etc. ....	3,808,437	3,487,670
Net income .....	<u>\$ 24,090,720</u>	<u>\$ 22,464,510</u>

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

## CONSOLIDATED STATEMENT OF SURPLUS

For the year ending 31st December 1959

IN CANADIAN DOLLARS

### EARNED SURPLUS

Earned surplus — 31st December 1958 .....		\$285,146,092
Net income for the year .....		24,090,720
		<hr/>
		309,236,812
Aluminium Limited dividends (1958 — \$22,038,072) .....	\$15,994,535	
Transfer to capital surplus .....	1,896,225	17,890,760
	<hr/>	<hr/>
Earned surplus — 31st December 1959 .....		\$291,346,052
		<hr/> <hr/>

### CAPITAL SURPLUS

Capital surplus — 31st December 1958 .....		\$ 3,886,875
Transfer from earned surplus of par value of preferred shares of Aluminum Company of Canada, Ltd. purchased for cancellation .....		1,896,225
		<hr/>
Capital surplus — 31st December 1959 .....		\$ 5,783,100
		<hr/> <hr/>



NOTES TO FINANCIAL STATEMENTS

1. Principles of Consolidation:

The consolidated financial statements include the accounts of all subsidiaries (companies more than 50% owned) with the exception of six partially owned foreign subsidiaries, the inclusion of which would have no significant effect. All intercompany items and transactions, including profits in inventories, have been eliminated. Intercompany profits on sales to subsidiaries not consolidated are not significant.

2. Foreign Exchange:

Accounts, other than Canadian currency accounts, included in the consolidated balance sheet are translated into Canadian dollars at rates of exchange current at 31st December 1959, except that (a) inventories, investments, fixed assets and related reserves are at rates current at dates of acquisition, and (b) debts not maturing within one year are at rates current at dates of issue except that the Aluminum Company of Canada, Ltd. first mortgage 3½% sinking fund bonds, due 1974, payable in United States currency, are stated on a dollar for dollar basis.

3. Inventories of Aluminum, Materials and Supplies:

Inventories, as summarized below, are stated at lower of cost or market.

	1959	1958
Aluminum . . . . .	\$ 86,855,312	\$ 89,538,501
Raw Materials . . . . .	62,561,689	64,716,993
Supplies . . . . .	20,725,556	22,156,887
	<u>170,142,557</u>	<u>176,412,381</u>
Less: Partial payments against aluminum under contracts for delivery at customer's option . . . . .	14,621,123	7,293,417
	<u>\$155,521,434</u>	<u>\$169,118,964</u>

4. Investments in Companies not Consolidated, at cost:

	1959	1958
Companies more than 50% owned . . . . .	\$ 4,932,372	\$ 3,769,653
Companies 50% owned . . . . .	11,167,839	11,171,147
Companies less than 50% owned . . . . .	5,827,542	4,983,366
	<u>\$ 21,927,753</u>	<u>\$ 19,924,166</u>

Aluminium Limited's interest in the net assets of those of the above companies owned 50% or more (located primarily in Australia, Japan, Mexico and Scandinavia), in which its investment amounted to \$16.1 million at 31st December 1959, aggregated \$27 million as indicated by the following summary of the assets and liabilities of these companies.

# ALUMINIUM LIMITED *AND CONSOLIDATED SUBSIDIARIES*

## 4. Investments in Companies not Consolidated, at cost — continued

ASSETS		LIABILITIES	
(In millions of dollars)			
Current assets . . . . .	55	Current liabilities . . . . .	31
Investments . . . . .	5	Funded debt . . . . .	38
Fixed assets . . . . .	102	Third party interest . . . . .	24
Less: Depreciation, etc. . . . .	(42)	Aluminium Limited interest . . . . .	27
	<u>120</u>		<u>120</u>

Aluminium Limited's equity in the aggregate net income of these companies in 1959 amounted to \$2.9 million of which \$1.0 million was received in the form of dividends and included in consolidated income.

## 5. Lands, Plants, Riparian Rights, and Facilities:

	1959	1958
Land and water rights . . . . .	\$ 57,841,414	\$ 57,398,049
Mineral properties, rights and development . . . . .	15,352,726	14,213,388
Buildings, machinery and equipment . . . . .	1,272,279,169	1,085,020,656
Uncompleted facilities . . . . .	46,286,807	47,609,149
	<u>1,391,760,116</u>	<u>1,204,241,242</u>
Construction work in progress . . . . .	60,657,694	191,805,480
	<u>\$1,452,417,810</u>	<u>\$1,396,046,722</u>

The expenditure for uncompleted facilities represents the cost of certain smelter facilities in British Columbia, the completion of which has been suspended.

Capital projects envisaged for the next few years, including those referred to on pages 6 to 10 of this report, are presently expected to involve the expenditure of about \$80 million during 1960.

## 6. Depreciation Policy:

Canadian Income Tax regulations permit the use of the diminishing balance method of calculating capital cost allowances and additional allowances may be claimed on property in respect of which certificates have been obtained from the Minister of Defence Production. These additional allowances, of which some \$14 million remain available to Aluminum Company of Canada, Ltd., as well as the diminishing allowances, apply to facilities prior to completion as well as to facilities in use. Certain non-Canadian subsidiaries, too, are permitted by regulations to claim capital cost allowances that exceed straight-line depreciation.

The consolidated subsidiaries, with minor exceptions, follow the policy of providing only for straight-line depreciation in their accounts. Whenever, in respect of any year, allowances utilized for determining that year's taxes exceed straight-line depreciation the resulting reduction in current income taxes is charged to income and credited to a Reserve for Future Income Taxes. Whenever, in a subsequent year, allowances so utilized fall short of straight-line depreciation, an appropriate portion of the reserve is transferred back to income. The reserve is similarly employed in the case of other items of a material nature not charged to income in the same year as utilized for tax purposes.

Straight-line depreciation, as recorded in the accounts, includes depreciation on all completed facilities and from 1st August 1958 includes depreciation at full rates on certain facilities in British Columbia (see note 5), the completion of which has been suspended.

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

7. Debt not maturing within one year:	1959	1958
Aluminum Company of Canada, Ltd.:		
Revolving credit loans from banks under U.S. \$160,000,000 credit agreement, convertible at the Company's option on or before maturity (1st May 1962) into term loans repayable in five equal consecutive annual installments beginning one year from date of conversion (U.S. \$115,000,000) . . . . .	\$111,512,578	\$ 84,446,250
First mortgage 3½% sinking fund bonds, due 1974:		
Series "A" . . . . .	5,948,000	6,987,000
Series "B" (U.S. \$11,978,000) . . . . .	11,978,000	13,578,000
Commutation value of contractual obligation for annual payments secured by second hypothec — payable in Canadian currency and in United States currency in equal parts . . . . .	7,425,000	7,748,607
3½% Sinking fund debentures, due 1971 . . . . .	34,493,000	38,427,000
3⅞% Sinking fund debentures, due 1970 (U.S. \$70,100,000) . .	68,982,781	69,531,888
4½% Sinking fund debentures, due 1973 . . . . .	44,438,000	45,400,000
4½% Sinking fund debentures, due 1980 (U.S. \$118,836,000) .	115,006,343	120,971,700
Redeemable notes — payable to the U.K. Government — interest and \$73,190,750 of principal abatable in certain circumstances as provided in the contracts under which they were issued:		
3% Notes, due 1971 . . . . .	54,950,000	54,950,000
3½% Notes, due 1971 . . . . .	24,975,000	24,975,000
3½% Notes, due 1974 . . . . .	41,915,446	41,978,482
Saguenay Power Company, Ltd.:		
First mortgage 3% Sinking fund bonds, due 1971 (U.S. \$15,680,000) . . . . .	15,680,000	16,332,000
3% Serial debentures, due 1960/1965 . . . . .	1,800,000	2,100,000
Northern Aluminium Company, Ltd.:		
5% Debentures, due 1962/1964 (£750,000) . . . . .	2,304,375	2,304,375
6% Debentures, due 1983 (£3,000,000) . . . . .	9,421,512	6,387,050
Alumina Jamaica Limited:		
6% Bank loans, due 1962 (£4,000,000) . . . . .	10,815,620	10,815,620
Other debt . . . . .	17,183,940	10,785,077
	578,829,595	557,718,049
Less: Debt payable within one year included in current liabilities (\$15,844,180 less \$15,214,180 already redeemed) . . . . .	630,000	2,414,000
	\$578,199,595	\$555,304,049

Allowing for payments already made, sinking fund payments over the next 5 years against the above debt, other than bank loans, will amount to approximately \$0.6 million in 1960 (appearing under Current Liabilities), \$13.8 million in 1961, \$21.6 million in 1962, \$20.2 million in 1963 and \$20.2 million in 1964.

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

8. Preferred Shares of Consolidated Subsidiaries, etc.:	1959	1958
Cumulative Redeemable Preferred Shares:		
Aluminum Company of Canada, Ltd.:		
4% Sinking fund first preferred shares . . . . .	\$10,707,800	\$11,174,375
4½% Sinking fund second preferred shares . . . . .	58,509,100	59,938,750
Indian Aluminium Company, Ltd. 5% Preferred shares . . . . .	1,329,200	1,329,200
	<u>70,546,100</u>	<u>72,442,325</u>
Minority interest in equity of consolidated subsidiaries . . . . .	6,613,939	5,446,123
	<u>\$77,160,039</u>	<u>\$77,888,448</u>

## 9. Capital Stock:

In April 1953, with the approval of the shareholders, 1,200,000\* shares were reserved for employees under the Share Purchase Plan and 900,000 shares were reserved for officers and other employees under a first Share Option Plan. In April 1958, 300,000 shares were likewise reserved for officers and other employees under a second Share Option Plan.

An initial offering, made under the Share Purchase Plan in 1953 at \$12.33\* per share, was completed in 1955 with a total of 94,641 shares fully paid and issued. A second offering, made in April 1956 at \$34.66 per share, was completed in 1958 with a total of 65,655 shares fully paid and issued. Under a third offering, made in April 1958 at \$23.00 per share, 89,766 shares were fully paid and issued by 31st December 1959 (36,893 shares in 1959). Subject to minor adjustments, this offering was completed in January 1960 with the issuance of a further 5,787 shares. Prices for the shares offered under the Share Purchase Plan have been fixed at approximately 85% of market price current at date of offering.

As at 31st December 1958, 543,820 shares were subject to outstanding options. During 1959, 37,370 shares were issued at a price of \$15.84. Also in 1959, options on 2,250 shares at \$49 lapsed and options on 137,750 shares at \$49 were surrendered, these shares becoming unavailable for the granting of further options. Options for 137,750 shares, not exercisable until 15th July 1960, were granted under the second Share Option Plan, at a price of \$36.50 per share, to the holders of the aforementioned options that were surrendered. As at 31st December 1959, 168,420 shares remained subject to options at \$15.84 per share and 198,030 shares at \$31.25 per share, all of which were exercisable, and 137,750 shares remained subject to options at \$36.50 per share which are non-exercisable until 15th July 1960. In each case the price represents the market price ruling when the options were granted. There were 162,250 shares still available for the granting of options at 31st December 1959.

*\*All numbers of shares and prices adjusted to reflect 1957 3-for-1 split.*

## 10. Earned Surplus:

Consolidated earned surplus at 31st December 1959 includes approximately \$133,000,000 which, pursuant to the provisions of the 4½% sinking fund debentures, due 1980, of Aluminum Company of Canada, Ltd. subject to certain reservations, is not available for payment of cash dividends to Aluminium Limited.

## 11. Commitments:

A subsidiary company, Saguenay Shipping Limited, has charter hire commitments amounting to \$25.7 million in 1960 (\$30.3 million paid in 1959), \$21.2 million in 1961, \$16.3 million in 1962, \$10.7 million in 1963, \$6.2 million in 1964, \$4.2 million in 1965 and lesser amounts up to 1974.

See also reference to capital expenditure program in note 5.

# ALUMINIUM LIMITED *AND CONSOLIDATED SUBSIDIARIES*

## 12. Geographical Distribution of Consolidated Assets, Liabilities, etc.:

A condensed analysis of the consolidated balance sheet at 31st December 1959, according to the domicile of the constituent companies and their branches, follows:

	Canada	Other Western Hemisphere	Other British Commonwealth	All Other	Total
ASSETS					
	(in millions of dollars)				
Current assets . . . . .	144.1	68.8	84.3	24.4	321.6
Investments . . . . .	21.4	.4	—	.1	21.9
Fixed Assets . . . . .	1,140.7	191.7	75.2	44.8	1,452.4
<i>Less: Depreciation, etc.</i> . . . . .	(410.3)	(50.4)	(28.6)	(13.9)	(503.2)
Other assets . . . . .	22.2	1.1	1.3	—	24.6
	<u>918.1</u>	<u>211.6</u>	<u>132.2</u>	<u>55.4</u>	<u>1,317.3</u>
LIABILITIES					
Current liabilities . . . . .	40.6	10.0	41.7	8.5	100.8
Funded debt . . . . .	543.1	10.8	23.7	.6	578.2
Reserve for future income taxes	118.6	3.4	2.8	.3	125.1
Preferred shares, etc. . . . .	71.1	—	6.1	—	77.2
	<u>773.4</u>	<u>24.2</u>	<u>74.3</u>	<u>9.4</u>	<u>881.3</u>
Common shareholders' equity .	<u>144.7</u>	<u>187.4</u>	<u>57.9</u>	<u>46.0</u>	<u>436.0</u>

## 13. Executive Salaries, etc. (parent and consolidated subsidiaries):

The following amounts have been paid in 1959: executive salaries \$2,923,196; legal fees \$211,969; directors' fees \$65,243.

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

## AUDITORS' REPORT

### PRICE WATERHOUSE & CO.

CANADA CEMENT BUILDING  
PHILLIPS SQUARE  
MONTREAL 2

15th March 1960

#### TO THE SHAREHOLDERS OF ALUMINIUM LIMITED:

We have examined the consolidated balance sheet of Aluminium Limited and consolidated subsidiaries as at 31st December 1959 and the related consolidated statements of income and surplus for the year then ended and have obtained all the information and explanations which we have required. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion and according to the best of our information and the explanations given to us and as shown by the books of the companies, the accompanying consolidated balance sheet and related consolidated statements of income and surplus, supplemented by the notes thereto, are properly drawn up so as to exhibit a true and correct view of the combined state of affairs of Aluminium Limited and consolidated subsidiaries as at 31st December 1959 and the results of their combined operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Pursuant to section 118 of the Companies Act, we report that the interest of Aluminium Limited in the profits for the year of the non-consolidated subsidiaries exceeded dividends from such subsidiaries included in consolidated income.

*Price Waterhouse & Co.*  
Chartered Accountants



PRINCIPAL OPERATING  
SUBSIDIARIES AND AFFILIATES

Main Countries of Operation	Map Ref. Nos.	Company	Products or Activity	Aluminium Limited's Equity	Gross Fixed Assets	Chief Executive or Operating Officer
CANADA	1-18	Aluminum Company of Canada, Limited	primary ingot, sheet, foil, extrusions, cable, wire, forgings, castings, aluminum paste, alumina, chemicals; generates own hydro-electric power.	100%	\$1054.3	Fraser W. Bruce, <i>President</i>
	28	Aluminum Goods Limited	utensils; jobbers; sales.	100%	\$3.7	N. E. Russell, <i>President</i>
	29	Kitimat Terminals Limited	established to operate port facilities.	100%	\$1.3	J. B. White, <i>President</i>
	27	Newfoundland Fluorspar Limited	owns and operates fluorspar mine at St. Lawrence, Newfoundland.	100%	\$2.8	Rupert Wiseman, <i>General Manager</i>
	23	Roberval & Saguenay Railway Company, The	owns and operates a railway from Port Alfred to Arvida.	100%	\$7.8	F. A. Dagg, <i>Vice President, General Manager</i>
	—	Saguenay Shipping Limited	operates a fleet of Group owned and chartered ships. Shipping arm of Aluminium Limited.	100%	\$ .2	F. L. Parsons, <i>President</i>
	24	Saguenay Terminals Limited	owns ships operated by Saguenay Shipping; operates wharves and terminal facilities at Port Alfred.	100%	\$14.7	F. A. Dagg, <i>Vice President, General Manager</i>
	22	Alma & Jonquières Railway Company, The	owns and operates a railway from Isle Maligne to C.N.R. main line.	93.6%	\$1.0	B. A. Walker, <i>Vice President, Manager</i>
	—	Saguenay Electric Company	retails electricity in Saguenay district of Quebec.	93.6%	\$11.2	Paul Tellier, <i>President</i>
	25	Saguenay Power Company, Ltd.	owns and operates hydro-electric power station at Isle Maligne.	93.6%	\$40.3	N. S. Crerar, <i>President</i>
	—	Saguenay Transmission Company, Limited	transmits and sells electric power wholesale in Saguenay district.	93.6%	\$6.4	N. S. Crerar, <i>President</i>
	19-21	Aluminium Laboratories Limited	research, engineering and exploration. Laboratories at Banbury (England), Arvida and Kingston.	100%	\$3.9	H. H. Richardson, <i>President</i>
BRAZIL	35	Aluminio do Brasil S.A.	sheet, extrusions, foil and utensils in Brazil.	100%	\$11.2	F. A. Sievert, <i>Director-President</i>
BRAZIL	36-38	Aluminio Minas Gerais S.A.	primary ingot and alumina; also ferro-alloys; mines own bauxite deposits in Brazil. Generates own power.	100%	\$19.8	T. A. Wootton, <i>Managing Director</i>
MEXICO	34	*Aluminio Industrial Mexicano, S.A.	sheet, foil, extrusions and paste in Mexico.	60.9%	\$4.7	R. A. Blay, <i>President</i>
URUGUAY	41	*Aluminio del Uruguay, S.A.	sheet, circles, extrusions and foil in Uruguay.	70.9%	\$1.6	H. A. Edelmann, <i>Managing Director</i>
JAMAICA	42, 43	Alumina Jamaica Limited	alumina in Jamaica from company-owned bauxite deposits; agriculture and cattle development.	100%	\$107.2	D. A. Bryn Davies, <i>Managing Director</i>

\*Not included in Aluminium Limited's Consolidation but carried on the books as an investment.

# ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

<i>Main Countries of Operation</i>	<i>Map Ref. Nos.</i>	<i>Company</i>	<i>Products or Activity</i>	<i>Aluminium Limited's Equity</i>	<i>Gross Fixed Assets</i>	<i>Chief Executive or Operating Officer</i>
TRINIDAD	46	Chaguaramas Terminals Limited	owns and operates a bauxite trans-shipping station with dock, storage at Trinidad.	100%	\$4.0	John Macindoe, <i>Vice President</i>
BRITISH GUIANA	47, 48	Demerara Bauxite Company, Limited	owns and operates bauxite mines and treating plant for preparation of various grades of bauxite in British Guiana. Alumina plant under construction.	100%	\$46.9	J. G. Campbell, <i>Managing Director</i>
BRITISH GUIANA	—	Sprostons, Limited	shipping, trading, construction and miscellaneous services. Branches in British Guiana and Trinidad.	100%	\$1.7	J. C. Batzold, <i>Managing Director</i>
JAMAICA	44	Sprostons (Jamaica) Limited	operates Port Esquivel; trading, construction and miscellaneous activities throughout Jamaica.	100%	\$ .9	J. C. Batzold, <i>Managing Director</i>
FRANCE	49, 50	Aluminium Méridional	aluminum paste, extrusions in France.	100%	\$1.8	Paul Fréault, <i>Chairman, General Manager</i>
GERMANY	52	Aluminiumwerke Göttingen G.m.b.H.	sheet, utensils, impact extrusions and job shop work.	100%	\$2.3	Kurt Schneider, <i>Manager</i>
GERMANY	53	Aluminiumwerke Nürnberg G.m.b.H.	foundry at Nürnberg, Germany.	100%	\$2.1	Kurt Schneider, <i>Manager</i>
SWITZERLAND	54	Aluminiumwerke A.-G. Rorschach	sheet and foil in Switzerland.	100%	\$5.1	Charles Meiner, <i>President</i>
FRANCE & GUINEA	94	Bauxites du Midi	owns bauxite mines at Brignoles, France. Mines and treats bauxite in Guinea.	100%	\$26.7	J. Y. Eichenberger, <i>Chairman, General Manager</i>
UNITED KINGDOM	58-60, 87	Northern Aluminium Company, Limited	sheet, extrusions, castings, rod wire, forgings, aluminum paste in England. Branch plant, New Zealand.	100%	\$45.8	S. E. Clotworthy, <i>Managing Director</i>
FRANCE	51	Société Anonyme des Bauxites et Alumines de Provence	bauxite mining in Southern France.	100%	—	André Chalmin, <i>Chairman, General Manager</i>
ITALY	61, 62	Società dell'Alluminio Italiano	primary and secondary ingot in Italy; generates own hydroelectric power.	100%	\$5.0	I. Barontini, <i>Managing Director</i>
SPAIN	63	*Aluminio Iberico, S.A.	sheet, extrusions, rod and cable in Spain.	31.3%	\$6.5	A. J. Zullig, <i>General Manager</i>
DENMARK	64	*Dansk Aluminium Industri A/S	utensils and tanks; jobbers in Denmark.	50%	\$1.1	Carl Jacobsen, <i>General Manager</i>
SWITZERLAND	55-57	*Fabrique d'Emballages Métalliques S.A.	manufacture of aluminum cans in Switzerland, Netherlands, France.	33.3%	\$ .7	Paul Sieber, <i>Managing Director</i>

\*Not included in Aluminium Limited's Consolidation but carried on the books as an investment.





PRINCIPAL OPERATING  
SUBSIDIARIES AND AFFILIATES (continued)

Main Countries of Operation	Map Ref. Nas.	Company	Products or Activity	Aluminium Limited's Equity	Gross Fixed Assets	Chief Executive or Operating Officer
NETHERLANDS	65	*N.V. Nederlandsche Aluminium Maatschappij	sheet, extrusions, foil and alpaste at Utrecht, Netherlands.	40%	\$4.2 million	G. J. J. Both, Sr., <i>President</i>
NORWAY	66	*A/S Nordisk Aluminiumindustri	sheet, rod, utensils and castings at Holmestrand, Norway.	50%	\$7.0	Nils Ramm, <i>Managing Director</i>
NORWAY	67-69	*A/S Norsk Aluminium Company	primary ingot, alumina, pig iron; generates own hydroelectric power.	50%	\$12.1	Nils Ramm, <i>Managing Director</i>
NORWAY	70, 71	*Det Norske Nitridaktieselskap	primary ingot in Norway.	50%	\$12.8	Johs. Höeg, <i>Managing Director</i>
SWEDEN	72, 73	*AB Svenska Aluminium-kompaniet	primary ingot in Sweden.	50%	\$9.1	Herman S. Lund, <i>Managing Director</i>
UNION OF SOUTH AFRICA	74	Aluminium Company of South Africa (Pty.) Limited	sheet, foil and extrusions in Union of South Africa. Sales of these products.	100%	\$4.4	N. H. Custers, <i>Managing Director</i>
GHANA	75	*Ghana Aluminium Products Limited	corrugating, window and furniture manufacture.	60%	\$ .1	D. P. Crilly, <i>Managing Director</i>
NIGERIA	76	*Nigeria Aluminium Products Limited	corrugating plant.	60%	—	Bruce Manning, <i>Managing Director</i>
NIGERIA	77	*Tower Aluminium (Nigeria) Limited	utensil plant.	26%	—	D. E. Davey, <i>General Manager</i>
MALAYA	78	Southeast Asia Bauxites Limited	mines bauxite on the Malay Peninsula.	100%	\$ .6	A. R. Chin-Bing, <i>Manager</i>
INDIA	79-84	Indian Aluminium Company, Limited	alumina, primary ingot, sheet, paste, extrusions; mines own bauxite deposits in India.	65%	\$22.7	H. V. Echols, <i>Managing Director</i>
AUSTRALIA	85	*Australian Aluminium Company Limited	sheet, extrusions and foundry ingot.	50%	\$10.7	O. F. McMahon, J. E. Hatton, <i>Joint Managing Directors</i>
AUSTRALIA	86	*Aluminium Foils (Australia) Pty. Limited	foil.	50%	\$1.7	W. S. Hogg, <i>General Manager</i>
JAPAN	88-91	*Nippon Light Metal Company, Ltd.	primary ingot, alumina; generates own hydroelectric power in Japan. Has 70% equity in company with three fabricating plants.	50%	\$34.2	Giichi Kusano, <i>President</i>
JAPAN	92	*Toyo Aluminium K.K.	sheet, foil and alpaste.	50%	\$5.0	Y. Oyamada, <i>President</i>
SARAWAK	93	*Sematan Bauxite Limited	bauxite mines in Sarawak.	33.3%	\$ .8	W. A. Conrad, <i>Managing Director</i>

\*Not included in Aluminium Limited's Consolidation but carried on the books as an investment.



# Legend

<ul style="list-style-type: none"> <li> SMELTER</li> <li> BAUXITE</li> <li> ALUMINA</li> <li> FABRICATION</li> <li> POWER</li> <li> TRANSPORTATION</li> </ul>	<ul style="list-style-type: none"> <li> RESEARCH</li> <li> OTHER</li> <li> SALES</li> <li> COMPANY LOCATION <small>(See Companies List pages 38-40)</small></li> <li> BAUXITE/ALUMINA ROUTES</li> </ul>
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**ALUMINIUM LIMITED**  
 LOCATION OF PRINCIPAL PLANTS AND  
 SALES OFFICES OF SUBSIDIARIES, AND  
 PLANTS OF AFFILIATES

*ALUMINIUM LIMITED'S WORLD SALES ACTIVITIES*

The Company's marketing activities are conducted by more than 70 sales offices and 100 agents in more than 100 countries. Many of these offices are established by the individual producing or fabricating subsidiaries to handle mainly domestic sales in the subsidiary's domestic market. The remaining sales offices transact the other and larger portion of the Company's total business which moves in the channels of international trade.

All told, it represents the largest marketing group in the world aluminum industry, with a lengthy background of experience. Several new offices were established in various countries in 1959.

In October 1959 a revised organization and integrated system of corporate names was adopted for marketing subsidiaries engaged in the Company's world trade activities. Each of the sales companies (except Aluminium Limited Sales Inc. in the U.S.A. and parts of South America) has been assigned a new name which is prefixed by the internationally-known trade name ALCAN. The word ALCAN is the registered trade-mark and familiar abbreviation of Aluminium Limited's principal subsidiary, Aluminum Company of Canada, Ltd. whose products the sales companies chiefly sell. The word ALCAN is also becoming widely used as an identification for Aluminium Limited and its other subsidiaries.

To increase the recognition of the integrated corporate identity, a new ALCAN symbol or housemark, illustrated in this report, has also been adopted.

Under the reorganization scheme, which follows territorial lines and meets legal requirements in various areas, the international export sales organization now functions as follows:

<i>Sales Company</i>	<i>Sales Offices or Staff Representatives</i>
Alcan (U.K.) Limited . . . . .	London, Manchester, Birmingham
Alcan S.A. . . . .	Zurich, Brussels, Frankfurt, Hamburg, Rotterdam, Athens, Alexandria, Lisbon
Alcan Asia Limited . . . . .	HongKong, Tokyo, Calcutta, Singapore, Bangkok, Colombo, Karachi, Rangoon
Alcan Africa Limited . . . . .	Accra, Lagos, Nairobi, Leopoldville
Alcan Australia Limited . . . . .	Sydney, Auckland
Alcan de Mexico S.A. . . . .	Mexico City, El Salvador
Alcan de Venezuela S.A. . . . .	Caracas
Aluminium Limited Sales, Inc. . . . .	New York, Detroit, Cleveland, Los Angeles, Chicago, Atlanta, St. Louis, Sao Paulo, Buenos Aires, Havana, Lima
<i>Sales Management</i>	
Alcan International Limited . . . . .	International sales management headquarters in Montreal



**ALUMINIUM LIMITED, MONTREAL, CANADA**

