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Annual Report 1956

ALUMINIUM LIMITED



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MAR 28 1957
McGILL UNIVERSITY



the world's largest working
dragline using an aluminum bucket
scoops up 30 tons of
British Isotona bauxite

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ANNUAL REPORT

FOR THE YEAR
ENDING
31st DECEMBER

1956

Executive portraits by Karsh of Ottawa except
that on Page 19 by Fabian Bachrach of New York.

COVER PHOTO: Kitimat aluminum smelter,
storage facilities and deep-water dock.

ALUMINIUM LIMITED

HEAD OFFICE

1155 METCALFE STREET, MONTREAL, CANADA



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

FIDELITY TRUST COMPANY
Pittsburgh

THE HANOVER BANK
New York City

DIRECTORS

FIELD MARSHAL EARL ALEXANDER OF TUNIS, K.G.

DANA T. BARTHOLOMEW

E. G. MACDOWELL

DR. DONALD K. DAVID

EDWIN J. MEJIA

NATHANAEI V. DAVIS

R. E. POWELL

JAMES A. DULLEA

H. H. RICHARDSON

DR. E. C. HARDER

M. B. DE SOUSA PERES

N. BAXTER JACKSON

JOHN L. SULLIVAN

PAUL LAROCHE

OFFICERS

NATHANAEI V. DAVIS, *President*

R. E. POWELL, *Senior Vice President and Director of Operations*

JAMES A. DULLEA, *Senior Vice President, Secretary and Chief Secretarial Officer*

DANA T. BARTHOLOMEW, *Vice President and Chief Financial Officer*

E. G. MACDOWELL, *Vice President and Chief Sales Management Officer*

EDWIN J. MEJIA, *Vice President and Chief Employee Relations Officer*

H. H. RICHARDSON, *Vice President and Chief Technical Officer*

J. F. EVANS, *Treasurer*

PAUL LAROCHE, *Ass't. Secretary and Ass't. Treasurer*

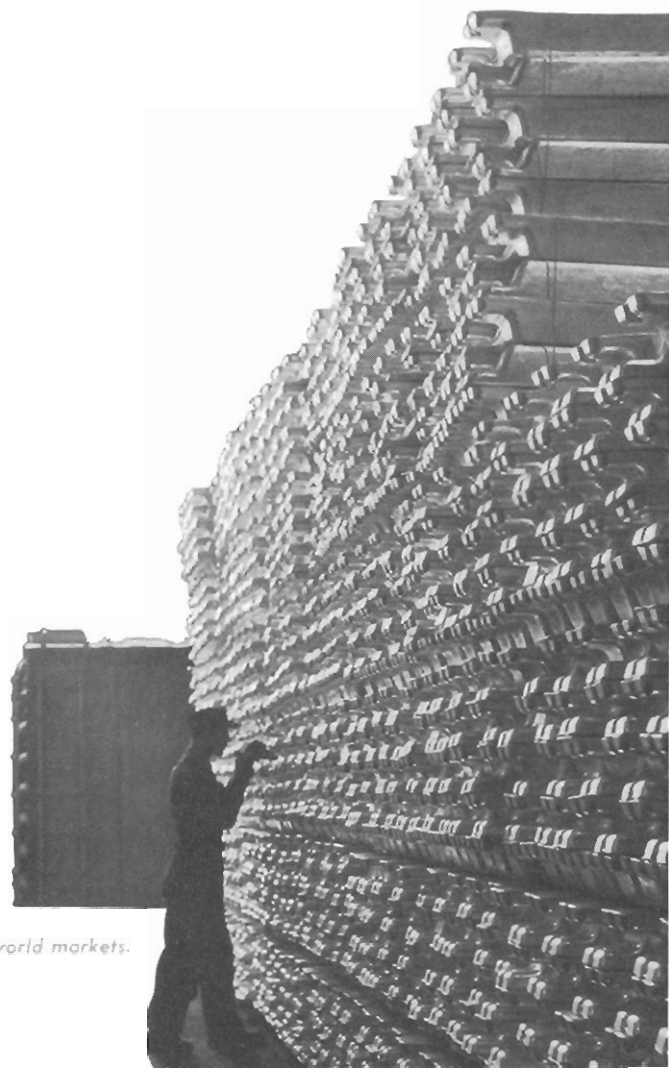
K. C. BALA, *Assistant Secretary*

A. A. BRUNEAU, *Assistant Secretary*

D. CASSELMAN ROSS, *Assistant Secretary*

O. E. COLLING, *Assistant Treasurer*

D. M. KERTLAND, *Assistant Treasurer*



Canadian incoats for world markets.

Building Works on
the fast
established base
and growing and



THE YEAR 1956 AT A GLANCE

| 1956 | 1955 |
|--|-----------------|
| Sales and operating revenues | \$482.6 million |
| Income before income taxes | \$108.1 million |
| Depreciation and reserve for future income taxes | \$51.1 million |
| Net income | \$55.7 million |
| Common shares outstanding | 10,013,847 |
| Net income per share | \$5.56 |
| Dividends paid | \$23.2 million |
| Dividends per share | (U.S.) \$2.35 |

BALANCE SHEET ITEM

| 1956 | 1955 |
|-----------------------------------|-------------------|
| Net current assets | \$183.8 million |
| Lands, plants, facilities (gross) | \$1,125.9 million |
| Additions to fixed capital | \$125.4 million |
| Shareholders' equity | \$405.1 million |

OTHER

| 1956 | 1955 |
|-----------------------------------|--------------|
| Sales of aluminum products | 705,058 tons |
| Number of shareholders (year-end) | 27,975 |
| Number of employees (year-end) | 47,627 |

For Year Ending December 31st

| 1956 | 1955 |
|--|-----------------|
| Sales and operating revenues | \$412.1 million |
| Income before income taxes | \$95.0 million |
| Depreciation and reserve for future income taxes | \$48.4 million |
| Net income | \$48.2 million |
| Common shares outstanding | 9,975,690 |
| Net income per share | \$4.83 |
| Dividends paid | \$21.1 million |
| Dividends per share | (U.S.) \$2.15 |

As at December 31st

| 1956 | 1955 |
|-----------------------------------|-------------------|
| Net current assets | \$193.8 million |
| Lands, plants, facilities (gross) | \$1,005.0 million |
| Additions to fixed capital | \$71.2 million |
| Shareholders' equity | \$370.0 million |

| 1956 | 1955 |
|-----------------------------------|--------------|
| Sales of aluminum products | 681,310 tons |
| Number of shareholders (year-end) | 24,265 |
| Number of employees (year-end) | 44,000 |



NATHANAEL V. DAVIS,
President

REPORT

TO THE SHAREHOLDERS OF

ALUMINIUM LIMITED

March 13th, 1957.

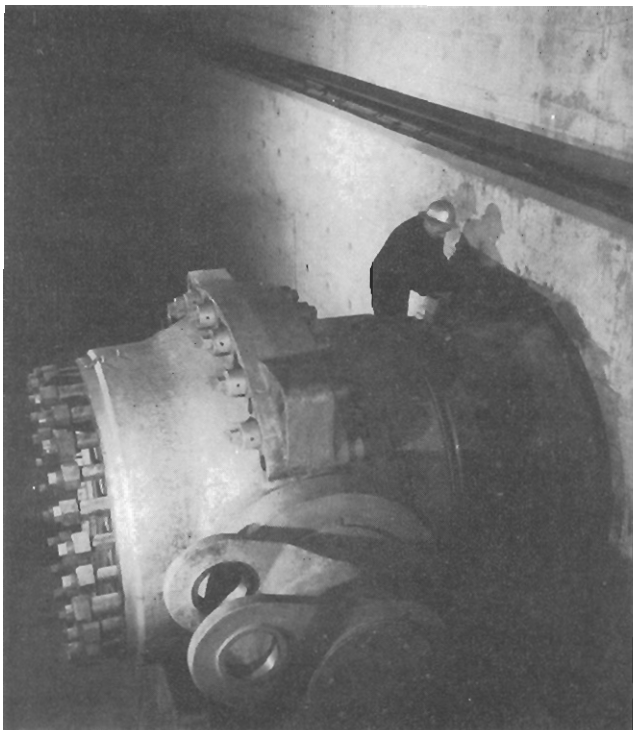
This year Aluminium Limited's Annual Report has been prepared by several officers of the Company, each contributing a section describing the year's activities in his primary field of responsibility. The report as a whole is submitted on behalf of the Board of Directors together with the Financial Statements of Aluminium Limited and its consolidated subsidiaries for the year ended December 31st, 1956, as reported thereon by the auditors, Price Waterhouse & Co.

SUMMARY OF RESULTS

During 1956 the aluminum industry continued its growth and we believe all North American producers experienced a year of high levels — and probably record levels — of production, sales and earnings. Aluminium Limited's results for the year are consistent with the strong and expanding conditions in which the industry as a whole operated.

The Company's net income, after all charges including dividends on preferred shares of subsidiaries, was \$55,657,372 or \$5.56 per share on the 10,013,847 shares outstanding at the year end. Comparable figures for 1955 were \$48,193,952 or the equivalent of \$4.83 per share on the 9,975,690 shares outstanding on December 31st, 1955. The improvement in earnings in 1956 occurred mainly during the last half of the year when a combination of new high levels of production, sales, and higher selling prices obtained. Cash generation, comprising net income, depreciation, and reserves for future income taxes increased during the year to a total of \$106,711,431 or \$10.66 per share.

In the second quarter of 1956 the quarterly dividend was increased from U.S. 55c per share to U.S. 60c per share and the new rate was maintained for the remainder of the year. Total dividend disbursements were the equivalent of \$23,192,053 in Canadian currency as compared with \$21,076,253 in 1955.



A giant sphere valve in Kemana powerhouse controls flow of water to 150,000-horsepower turbine.

PRODUCTION AND SALES

In the early part of the year production at the Company's Canadian smelters in the Saguenay area was sharply curtailed by an unusually severe water shortage. With the coming of the spring floods and good summer rains, production was brought up to a high rate and was supplemented by new facilities brought into operation in Kitimat. The increase of production obtained after the spring floods offset by a small margin the losses sustained during the earlier part of the year. The total production of primary metal from all Canadian smelters for the year was 620,300 tons* as compared to 607,700 in 1955. At the year end the Company's Canadian plants were producing at an approximate annual rate of 760,000 tons.

Sales and operating revenues were \$483 million in 1956 as compared to \$412 million in 1955. Although the total physical volume of sales of aluminum products increased, a large part of the increase in the dollar volume of sales is attributable to the higher selling prices which prevailed during the year. In the United States, the delivered prices of primary aluminum increased in two stages during the year from 22½¢ per pound at the beginning of the year to 25¢ at the end of the year. The prices of the Company's primary metal were increased by approximately similar amounts in its several markets during the course of the year.

EXPANSION IN 1956

In 1956 a total of \$125 million was spent on the construction of new facilities. The bulk of these capital expenditures went into additional plant for raw materials, smelting and power generation required for the integrated production of primary aluminum. A total of 90,000 tons of new capacity was brought into operation at Kitimat during the year, bringing Kitimat's total installed capacity up to 180,000 tons. Alumina facilities in Jamaica were also enlarged during the year to supply the necessary raw materials for the increased primary aluminum production in Canada. As foreseen in last year's Annual Report, Kitimat, with the increased production facilities now in operation, is beginning to contribute to the Company's earnings. As in previous years, some further expansion took place in the field of fabrication among many of the Company's subsidiaries. At the year end, the total assets employed in the business, after depreciation reserves, stood at \$1,084,451,925.

CURRENT BUSINESS

During the closing months of 1956 the supply of primary aluminum caught up with demand in the United Kingdom and the United States and Aluminium Limited ended 1956 with a small amount of metal available for immediate sale. Since the year end, sales have been running slightly below the rate of production which has been maintained at a high level. The resulting accumulation to date of a relatively small stock of saleable metal is, in the Company's view, basically a healthy and desirable development. For the first time in several years Aluminium Limited and, we believe, other North American producers, are in a position to meet current levels of

* Short tons of 2,000 pounds each are used throughout this report.

demand and to encourage — by availability of metal, active selling and the development of new products and uses — the further growth in the consumption of aluminum which the Company foresees with confidence.

FUTURE EXPANSION

The Company still has before it a large expansion program. As previously announced, the Company is in the process of increasing Kitimat's production facilities in stages up to a total annual capacity of approximately 300,000 tons, scheduled to be fully installed by 1960. In the Saguenay area, work is progressing on the new hydroelectric plant at Chute-des-Passes, which is expected to provide an additional 700,000 firm horsepower upon completion in 1959. Related smelting facilities in Quebec, with an annual capacity of 120,000 tons, are also being planned together with new alumina and bauxite developments in Jamaica, British Guiana and French West Africa. Construction is underway both in Jamaica and British Guiana.

The French West African development, which is of a longer term nature, is now being engineered and construction is scheduled to begin towards the end of this year. The opening up of this new and extensive bauxite area is expected to provide the raw material base for potential future operations both within French West Africa and in other areas where additional smelting may be developed.

The over-all program has been designed to permit flexibility in construction schedules and the company will be prepared to adjust the rate of expansion in the light of market and other conditions as they may develop.

FINANCING

During the course of the year a \$100,000,000 intermediate term credit-line was established by the Aluminum Company of Canada, Ltd. with several United States and Canadian banks to provide temporary funds for the Company's expansion program. Currently, steps are being taken by the Aluminum Company of Canada, Ltd. to raise in the near future a \$125 million long-term debenture issue to provide the more permanent capital needed for the Canadian expansion program. This financing was foreseen when the program was announced in April of 1956.

* * * * *

This summary would be incomplete if no mention were made of the devotion and perseverance shown by the Company's personnel during the past year and previous years. The pace has been rapid and great credit is due our many people both in Canada and abroad who have devoted themselves with vigor and patience to the task of maintaining operations at high levels and carrying through at the same time an extensive expansion program.

— N. V. D.

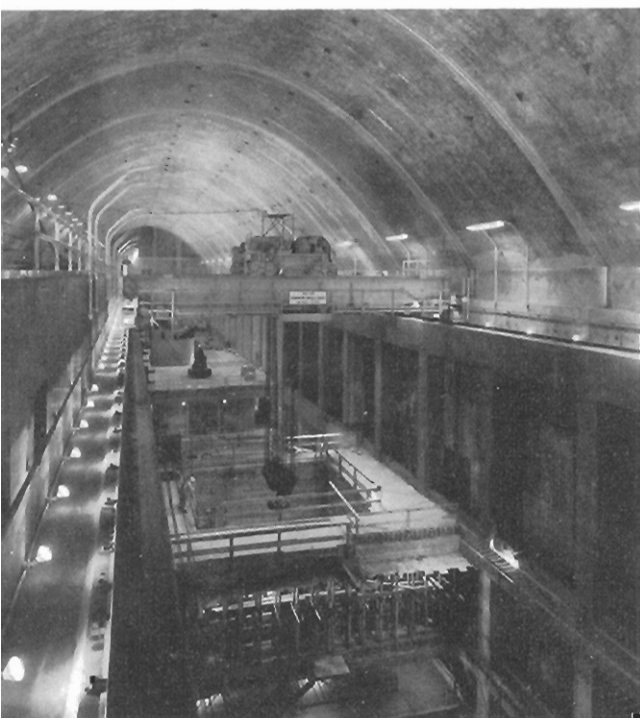
Mackenzie, British Guiana — the original and largest source of bauxite for Canadian aluminum smelters, soon to have its own alumina plant.





R. E. POWELL,
Senior Vice President and Director of Operations

Five 150,000 h.p. generators are now operating in the underground powerhouse at Kemano, B.C. Three more will complete the first stage of development.



OPERATIONS

In describing the highlights of 1956, from the standpoint of operations, it may be appropriate to consider the various phases of the business even though some subsidiaries, in their own national settings, are engaged in more than one of the phases.

POWER AND SMELTING

The growth in our Canadian aluminum smelting capacity and the shortage of water in eastern Canada during the first four and-a-half months of 1956 were the most significant features of the year's operations. Generation of power by the Company during the year was 14,274,260,000 Kwh., of which 8,383,664,000 Kwh., or some 58%, was generated in the last half of the year. Purchases of power from third parties during the year totalled 852,640,000 Kwh. and sales 2,246,401,000 Kwh. One consequence of this water shortage was that it limited our Canadian aluminum production to 620,300 tons which, however, was 2% more than in 1955. Total production of all subsidiaries and affiliates was 700,000 tons, with the smelters in India, Brazil, Italy, Norway, Japan and Sweden operating at the highest production rates attainable.

ALUMINUM EXPANSION

The principal expansion was at Kitimat, where three new smelter potlines began to operate at an annual rate of 90,000 tons. Other expansion at Isle Maligne, Arvida and Shawinigan Falls added annual capacity of 31,500 tons but power supply for it will be uncertain until 1959 when a new hydroelectric plant should be ready for operation.

The new plant will be at Chute-des-Passes on the Peribonka River some 100 miles from the Company's smelters on the Saguenay River. Its operation, when synchronized with that of other plants on the two rivers, is expected to increase the Company's supply of firm power by at least 700,000 H.P. - enough to eliminate shortage and to carry still more expansion.

In British Columbia the installation of two additional potlines and appropriate generating equipment is well advanced with construction of another potline scheduled. These three will increase Kitimat capacity by about 120,000 tons per year, that is, to a total annual capacity of 300,000 tons.

Although the Indian Aluminium Company, Limited only recently expanded its rate of production to 5,500 tons a year, it is now busily

engaged with construction which will treble that capacity. The increased output should begin to be available in 1959.

In Japan, the Nippon Light Metal Company, Ltd. began reactivation of its Niigata smelter. Production, with purchased power, will be at the annual rate of 22,000 tons, beginning in 1958. At the end of 1956, its new hydroelectric station for the Kambara smelter was completed and expansion of the smelter itself was under way. Preparations were made to increase alumina output at Shimizu.

Electro-Quimica Brasileira S.A. in Brazil began construction of a new hydroelectric station and of new smelting facilities. New aluminum output of 7,500 tons per year can readily be increased to 15,000 tons a year.

Norsk Aluminium Company is also expanding generating and smelting facilities with the expectation that it will be able to increase production of aluminum some time during 1958-1959.

At Kubikenborg, Sweden, smelting capacity based on purchased power was also increased.

FABRICATING OPERATIONS

Generally speaking, the year was an active one for the Company's extensive and widespread fabricating facilities, which took about one-quarter of the ingot output.

Extensive modernization by Northern Aluminium Company Ltd of its fabricating facilities at Banbury, England, proceeded according to schedule and should be finished about the end of 1957.

The Aluminum Company of Canada, Ltd. installed new and higher speed equipment at Shawinigan Falls, Quebec and Kingston, Ontario.

The new cable mill and extrusion plant of Aluminio Iberico, Alicante, Spain, began operations and some of the rolling equipment was installed.

Sheet mills at Aluminiumwerke A.G. Rorschach, Rorschach, Switzerland, were modernized and new foil equipment was installed.

Land for a new fabricating plant in France was acquired at Chartres.

Aluminio do Brasil, S.A. also continued its program of expansion and modernization in Brazil.

BAUXITE, ALUMINA AND FLUORSPAR

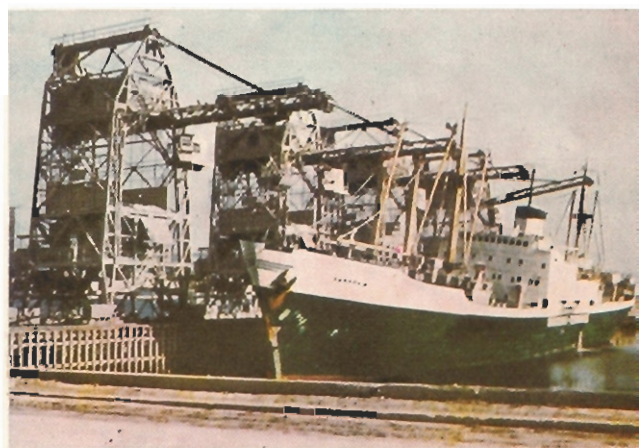
Approximately 2½ million tons of bauxite were mined by fully-owned subsidiaries in British Guiana, 440,000 tons in French West Africa and 190,000 tons in France. Some bauxite was acquired by purchase but this was more than offset by sales.

To satisfy our smelter requirements, the plants in eastern Canada extracted some 1,150,000 tons of alumina from bauxite imported from British Guiana, Surinam and French West Africa. Shipments from Alumina Jamaica Limited provided the 250,000 tons of alumina needed at Kitimat and met a good portion of the Company's commitments in Scandinavia.

The alumina plant at Kirkvine, Jamaica, was practically finished and doing well at the end of the year. Construction of a second plant in Jamaica was begun, with the expectation that it would commence operations in



Open pit mining of Jamaican bauxite for the adjacent alumina plant at Kirkvine Works.



A Saguenay Terminals ship discharges its bauxite cargo from French West Africa at Port Alfred, Quebec.

1958. Total alumina producing capacity in Jamaica will then be about 800,000 tons per year. In addition, there was a decision to produce alumina at an annual rate of 250,000 tons at the Demerara Bauxite Company's installations in British Guiana.

Fluorspar is another important raw material in aluminum production and our needs were mainly provided by the shipment of 76,000 tons of concentrates by Newfoundland Fluorspar Limited, a fully-owned subsidiary. Also during the year the Company acquired an interest in fluorspar properties on the west coast of Mexico. This ore is well placed to supply the needs of Kitimat.

TRANSPORTATION

Transportation of the Company's raw materials and its finished products is an increasingly important and interesting part of operations. At one time in 1956, Saguenay Terminals Limited had over 100 ocean-going vessels in operation and during the year carried almost 10,000,000 tons of cargo, of which about one-third was cleared through its own terminal at Port Alfred, Quebec.

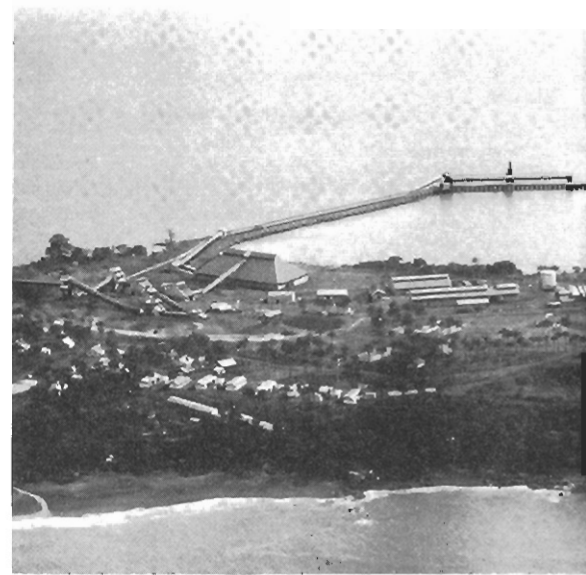
LABOUR RELATIONS

There was a 35-day strike at Port Alfred in the autumn of 1956, and although it disturbed the plan of operations and reduced earnings, it did not adversely affect the production of alumina or aluminum.

The labour contracts covering the Company's Arvida and Isle Maligne plants expired in November 1956 and January 1957 respectively. Although operations have continued, negotiations for renewal of the labour contracts have not been concluded and the issues are now undergoing arbitration as required by law.

Reviewing the year as a whole, while there have been shortages of men and material in many areas and increased costs of labour and equipment, operations have been conducted at high levels and construction has progressed on schedule.

— R. E. P.



Kassa, an island off the coast of French West Africa, supplies bauxite for smelters in Quebec.



Newly completed buildings of Aluminio Ibérico fabricating plant in Spain.





E. G. MACDOWELL,
Vice President and Chief Sales Management Officer

MARKETS AND SALES

Here, in brief, is the 1956 story of aluminum in the market places of the world, with particular emphasis on the part played by our Company.

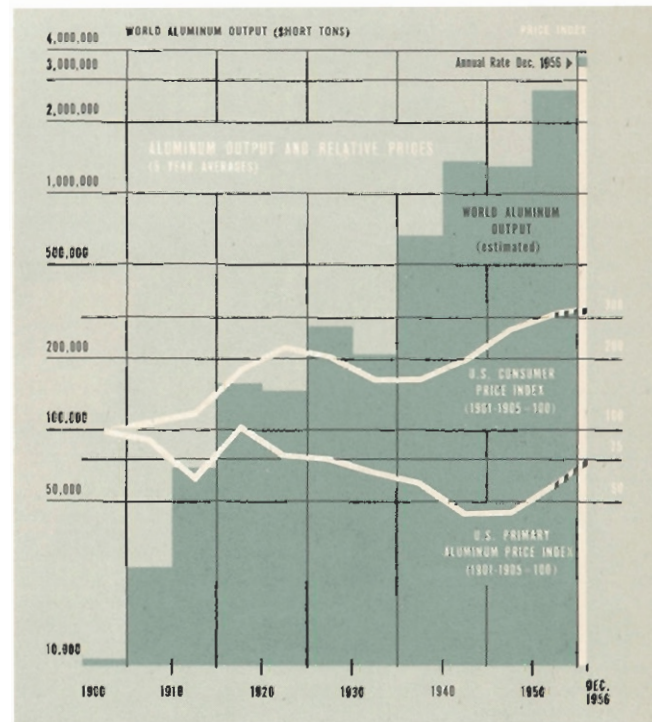
Free world production of primary metal during 1956 reached a new high level of 3,080,400 tons, representing an increase of 223,800 tons or 8% over the 1955 production of 2,856,600 tons.

A breakdown of primary aluminum production by principal producing countries during the past six years, as shown in the following tabulation, will serve to illustrate the substantial growth that has occurred during the period:

| | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 |
|---------------------------|--------------|-----------|-----------|-----------|-----------|-----------|
| | (SHORT TONS) | | | | | |
| U.S.A. | 837,000 | 937,300 | 1,252,000 | 1,461,000 | 1,565,800 | 1,679,400 |
| Canada | 447,500 | 499,800 | 545,800 | 560,900 | 608,000 | 620,300 |
| France | 100,400 | 117,000 | 123,700 | 132,500 | 142,700 | 165,000 |
| West Germany | 81,700 | 110,800 | 117,800 | 142,400 | 151,100 | 162,200 |
| Italy | 56,000 | 58,200 | 61,200 | 63,500 | 68,000 | 69,900 |
| Norway | 55,400 | 56,300 | 58,600 | 67,600 | 79,500 | 103,000 |
| Japan | 40,700 | 47,000 | 50,100 | 58,200 | 62,500 | 72,600 |
| Other Countries | 112,900 | 127,400 | 144,100 | 152,800 | 179,000 | 208,000 |
| Total | 1,731,600 | 1,933,800 | 2,353,300 | 2,638,900 | 2,856,600 | 3,080,400 |

There are no official figures on production in Russia and satellite countries but our estimate is that their primary aluminum output was of the order of 600,000 tons in 1956.

Of the total free world production of 3,080,400 tons of primary aluminum during 1956, our consolidated subsidiaries accounted for 639,000 tons or, as in the previous year, slightly more than one-fifth of the total.





The S.S. Bergensjord incorporates the largest marine use of all-welded aluminum structures.

The consolidated sales of all our products in the period 1951 to 1956 are shown in the following tabulation:

| | Ingot and Ingot Products | | Semi-fabricated Products | | All Other Products | Operating Revenues | Total |
|---------|--------------------------|---------|--------------------------|---------|--------------------|--------------------|---------|
| | Short Tons | \$'000 | Short Tons | \$'000 | | | |
| 1951... | 323,264 | 113,872 | 154,969 | 121,429 | 14,152 | 34,526 | 283,979 |
| 1952... | 375,098 | 138,244 | 163,126 | 136,906 | 17,351 | 40,493 | 332,994 |
| 1953... | 451,819 | 167,839 | 145,960 | 118,638 | 18,922 | 30,289 | 335,688 |
| 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 |

During 1956, we received higher average prices for both our ingot and our semi-fabricated products than during the preceding year. Expressed in percentages, the increase was approximately 10% for ingot and semi-fabricated products.

The principal fields of consumption for our aluminum in 1956 were unchanged from the preceding year. In order of volume they were: transportation equipment for land, sea and air; building and architectural uses; distribution of electricity and manufacture of electrical equipment; household and commercial supplies; and packaging and canning.

In transportation, the weight of aluminum in North American passenger cars increased by approximately 15%. Railway freight car roofs in aluminum were introduced in Canada. In Europe many new ships contained substantial tonnages of aluminum in their superstructures.

In Europe, where power distribution is largely underground, aluminum captured a significant part of the insulated underground cable market and of the sheathing of such cables. In North America aluminum achieved an increasingly important position in telephone cables.

In building and architectural applications, the use of aluminum in windows, doors, roofing and curtain walls continued to expand in all markets.

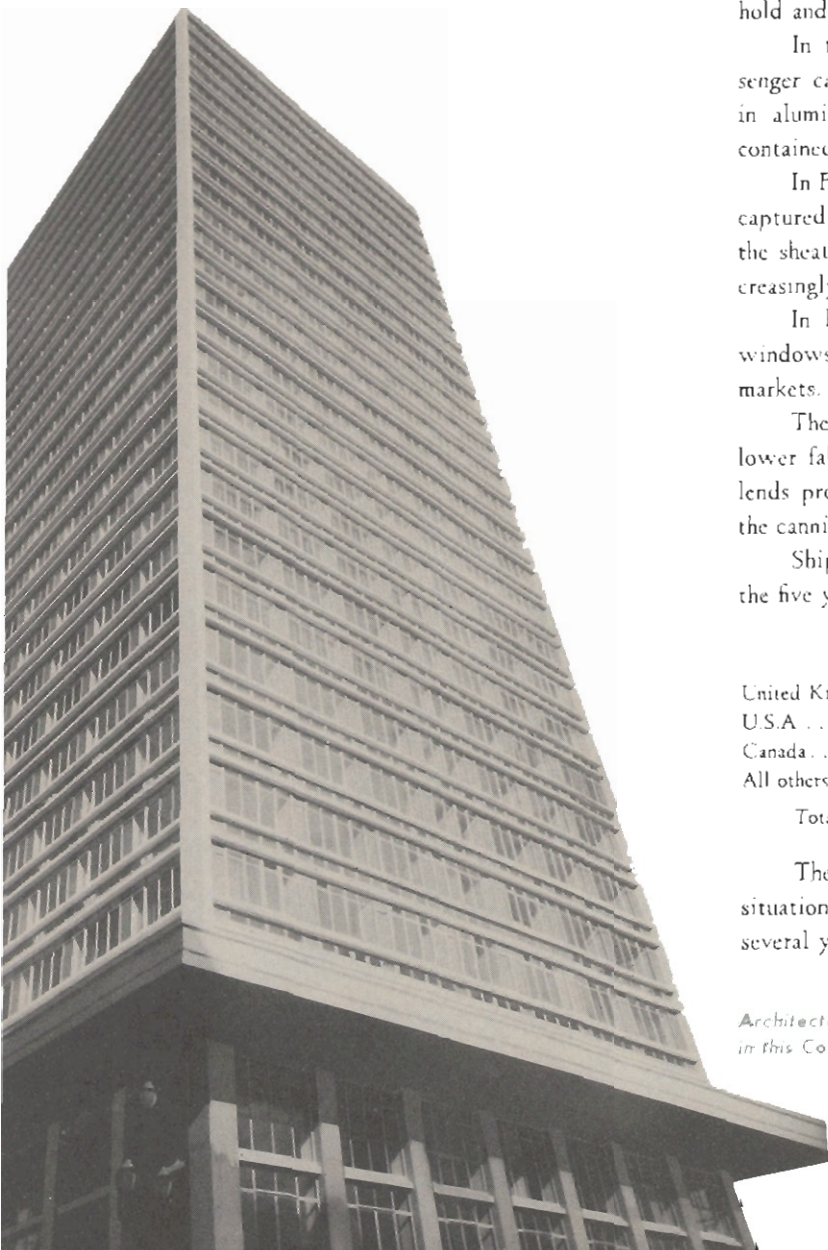
The development of new casting processes offers the possibility of lower fabricating costs for aluminum in the form of sheet and slugs, and lends promise to more rapid progress in the introduction of aluminum in the canning industry.

Shipments of our Canadian aluminum in ingot form during each of the five years have been as follows, in short tons:

| | 1952 | 1953 | 1954 | 1955 | 1956 |
|---------------------|---------|---------|---------|---------|---------|
| United Kingdom..... | 257,750 | 184,600 | 221,800 | 267,100 | 224,400 |
| U.S.A..... | 114,500 | 237,000 | 192,560 | 193,200 | 215,300 |
| Canada..... | 88,550 | 90,200 | 80,000 | 85,000 | 90,500 |
| All others..... | 39,150 | 37,900 | 60,840 | 64,300 | 66,300 |
| Total..... | 499,950 | 549,700 | 555,200 | 609,600 | 596,500 |

There was a significant change in the over-all demand and supply situation in the United States, where the primary producers for the past several years have faced an unsatisfied demand and a need for creating new

Architectural uses of aluminum are shown in this Conde de Prates Building in Sao Paulo, Brazil.



smelting facilities. What is new is that although more aluminum was consumed during 1956 than in any earlier year, the domestic smelter output during the last half plus importations of primary metal was in excess of consumer demand in the United States. Since last summer there have been some indications of customers using more metal than they have been buying. Some U.S. producers are reported to have exercised their contractual right to deliver surplus aluminum to Government stockpile. At the year-end, consumers could readily obtain their full requirements, pipeline stocks in producers' and consumers' hands were restored to normal, scrap and secondary metal were available at prices reflecting the free supply of primary metal, and both producers and fabricators were actively in search of orders. This change from acute shortages of supply is a healthy one and should be welcomed by all concerned; it presents a challenge and an opportunity to our live and growing industry. Old customers can be better served and promising new fields of consumption, the development of which has been retarded by meral shorrages, can now be opened up.

Our total sales in the United States last year were somewhat less than we had anticipated. In the United Kingdom, our business was adversely affected by customer credit restrictions and by industrial dislocations arising from the closing of the Suez Canal. In some other markets, notably Canada, Brazil, France, South Africa, Spain, Sweden and Switzerland, our sales were greater than in the preceding year. Operating as we do on a wide geographical basis in smelting, fabricating and marketing, a decline in our business in one market is frequently offset by improved conditions in others.

We maintain seventy-six sales offices in thirty countries, staffed with salaried personnel in addition to ninety-four agents in various trading centers. Three new sales offices were opened in 1956. We believe it is significant that the percentage growth in consumption in so-called un-developed countries continues at a higher rate than in highly industrialized areas.

In arranging its commercial affairs, the Company makes sales contracts of numerous types and duration. For example, in January 1957, an agreement was entered into with the Canadian British Aluminium Company Ltd. under which we will supply a substantial part of the alumina required by its smelter now being built at Baie Comeau, Quebec. Alumina will be exchanged for ingot on a barter basis over a period of twenty years, commencing in 1958. It is expected that our receipts of aluminum ingot from this source will exceed 20,000 tons per annum by 1960. This contract with a new Canadian producer is similar in type to contracts made by the Company with certain producers in other countries.

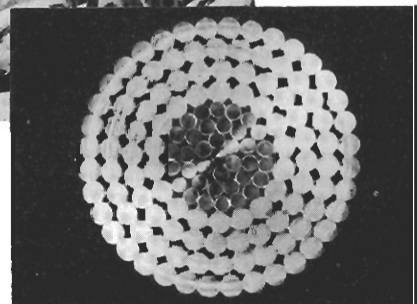
Of the metal we expect to have available for shipment during 1957, a total of 352,000 tons is earmarked under contingent supply obligations in the United Kingdom and Canada, and a further 350,000 tons, representing 86% of the balance, are already under contract for delivery in other markets.

Looking beyond 1957, our long-term contracts for primary aluminum amount to 1,215,000 tons.

— E. G. M.



An average of 40 lbs. of aluminum is now used in each American automobile. Some Chryslers use over 100 lbs.



The world's largest aluminum cable, suspended from aluminum towers, transmits power over Kildala Pass, B.C. Lower picture shows the stranded aluminum cable with its reinforcing steel core.



H. H. RICHARDSON,
Vice President and Chief Technical Officer

*Aluminium Laboratories Limited,
Banbury, England — devoted largely to
fabricating research.*



EXPLORATION, ENGINEERING AND RESEARCH

EXPLORATION

The rapidly increasing consumption of aluminum has forced periodic reappraisals by the industry of its raw material resources. Bauxite exploration has been extended to remote areas and low-grade materials. Although our reserves of high-grade bauxite are large, the wisdom of taking care of the future and the economies to be derived from favourable mining conditions and good location, as well as from high quality ore, have justified continued extensive exploration activity during the year. This has involved more countries and more study of mining, transportation and process considerations than ever before.

ENGINEERING

Extensions to bauxite-refining plants in Canada and Jamaica and new installations planned for Jamaica, British Guiana and French West Africa are designed by our central engineering department in Montreal, working in conjunction with our research organization and the alumina process experts of our associated companies. Expansion presents the opportunity for process and equipment improvement if time and experience justify the "pioneering" risks. These considerations, plus the differing character of the bauxite to be treated at the several plants under construction, have not permitted easy duplication of designs to lighten the engineering load. It has been possible to build on the earlier production and pilot plant experience with these bauxites and arrive at improved installations which we are confident will give excellent results.

POWER

The broadest continuing assignment of our power department is to assess the cost and availability of power from any source, for example, from water, coal or uranium. More specific studies are made of particular projects considered by us as worthy of eventual development. Major attention is devoted to precise evaluation of projects for immediate development and to projects actually under design and construction where it appears advisable to supplement the work of our consultants and associated companies. The specialized knowledge in our power department is also called upon with reference to problems of power generation and use in our existing installations. We have, for example, devoted much time during 1956 to measurement and analysis of pressure losses in the Kemano tunnel, which no longer seem serious. Transmission of power from the new hydroelectric

Research covers many fields of production and fabrication. Here aluminum food containers undergo testing.



project under construction at Chute-des-Passes to the smelters in the Saguenay area will be over easy terrain compared to the Kemano-Kitimat line but twice as long and our power and research divisions will collaborate to set up specifications for maximum efficiency.

RESEARCH

A year is a very short time in the life of most significant process and product developments and an annual review of research accomplishment is more a matter of reporting rate of progress than of listing inventions and discoveries.

During 1956 we can report particularly good progress with improved technique and greater utilization of continuous casting, continuous anodizing and colouring and of superpurity metal. Evaluation of aluminum alloys for railway applications was extended to impact and fabrication tests not on specimens or models but on complete cars for the purpose of establishing probable life and performance in actual service. Some of the present demands of the aircraft, defence and atomic energy industries call for improvement in the properties of light metals of a magnitude which can be met, if at all, only by seeking the possibilities in very fundamental studies of alloy systems. We have recently devoted a larger portion of our research time to such activity.

The increasing size and complexity of the aluminum industry is forcing more selectivity into the research and development effort of the individual company. Much research related to aluminum end products and uses is done by our customers for ingot and semi-fabricated products. We give priority to what is not so easily done by the customer, for example, corrosion tests in many media and climates pursued for many years or long-term investigations of the less obvious properties of metals, such as failure under prolonged or repeated stresses. In process research we give first priority to investigations which may lead to improvements, or radical changes, in refining and smelting and in the technique of converting molten metal into the most useful forms for subsequent fabrication. Any successes in this field are convertible into cost savings or quality improvement by our associated companies or customers.

During 1956 we have added to our laboratory and pilot plant facilities for carrying on all of these forms of process research and plan to extend them further during 1957.

— H. H. R.

Bauxite exploration by helicopter and ground transport in West Africa.



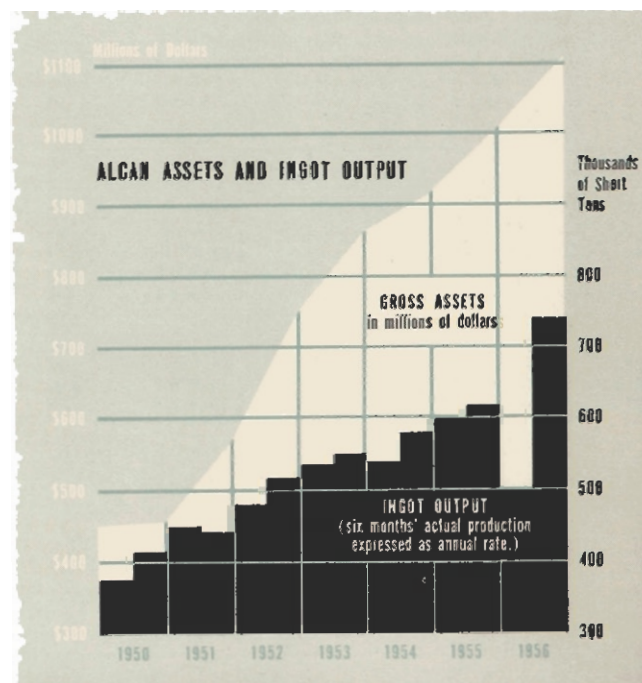


DANA T. BARTHOLOMEW,
Vice President and Chief Financial Officer

FINANCE

The scope of our interests is reflected in finances. Financing operations for the Group during the past year have included 32 million rupees, principally convertible notes, of Indian Aluminium Company, Ltd. for the first stage of a 20,000-ton smelter in an underdeveloped part of India, of which half was subscribed by residents of India, 200 million pesetas of Alumino Ibérico, S.A. partially convertible bonds for a 20,000-ton fabricating plant in Spain, all subscribed by residents of Spain, 12 million kroner of A.S. Norsk Aluminium Company convertible notes for a 50% expansion of a Norwegian smelter of which half was committed by Norwegians, a £9 million increase in Aluminium Union Limited's bankers acceptances placed in the London market to carry ingot inventories and receivables in Britain, and the drawing down of U.S. \$48 million against a \$100 million intermediate-term credit line established with United States and Canadian banks last May by the Aluminum Company of Canada, Ltd. to meet temporary requirements during its major construction period.

In their respective countries these represent fairly substantial financings. Development of any segment of the aluminum industry requires a lot of money. And development of ingot capacity as we are doing it in Canada with complete integration through our own hydroelectric facilities requires capital on a heavier scale. In the six years ended December, 1956, as much money was invested in Kitimat construction as had gone into Arvida and the rest of the Saguenay district in the previous generation. This does not include provision for the necessary bauxite development abroad





A record size aluminum rolling mill cast at Arvida, Quebec.

where we consider it good business also to locate additional facilities, in effect to concentrate the ore before starting it on its long journey to the smelter. These foreign raw material investments in relatively underdeveloped areas, where commercial bauxite is found in greatest abundance, involve risks not faced in developed areas. Forward-looking peoples are usually prepared to recognize these risks and to grant special incentives to foreign capital in the interest of increasing production and improving their own living standards.

It is the nice balancing of such incentives and the long-term values of substantial hydroelectric investment, as well as sound provision of the necessary funds with a minimum of strain on our shareholders, that occupy much of the time of this department.

The development of the first 300,000 tons of integrated ingot capacity at Kitimat, involving \$500 million and several years of construction time, has required patience. Happily, the financial outlay is four-fifths completed and smelting operations are now using 60% of the water power installed.

This increase in production at Kitimat combined with the restoration of normal production in the Saguenay area of Quebec during the second half of 1956, have resulted in fuller usage of our resources. This is indicated in the following tabulation of gross assets of Aluminum Company of Canada, Ltd. and associated companies per ton of ingot produced substantially all of which assets are for Canadian ingot production:

GROSS ASSETS PER TON OF INGOT PRODUCED:

| | |
|----------------------------------|---------|
| pre-Kitimat..... | \$1,300 |
| 1952..... | 1,680 |
| 1954..... | 1,840 |
| 1956..... | 2,010 |
| 1956 (2nd half annual rate)..... | 1,700 |

The benefits of the heavy outlays for Kitimat in 1951, 1952 and 1953 are beginning to show, as production increases.

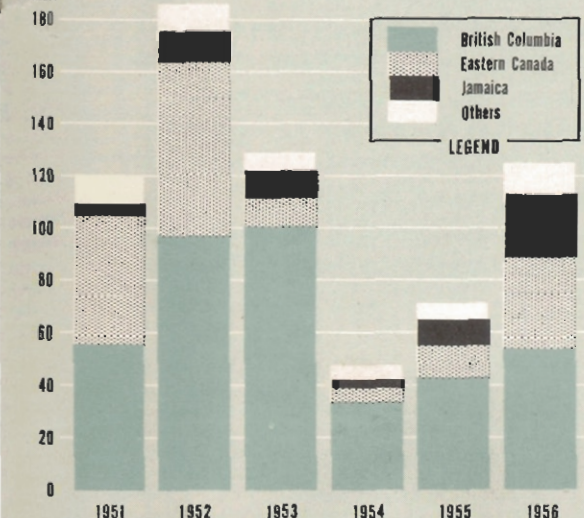
Steps taken in recent weeks to finance Aluminum Company of Canada's foreseeable requirements in the form of a U.S. \$125 million long-term debenture issue, and an increase in the intermediate-term credit lines to U.S. \$130 million should enable it to continue its basic hydroelectric program, with smelter expansion to be attuned sensitively to the indicated requirements of the market as they develop.

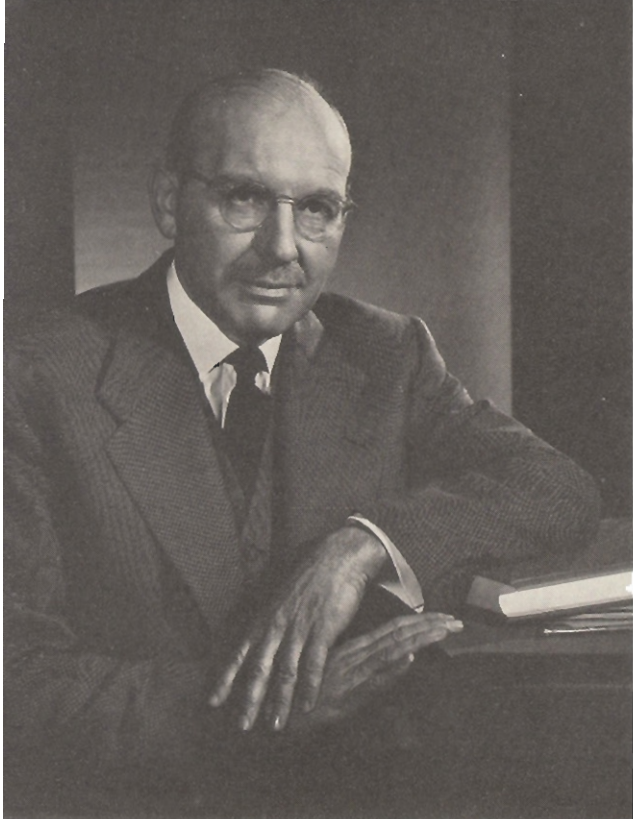
Aluminium Limited's capital outlay in 1956 was \$125 million and it is expected that capital expenditures in 1957 will exceed that amount.

D. T. B.

GEOGRAPHICAL DISTRIBUTION OF CAPITAL EXPENDITURES 1951-56
ALUMINIUM LIMITED AND CONSOLIDATED SUBSIDIARIES

Millions of Canadian Dollars





J. A. DULLEA,
Senior Vice President, Secretary and Chief Secretarial Officer

SECRETARIAT

During the year companies of the Aluminium Limited Group negotiated, with their respective governments the conditions to apply both for the near and long term to the investment in, and operation of, the plants for producing alumina to be built in British Guiana, Jamaica, B.W.I., and French West Africa.

Southeast Asia Bauxites Limited was incorporated and negotiations leading to a participation in Sematan Bauxite Limited were recently concluded. The former, a fully-owned subsidiary, will mine and ship bauxite from concessions acquired some years ago in Malaya. Sematan will ship bauxite from recently acquired deposits in Sarawak. Three Japanese aluminum smelting companies are expected to be the principal buyers of bauxite from Malaya and Sarawak. Aluminium Limited owns one-half the shares in one of the Japanese companies, has no share interest in the other two.

At the year end the 10,013,847 issued shares of Aluminium Limited were registered in the names of 27,975 holders of whom 13,421 shareholders were in Canada, 13,635 in the United States, 919 in other countries. Of the foregoing, over 2,800 were employee shareholders.

Since the end of 1955 the Company's shares have been newly listed on six stock exchanges in Europe, namely those in Brussels, Paris, Basle, Geneva, Lausanne and Zurich. The shares are also listed on the Montreal, New York, Pacific Coast, Toronto, Vancouver and London stock exchanges.

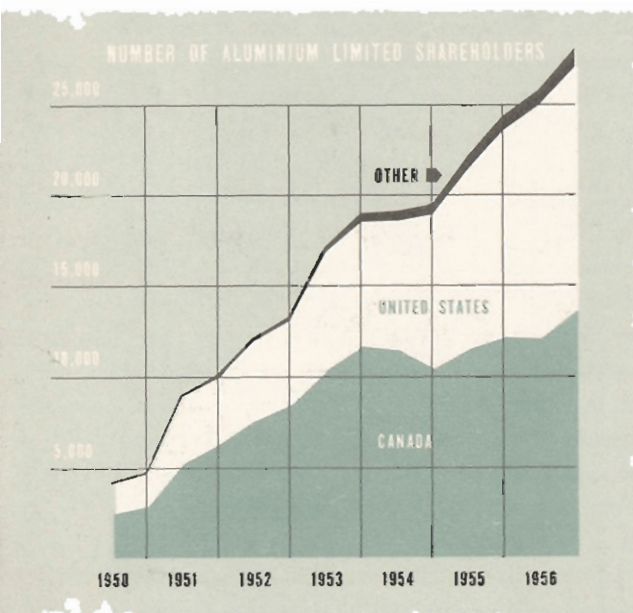
The day-to-day assistance available to subsidiary and affiliated companies contributed to the cohesion of the Aluminium Limited Group of Companies and, to the extent the international character of the enterprise permits, was reflected in uniformity of corporate and legal practices. Neither the parent company nor any of its subsidiaries was involved in litigation of any consequence during 1956.

PUBLIC RELATIONS

The staff of Aluminium Secretariat Limited encourages and assists affiliated operating companies in their public relations activities. Such programs are carried out in the conviction that companies of the Aluminium Limited Group should not only comply with the laws of the countries in which they do business but that in addition the business should be conducted in each country in a way that is conducive to good relations with the public and the government of the country. Thus, for example, in Jamaica the land acquired for its bauxite has not been taken out of production. Instead the citrus groves and cattle on those properties have been improved and increased and now constitute a growing part of the food and export needs of the Island.

Information and advertising activities are carried on by the Company or its subsidiaries in most areas important to the success of the business. In the United States, our third year as a sponsor of the "Omnibus" television program and our periodical advertising are a part of Aluminium Limited's contribution to the development of the United States market for aluminum.

— J. A. D.



PERSONNEL

The Company's employees are engaged directly by its subsidiaries according to their respective needs except that in the case of staff employees consideration is first given to the possibility of intercompany transfers. The latter practice not only permits job openings to be filled promptly by experienced persons, but also greatly broadens the opportunities for employee advancement within the Group - preference being given to nationals of the country where the openings occur.

The larger operating subsidiaries have developed their own management training courses and, additionally, a small number of staff and new recruits are offered a year's course in international industrial administration at the Centre d'Etudes Industrielles, a company sponsored post-graduate school in Geneva, Switzerland.

On December 31st, 1956, the total number of employees in Aluminum Limited's consolidated subsidiaries was 47,627 distributed geographically as follows:

| Area | Employees | Area | Employees |
|----------------|-----------|---------------------|-----------|
| Africa..... | 1,333 | Europe..... | 3,828 |
| Asia..... | 3,438 | South America..... | 2,315 |
| Canada..... | 22,492 | United Kingdom..... | 7,332 |
| Caribbean..... | 6,683 | United States..... | 192 |
| | | Other..... | 14 |

RETIREMENT PLANS

To assure orderly retirement arrangements for Group employees, six formal retirement plans have been established in the different areas of the world where operations are conducted. These plans, which are administered by this department, have all been developed on the same general principles but vary in detail in accordance with the tax and other regulations in force in each area. Participation, on a voluntary basis, is open in most plans to both staff and hourly-paid employees with each paying contributions and receiving benefits on the same basis. Contributions to the plans during 1956, by the companies concerned, totalled \$7.8 million and by the employees \$3.1 million. Benefits are based on career earnings and with minor exceptions are provided through the purchase of annuities from insurance companies and government agencies. As a result of the inflationary effect on the value of the benefits provided by such plans, it became necessary late in 1956 to introduce a trusteed supplement to the North American Plan establishing a minimum pension based on terminal earnings.

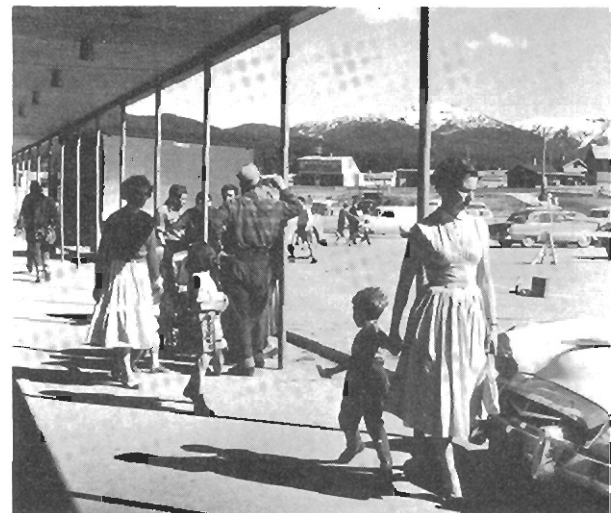
The Company's shares were offered to employees for the second time on April 27th, 1956 under the Employee Share Purchase Plan. Of the eligible employees 28% elected to purchase shares with a value of \$2.5 million. This compares with a participation of 12% and purchases to the value of \$1.2 million at the time of the First Offering and is evidence of increasing interest among employees to become shareholders.

- E. J. M.



EDWIN J. MEJIA,
Vice President and Chief Employer Relations Officer

Today's shopping centre in
yesterday's wilderness at Kitimat



**SOURCE AND APPLICATION
OF FUNDS**

IN MILLIONS OF CANADIAN DOLLARS



| | 1956 | 1951-1956 Inclusive |
|---|--------------|------------------------|
| CASH AND MARKETABLE SECURITIES | | |
| (beginning of period) | \$ 86 | \$ 74* |
| SOURCE OF FUNDS: | | |
| Net income | 56 | 249 |
| Straight-line depreciation | 33 | 129 |
| Reserve for future income taxes | 18 | 85 |
| Sales of securities: | | |
| Aluminium Limited shares | 3 | 99 |
| Aluminum Company of Canada, Ltd. preferred shares | — | 60† |
| Aluminum Company of Canada, Ltd. abatable notes | — | 67 |
| Aluminum Company of Canada, Ltd. fixed debt | — | 189 |
| Other fixed debt | — | 24 |
| Aluminum Company of Canada, Ltd. intermediate-term bank loans . . . | 47 | 47 |
| Net increase in short-term borrowings | 25 | 35 |
| Other | 3 | 16 |
| | <u>185</u> | <u>1,000</u> |
| | <u>\$271</u> | <u>\$1,074</u> |
| APPLICATION OF FUNDS: | | |
| New plant | \$125 | \$680 |
| New investments | 2 | 8 |
| Redemption of debt and preferred shares | 11 | 79 |
| Dividends paid on common shares | 23 | 110 |
| Increase in working capital (excluding cash, marketable securities, short-term borrowings and funded debt payable within one year) . . | 34 | 121 |
| | <u>195</u> | <u>998</u> |
| CASH AND MARKETABLE SECURITIES | | |
| (end of period) | 76 | 76 |
| | <u>\$271</u> | <u>\$1,074</u> |

*Excluding proceeds of \$50 million Aluminum Company of Canada, Ltd. debentures underwritten in December 1950 but issued on 3rd January 1951, included under "Sales of securities."

†After deducting \$30 million applied to redemption of previous issue.

ALUMINIUM LIMITED
AND CONSOLIDATED SUBSIDIARIES

COMPARATIVE FINANCIAL STATISTICS

(AS ADJUSTED)

| Year | Total Assets before Reserves | Sales and Operating Revenues | Net Income before Depreciation and Income Taxes | Current Income Taxes | "Cash Income" | Number of Common Shares ⁽¹⁾ | Per Common Share | | |
|------------------------------|------------------------------|------------------------------|---|----------------------|--------------------|--|---------------------------|------------|----------------------|
| | | | | | | | Capital Stock and Surplus | Net Income | Cash Dividends |
| Millions of Canadian Dollars | | | | | | Millions | Canadian Dollars | | |
| 1928 | \$ 71 | \$ 12 | \$ 1 | \$ 0 | \$ 1 | 6.3 | \$ 4 | \$.05 | \$ 0 |
| 1929 | 75 | 30 | 4 | 0 | 4 | 6.3 | 4 | .38 | 0 |
| 1930 | 75 | 26 | 3 | 1 | 2 | 6.3 | 4 | .08 | 0 |
| 1931 | 81 | 22 | 1 | 1 | 0 | 6.5 | 4 | —.25 | 0 |
| 1932 | 81 | 13 | 1 | 0 | 1 | 6.5 | 4 | —.25 | 0 |
| 1933 | 84 | 14 | 2 | 0 | 2 | 6.5 | 4 | —.14 | 0 |
| 1934 | 83 | 21 | 2 | 0 | 2 | 6.5 | 4 | —.06 | 0 |
| 1935 | 84 | 26 | 2 | 0 | 2 | 6.5 | 4 | .02 | 0 |
| 1936 | 88 | 32 | 4 | 0 | 4 | 6.9 | 4 | .26 | 0 |
| 1937 | 98 | 49 | 13 | 2 | 11 | 7.4 | 5 | 1.07 | 0 |
| 1938 | 144 | 66 | 20 | 5 | 15 | 7.4 | 7 | 1.47 | 0 |
| 1939 | 158 | 92 | 28 | 8 | 20 | 7.4 | 8 | 2.07 | .42½ |
| 1940 | 209 | 82 | 38 | 22 | 16 | 7.4 | 9 | 1.47 | .80 |
| 1941 | 324 | 132 | 53 | 15 | 38 | 7.4 | 10 | 1.96 | 1.00 |
| 1942 | 446 | 198 | 75 | 12 | 63 | 7.4 | 11 | 2.06 | 1.00 |
| 1943 | 528 | 290 | 96 | 14 | 82 | 7.4 | 11 | 1.55 | 1.00 |
| 1944 | 523 | 259 | 81 | 11 | 70 | 7.4 | 12 | 1.48 | .80 |
| 1945 | 480 | 114 | 26 | 8 | 18 | 7.4 | 13 | 1.55 | .80 |
| 1946 | 490 | 111 | 28 | 10 | 18 | 7.4 | 14 | 1.61 | .90 |
| 1947 | 514 | 153 | 38 | 15 | 23 | 7.4 | 15 | 2.15 | 1.00 |
| 1948 | 587 | 209 | 56 | 20 | 36 | 7.4 | 17 | 3.67 | 1.32½ |
| 1949 | 612 | 199 | 57 | 20 | 37 | 7.4 | 18 | 3.63 | 1.30 |
| 1950 | 698 | 227 | 73 | 26 | 47 ⁽²⁾ | 7.4 | 22 | 4.67 | 1.72½ ⁽³⁾ |
| 1951 | 809 | 284 | 92 | 36 | 56 ⁽²⁾ | 8.2 | 26 | 4.54 | 1.77½ ⁽³⁾ |
| 1952 | 972 | 333 | 95 | 35 | 60 ⁽²⁾ | 8.2 | 28 | 4.31 | 2.00 ⁽³⁾ |
| 1953 | 1,124 | 336 | 96 | 26 | 70 ⁽²⁾ | 9.0 | 31 | 4.24 | 2.00 ⁽³⁾ |
| 1954 | 1,180 | 328 | 94 | 21 | 73 ⁽²⁾ | 9.0 | 33 | 3.87 | 2.00 ⁽³⁾ |
| 1955 | 1,310 | 412 | 123 | 26 | 97 ⁽²⁾ | 10.0 | 37 | 4.83 | 2.15 ⁽³⁾ |
| 1956 | 1,472 | 483 | 137 | 31 | 107 ⁽²⁾ | 10.0 | 40 | 5.56 | 2.35 ⁽³⁾ |

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

(2) Before reserve for future income taxes — see note 5 to financial statements.

(3) Dividend payments in U.S. dollars after 5th September 1950, including U.S. \$.75 in 1950.

CONSOLIDATED BALANCE SHEET

ASSETS

31st DECEMBER 1956

IN CANADIAN DOLLARS



| | 31st December 1956 | 31st December 1955 |
|---|------------------------|-----------------------|
| Current Assets: | | |
| Cash | \$ 38,078,966 | \$ 40,255,008 |
| Government of Canada securities (quoted value \$37,673,267) | 38,099,127 | 45,759,427 |
| Receivables, less provision for doubtful accounts | 82,744,355 | 64,301,161 |
| Inventories of aluminum, materials and supplies (note 3) (lower of cost or market) | 145,318,872 | 120,749,839 |
| | <u>304,241,320</u> | <u>271,065,435</u> |
| Deferred receivables | 7,013,294 | 4,102,116 |
| Prepaid expense and deferred charges | 18,751,501 | 15,863,656 |
| Investments: | | |
| Subsidiaries not consolidated (note 1) | 2,833,112 | 4,109,442 |
| Other allied companies (not more than 50% owned) | 12,720,630 | 10,246,544 |
| | <u>15,553,742</u> | <u>14,355,986</u> |
| Lands, plants, riparian rights, and facilities, at cost (note 4) | 1,125,940,700 | 1,004,968,009 |
| Less: Accumulated amortization, depreciation and depletion (note 5) | 387,048,632 | 357,074,447 |
| | <u>738,892,068</u> | <u>647,893,562</u> |
| | <u>\$1,084,451,925</u> | <u>\$953,280,755</u> |

CONSOLIDATED BALANCE SHEET
LIABILITIES

31st DECEMBER 1956
IN CANADIAN DOLLARS



| | 31st December 1956 | 31st December 1955 |
|--|-----------------------|-----------------------|
| Current Liabilities: | | |
| Payables, including accrued liabilities | \$ 50,645,736 | \$ 39,488,713 |
| Short-term borrowings, principally in foreign currencies | 40,413,936 | 15,796,749 |
| Income and other taxes | 24,003,004 | 19,773,346 |
| Other debt payable within one year (note 6) | 5,422,260 | 2,251,000 |
| | <hr/> | <hr/> |
| | 120,484,936 | 77,309,808 |
| Debt not maturing within one year (note 6) | 301,295,713 | 262,012,165 |
| Debt contingent on volume of operations (note 6) | 91,443,500 | 97,527,750 |
| Operating reserves and deferred credits | 3,616,751 | 2,785,067 |
| Reserve for future income taxes (notes 5 and 9) | 86,053,764 | 67,554,681 |
| Preferred shares of consolidated subsidiaries (note 7) | 73,185,850 | 73,584,075 |
| Minority interest in consolidated subsidiaries | 3,233,165 | 2,502,887 |
| Capital Stock and Surplus: | | |
| Shares without nominal or par value (note 8) | | |
| 10,013,847 shares outstanding | 132,689,701 | 130,021,096 |
| Capital surplus | 3,143,350 | 2,745,125 |
| Earned surplus (note 10) | 269,305,195 | 237,238,101 |
| | <hr/> | <hr/> |
| | 405,138,246 | 370,004,322 |
| | <hr/> | <hr/> |
| | \$1,084,451,925 | \$953,280,755 |

Signed on behalf of the Board,
NATHANAEL V. DAVIS, Director
DANA T. BARTHOLOMEW, Director

CONSOLIDATED STATEMENT OF
INCOME

FOR THE YEAR ENDING 31st DECEMBER 1956

IN CANADIAN DOLLARS



| | 1956 | 1955 |
|--|----------------------|----------------------|
| Sales and Revenues: | | |
| Sales | \$424,767,889 | \$371,331,014 |
| Operating revenues (transportation services, etc.) | 57,867,098 | 40,815,203 |
| Income from marketable securities | 1,075,187 | 830,682 |
| Income from investments | 738,946 | 691,371 |
| Gain on disposal of surplus fixed assets | 1,295,567 | 2,468,619 |
| Other income | 1,201,756 | 948,577 |
| | <u>486,946,443</u> | <u>417,085,466</u> |
| Costs and Expenses: | | |
| Cost of sales | 245,783,817 | 214,951,858 |
| Operating expenses (transportation services, etc.) | 45,316,779 | 30,690,004 |
| Provision for depreciation and depletion (note 5) | 32,554,976 | 30,099,298 |
| Selling, general and administrative expenses | 35,811,071 | 31,198,288 |
| Interest on contingent and other debt not maturing within one year | 13,261,317 | 13,356,283 |
| Other interest | 2,255,108 | 839,366 |
| Cost of establishing supplementary pension fund (note 9) | 2,569,147 | — |
| Exchange adjustment arising in consolidation (profit in 1955) | 1,284,037 | (1,370,687) |
| Financing expenses | — | 2,354,737 |
| | <u>378,836,252</u> | <u>322,119,147</u> |
| Income before income taxes | 108,110,191 | 94,966,319 |
| Provision for current income taxes | 30,648,990 | 25,958,416 |
| (including \$20,922,216 Canadian taxes; \$17,816,825 in 1955) | | |
| Reserve for future income taxes (notes 5 and 9) | 18,499,083 | 18,256,303 |
| | <u>49,148,073</u> | <u>44,214,719</u> |
| Income after income taxes | 58,962,118 | 50,751,600 |
| Dividends on preferred shares of consolidated subsidiaries | 3,219,189 | 2,432,748 |
| Minority interest in net income of consolidated subsidiaries | 85,557 | 124,900 |
| | <u>3,304,746</u> | <u>2,557,648</u> |
| Net income | <u>\$ 55,657,372</u> | <u>\$ 48,193,952</u> |

CONSOLIDATED STATEMENT OF
SURPLUS

FOR THE YEAR ENDING 31st DECEMBER 1956
IN CANADIAN DOLLARS



EARNED SURPLUS

| | | |
|---|--------------|----------------------|
| Earned surplus - 31st December 1955 | | \$237,238,101 |
| Net income for the year | | 55,657,372 |
| | | <u>292,895,473</u> |
| Aluminium Limited dividends (1955 — \$21,076,253) | \$23,192,053 | |
| Transfer to capital surplus | 398,225 | 23,590,278 |
| | | <u>\$269,305,195</u> |

CAPITAL SURPLUS

| | | |
|---|--|---------------------|
| Capital surplus — 31st December 1955 | | \$ 2,745,125 |
| Transfer from earned surplus of par value of preferred shares of a consolidated subsidiary purchased for cancellation | | 398,225 |
| | | <u>\$ 3,143,350</u> |

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 two 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 1956, except that (a) investments, fixed assets and related reserves are at rates current at dates of acquisition, and (b) funded debts 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:

| | 1956 | 1955 |
|--------------------|----------------|----------------|
| Aluminum..... | \$ 61,820,935 | \$ 47,783,994 |
| Raw materials..... | 60,860,719 | 52,642,357 |
| Supplies..... | 22,637,218 | 20,323,488 |
| | \$ 145,318,872 | \$ 120,749,839 |

4. Lands, Plants, Riparian Rights, and Facilities:

| | 1956 | 1955 |
|---|-----------------|-----------------|
| Land and water rights..... | \$ 52,071,214 | \$ 49,774,424 |
| Mineral properties, rights and development..... | 10,203,223 | 8,235,552 |
| Buildings, machinery and equipment..... | 989,816,858 | 880,875,407 |
| | 1,052,091,295 | 938,885,383 |
| Construction work in progress..... | 73,849,405 | 66,082,626 |
| | \$1,125,940,700 | \$1,004,968,009 |

Capital expenditures amounted to approximately \$125,000,000 in 1956 and it is expected that 1957 expenditures will exceed this amount.

5. 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 (for which Aluminum Company of Canada, Ltd. is still eligible to the extent of some \$93 million deductible over the next few years) 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.

ALUMINIUM LIMITED
AND CONSOLIDATED SUBSIDIARIES

5. Depreciation Policy—continued

The consolidated subsidiaries, while claiming tax allowances as permitted by regulation, follow the policy of providing in their accounts only for straight-line depreciation on facilities in use. Inasmuch as capital cost allowances for tax purposes in later years on existing assets will consequently fall correspondingly short of the amount of depreciation which will be recorded in the accounts for such years, reserves have been set aside for application against taxes payable in those later years. The amounts set aside each year are calculated at tax rates prevailing in that year and are thus equivalent to the reduction in each year's taxes resulting from taking capital cost allowances in excess of straight-line depreciation on facilities in operation.

6. Debt not maturing within one year:

| | 1956 | 1955 |
|---|---------------|---------------|
| Aluminum Company of Canada, Ltd.: | | |
| Revolving credit loans from banks, under U.S. \$100,000,000 credit agreement, convertible at the Company's option on or before maturity (1st May 1959) into term loans repayable in five equal consecutive annual installments beginning one year from date of conversion (U.S. \$48,000,000) | \$ 46,954,375 | \$ — |
| First mortgage 3½% sinking fund bonds, due 1974: | | |
| Series "A" | 8,290,000 | 8,605,000 |
| Series "B" (U.S. \$15,543,000) | 15,543,000 | 17,264,000 |
| Commutation value of contractual obligation for annual payments secured by second hypothec — payable in Canadian currency and in United States currency in equal parts | 8,400,000 | 8,763,486 |
| 3½% Sinking fund debentures, due 1971 | 42,400,000 | 43,730,000 |
| 3⅞% Sinking fund debentures, due 1970 (U.S. \$73,068,000) . . . | 71,903,478 | 76,264,844 |
| 4½% Sinking fund debentures, due 1973 | 46,750,000 | 48,000,000 |
| Redeemable notes — payable to the U.K. Government: | | |
| (Interest payable only if and to the extent aluminum (magnesium) production is maintained at rates specified in the respective notes during the term thereof) | | |
| 3% Notes, due 1971 (a) | 16,485,000 | 13,737,500 |
| 3½% Note, due 1971 (b) | 7,492,500 | 6,243,750 |
| 3½% Note, due 1974 (c) | 6,000,000 | 4,000,000 |
| 3½% Note, due 1974 (magnesium) (d) | 186,746 | 144,711 |
| 3½% Redeemable note, due 1974 — payable to the U.K. Government | 440,000 | 440,000 |
| Saguenay Power Company, Ltd.: | | |
| First mortgage 3% sinking fund bonds, due 1971 (U.S. \$18,340,000) | 18,340,000 | 18,999,000 |
| 3% Serial debentures, due 1957/1965 | 2,700,000 | 3,000,000 |
| Northern Aluminium Company, Ltd.: | | |
| 3¾% Debentures, due 1957/1961 (£1,250,000) | 5,025,000 | 5,025,000 |
| 3¾% Debentures, due 1962/1964 (£ 750,000) | 2,304,375 | 2,304,375 |
| Alumina Jamaica Limited: | | |
| 4% Loan, due 1957/1958 — payable to the U.S. Government International Cooperation Administration (U.S. \$4,643,273) | 4,785,499 | 4,785,499 |
| Other debt | 3,980,000 | 4,145,000 |
| | 307,979,973 | 265,452,165 |
| Less: Bonds and debentures held by a consolidated subsidiary and debt of \$5,422,260 payable within one year | 6,684,260 | 3,440,000 |
| | \$301,295,713 | \$262,012,165 |

6. Debt contingent on volume of operations:

Aluminum Company of Canada, Ltd.:

Redeemable notes — payable to the U.K. Government:

(principal and interest payable only if and to the extent aluminum (magnesium) production is maintained at rates specified in the respective notes during the term thereof)

| | 1956 | 1955 |
|--|----------------------|----------------------|
| 3% Notes, due 1971 (a) | \$ 38,465,000 | \$ 41,212,500 |
| 3½% Note, due 1971 (b) | 17,482,500 | 18,731,250 |
| 3½% Note, due 1974 (c) | 34,000,000 | 36,000,000 |
| 3½% Note, due 1974 (magnesium) (d) | 1,496,000 | 1,584,000 |
| | <u>\$ 91,443,500</u> | <u>\$ 97,527,750</u> |

The formulae for abatement of the several notes in any year are summarized below:

| | Principal amount of Note | Rate of interest | Principal and interest are abatable if production is less than | Amount of principal abatable per ton | Maximum amount of principal abatable in any year | Entire interest is abatable if production is less than |
|-----|--------------------------------|---------------------|--|---|---|---|
| | | | (metric tons) | | | (metric tons) |
| (a) | \$39,600,000 | 3% | 172,500* | \$24.00 | \$1,980,000 | 90,000 |
| (a) | 15,350,000 | 3% | 197,500* | 30.70 | 767,500 | 172,500 |
| (b) | 24,975,000 | 3½% | 400,000* | 13.50 | 1,248,750 | 307,500 |
| (c) | 40,000,000 | 3½% | 450,000* | 40.00 | 2,000,000 | 400,000 |
| (d) | 1,682,746 | 3½% | 4,000† | 33.33 | 88,000 | 1,360 |

*1956 aluminum production — 563,000 metric tons.

†1956 magnesium production — 2,340 metric tons.

7. Preferred Shares of Consolidated Subsidiaries:

Cumulative Redeemable Preferred Shares:

Aluminum Company of Canada, Ltd.:

| | 1956 | 1955 |
|--|----------------------|----------------------|
| 4% Sinking fund first preferred shares | \$ 11,856,650 | \$ 12,254,875 |
| 4½% Sinking fund second preferred shares | 60,000,000 | 60,000,000 |
| Indian Aluminium Company, Ltd. 5% Preferred shares | 1,329,200 | 1,329,200 |
| | <u>\$ 73,185,850</u> | <u>\$ 73,584,075</u> |

8. Capital Stock:

In April 1953, with the approval of the shareholders, 400,000 shares were reserved for employees under a Share Purchase Plan and 300,000 shares were reserved for officers and other key employees under a Share Option Plan.

Under the Share Purchase Plan, an initial offering was made in 1953 at a price of \$37.00 per share, being 85% of the then market price. This offering was completed in 1955 with a total of 31,547 shares fully paid and issued. A second offering was made in April 1956 at a price of \$104.00 per share, being 85% of the then market price. Under this offering, 13,750 shares were fully paid and issued by 31st December 1956 and 9,665 shares were still being paid for.

As at 31st December 1955, 213,837 shares were subject to outstanding options under the Share Option Plan. During 1956, 22,693 shares were issued at a price of \$47.50 and 1,714 shares were issued at a price of \$93.75 (in each case the market price ruling when the options were granted). As at 31st December 1956, 121,644

ALUMINIUM LIMITED
AND CONSOLIDATED SUBSIDIARIES

8. Capital Stock - continued

shares remained subject to options at \$47.50 and 67,786 shares were subject to options at \$93.75, all of which were exercisable. The number of unoptioned shares available for the granting of options under the Plan remained at 47,000 throughout the year.

A 3-for-1 subdivision of the shares, initiated by the Directors in January 1957, will become effective early in May, if approved by the shareholders at the forthcoming annual meeting.

9. Supplementary Pension Fund:

A Supplementary Pension Fund was established in 1956, at an initial cost of \$2,569,147, to increase wherever necessary the retirement benefits becoming payable to employees of the North American Companies to minimum levels based on a revised pension formula. Inasmuch as the initial cost, which has been charged to income in 1956, may only be deducted for income tax purposes over a ten year period, expected future tax savings thereon of \$1,050,944 have been deducted from the amount reserved in 1956 for future income taxes. Based on current payrolls of the companies involved, contribution to this supplementary fund in future years should approximate \$240,000 per annum.

10. Earned Surplus:

The surpluses of non-Canadian subsidiaries forming part of the consolidated earned surplus at 31st December 1956 aggregated \$25,667,000 (\$18,412,000 in 1955).

11. Geographical Distribution of Consolidated Assets, Liabilities, etc.:

A condensed analysis of the consolidated balance sheet at 31st December 1956, 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 | 177.1 | 42.6 | 69.0 | 15.5 | 304.2 |
| Investments | 15.2 | .3 | — | .1 | 15.6 |
| Fixed assets | 935.5 | 113.2 | 49.1 | 28.1 | 1,125.9 |
| Less: Depreciation, etc. | (323.2) | (31.4) | (22.4) | (10.0) | (387.0) |
| Other assets | 22.7 | 2.0 | .8 | .3 | 25.8 |
| | <u>827.3</u> | <u>126.7</u> | <u>96.5</u> | <u>34.0</u> | <u>1,084.5</u> |
| LIABILITIES | | | | | |
| Current liabilities | 50.8 | 16.7 | 47.6 | 5.4 | 120.5 |
| Funded debt | 383.0 | 2.7 | 7.0 | — | 392.7 |
| Preferred shares | 71.9 | — | 1.3 | — | 73.2 |
| Other liabilities | 4.3 | .7 | 1.4 | .5 | 6.9 |
| Reserve for future income taxes | 83.7 | 1.0 | 1.4 | — | 86.1 |
| | <u>593.7</u> | <u>21.1</u> | <u>58.7</u> | <u>5.9</u> | <u>679.4</u> |
| Common shareholders' equity | <u>233.6</u> | <u>105.6</u> | <u>37.8</u> | <u>28.1</u> | <u>405.1</u> |

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

The following amounts have been charged to income in 1956: executive salaries \$2,396,077; legal fees \$228,844; directors' fees \$20,528.

AUDITORS' REPORT

PRICE WATERHOUSE & CO.

**215 ST. JAMES STREET WEST
MONTREAL 1**

12th March 1957

TO THE SHAREHOLDERS OF ALUMINIUM LIMITED

We have examined the consolidated balance sheet of Aluminium Limited and consolidated subsidiaries as at 31st December 1956 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 1956 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

SUBSIDIARY OPERATING COMPANIES

(CONSOLIDATED)

ALUMINUM COMPANY OF CANADA, LTD. — CANADA
ALMA & JONQUIERES RAILWAY COMPANY — CANADA
ALUMINA JAMAICA LIMITED — JAMAICA
ALUMINIO DO BRASIL, S.A. — BRAZIL
ALUMINIO DE VENEZUELA, S.A. — VENEZUELA
ALUMINIUM COMPANY OF SOUTH AFRICA (PTY.) LTD. — SOUTH AFRICA
ALUMINIUMWERKE A. G. RORSCHACH — SWITZERLAND
ALUMINIUMWERKE GOETTINGEN G.m.b.H. — GERMANY
ALUMINIUMWERKE NURNBERG G.m.b.H. — GERMANY
ALUMINUM GOODS LIMITED — CANADA
ALUMINIUM MÉRIDIONAL — FRANCE
AKTIESELSKAPET KINSERVIK — NORWAY
BAUXITES DU MIDI — FRANCE
CHAGUARAMAS TERMINALS LIMITED — TRINIDAD
DEMERARA BAUXITE COMPANY, LTD. — BRITISH GUIANA
ELETRO-QUÍMICA BRASILEIRA S.A. — BRAZIL
FLUORITA INDUSTRIAL MEXICANA S.A. — MEXICO
INDIAN ALUMINIUM COMPANY, LTD. — INDIA
KITIMAT TERMINALS LTD. — CANADA
MAGNESIUM COMPANY OF CANADA, LTD. — CANADA
NEWFOUNDLAND FLUORSPAR LIMITED — CANADA
NORTHERN ALUMINIUM COMPANY, LTD. — GREAT BRITAIN
OREGON BAUXITES INC. — U.S.A.
ROBERVAL AND SAGUENAY RAILWAY COMPANY — CANADA
SAGUENAY TERMINALS LIMITED — CANADA
SAGUENAY ELECTRIC COMPANY — CANADA
SAGUENAY-KITIMAT COMPANY — CANADA
SAGUENAY POWER COMPANY, LTD. — CANADA
SAGUENAY TRANSMISSION COMPANY, LTD. — CANADA
SOCIETÀ DELL'ALUMINIO ITALIANO — ITALY
SOCIÉTÉ ANONYME DES BAUXITES ET ALUMINES DE PROVENCE — FRANCE
SOUTHEAST ASIA BAUXITE LIMITED — SINGAPORE
SPROSTONS (JAMAICA) LIMITED — JAMAICA
SPROSTONS, LIMITED — BRITISH GUIANA

INTERNATIONAL DISTRIBUTING COMPANIES

ALUMINIUM UNION LIMITED
ALUMINIUM LIMITED SALES, INC.
L'ALUMINIUM COMMERCIAL S.A.
INTERNATIONAL ALUMINIUM COMPANY, LTD.

GROUP MANAGEMENT COMPANIES

- ALUMINIUM FIDUCIARIES LIMITED — Employee Relations
- ALUMINIUM LABORATORIES LIMITED — Research, Engineering and Exploration
- ALUMINIUM SECURITIES LIMITED — Financial Management
- ALUMINIUM SECRETARIAT LIMITED — Corporate Procedure and Public Relations
- ALUMINIUM UNION LIMITED — Sales Management

CORRESPONDENTS

OF THE ALUMINIUM LIMITED GROUP OF COMPANIES

- ALUMINIUM LIMITED, Inc., Boston and New York correspondent
- ALUMINIUM (CANADA) LIMITED, London correspondent
- ALUMINIUM LIMITED (CANADA) S.A., Geneva correspondent

OTHER SUBSIDIARY AND

ALLIED OPERATING COMPANIES

(NOT CONSOLIDATED)

- ✓ ALUMINIO IBERICO, S.A. — SPAIN
- ✓ ALUMINIO INDUSTRIAL MEXICANO, S.A. — MEXICO
- ✓ AUSTRALIAN ALUMINIUM COMPANY PROPRIETARY LTD. — AUSTRALIA
- ✓ DANSK ALUMINIUM INDUSTRI (A/S) — DENMARK
- ✓ DET NORSKE NITRIDAKTIESELSKAP — NORWAY
- ✓ ELABORACION GENERAL DE ALUMINIO Y METALES, S.A. — URUGUAY
- FLUORESQUEDA, S.A. — MEXICO
- ✓ NIPPON LIGHT METAL COMPANY, LTD. — JAPAN
- ✓ NEDERLANDSCHE ALUMINIUM MAATSCHAPPIJ (N.V.) — HOLLAND
- NORDISK ALUMINIUMINDUSTRI (A/S) — NORWAY
- NORSK ALUMINIUM COMPANY (A/S) — NORWAY
- ✓ PLANTATION BAUXITE COMPANY, LTD. — BRITISH GUIANA
- ✓ SVENSKA ALUMINIUMKOMPANIET (AB) — SWEDEN
- TOYO ALUMINIUM K.K. — JAPAN
- ✓ WEST AFRICAN ALUMINIUM LIMITED — GHANA

NOTE: The companies listed on the previous page are the principal consolidated operating subsidiaries of Aluminium Limited; the operating companies on this page are the principal ones carried on the books as investments.

