

*18<sup>th</sup>  
Annual  
Report  
1998-99*

EVER FORWARD

**National Aluminium Company Limited**

IN PURSUIT OF EXCELLENCE



# VISION

*To be a company of  
global repute  
in Aluminium Sector*

# MISSION

*To achieve growth in business with  
global competitive edge providing  
satisfaction to the customers,  
employees, shareholders and  
community at large.*

## National Aluminium Company Limited

### BOARD OF DIRECTORS

Shri P.K. Mohanty  
Shri A. H. Jung  
Dr.(Smt.) Aruna Bagchee  
Shri C. Venkataramana  
Shri S. B. Nayak  
Shri K. N. Misra  
Shri P. Mohapatra  
Shri S. N. Malik  
Shri P. G. Kakodkar

### EXECUTIVE DIRECTORS

Dr. R. C. Mohanty  
Shri P. L. Sahu  
Shri N. V. Badi  
Maj. A. Chowdhury  
Shri S. K. Mishra  
Shri M. S. Parija  
Shri S. K. Banerjee

### CHIEF VIGILANCE OFFICER

Shri S. K. Mishra

### COMPANY SECRETARY

Shri K. N. Ravindra

### BANKERS

State Bank of India

### REGISTERED & CORPORATE OFFICE

NALCO BHAWAN,  
Plot No.-P/1, Nayapalli,  
Bhubaneswar - 751 013 (Orissa)  
Tel. : 442301-08  
Fax: 0674 - 442580/442640/442740/442677

### AUDITORS

Brahmayya & Co.  
Chartered Accountants  
26-13-37, Sanyasi Raju Road,  
Gandhi Nagar  
Vijayawada - 520 003.

### Contents

The Year at a glance .....	2
Progress in Expansion Projects and Waste to Wealth .....	7-11
Directors' Report .....	13-24
C & AG Comments .....	25-27
Auditor's Report .....	28-29
Annual Accounts .....	30-49
Cash Flow Statement .....	50-51
Reformatted financial statements in substantial compliance with the U.S., U.K. & France .....	53-63

## The Year at a glance - 1998-99

### PHYSICAL

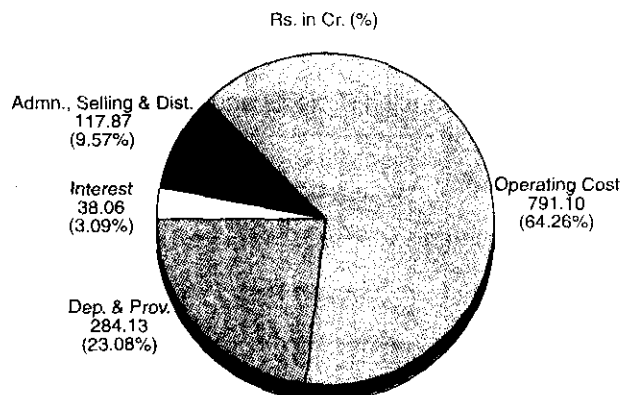
	Units	1998-99	1997-98
Bauxite mining	MT	28,06,288	26,61,557
Alumina production	MT	8,94,500	8,83,300
Aluminium production	MT	1,46,206	2,00,162
Power	MU	3,588	3,902

### FINANCIAL

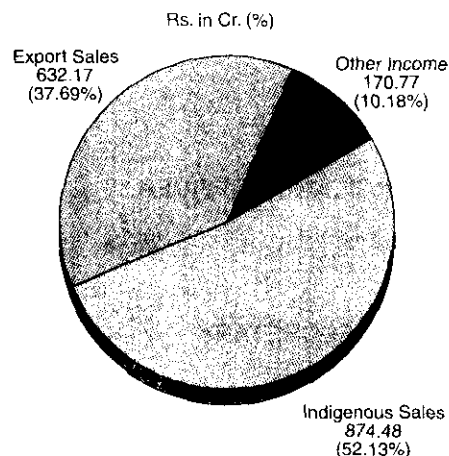
	1998-99	1997-98
Sales Turnover (Rs. in crore)	1506.65	1853.54
Other Income (Rs. in crore)	179.78	101.92
Profit Before Tax (Rs. in crore)	337.22	625.43
Profit After Tax (Rs. in crore)	248.25	546.97
Export Turnover (Rs. in crore)	632.17	679.48
Earning Per Share (in Rs.)	3.85*	4.24
Book Value Per Share (in Rs.)	44.01*	26.21

\* on reduced capital base

### Break-up of Total Cost

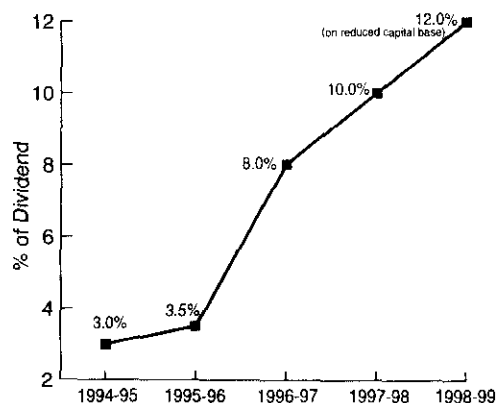


### Break-up of Earnings



### Dividend Payment

■ % of Dividend



## 10 years performance at a glance - Physical

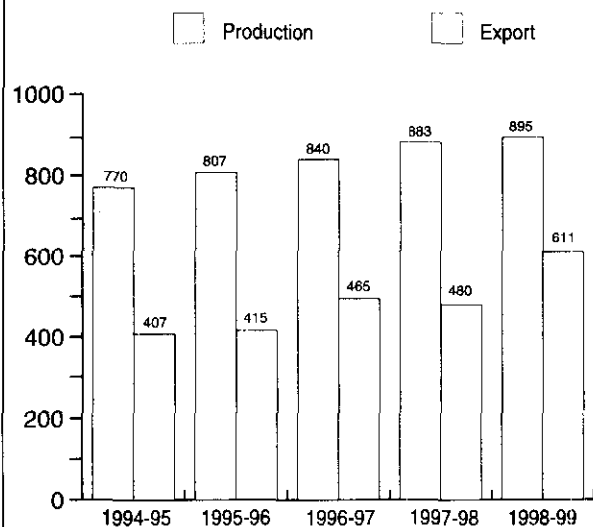
Sl.No.	Particulars	Units	1998-99	1997-98	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90
<b>1.</b>	<b>Production :</b>											
	Bauxite	MT	2,806,288	2,661,557	2,558,002	2,408,472	2,138,344	2,435,596	2,267,320	1,860,000	1,920,000	2,230,040
	Alumina	MT	894,500	883,300	840,062	807,130	770,000	753,021	803,500	672,200	652,485	739,000
	Aluminium	MT	146,206	200,162	203,823	192,288	178,072	194,332	191,069	192,022	151,330	135,018
	Power (net)	MU	3,588	3,902	4,187	4,147	3,979	3,741	3,690	3,531	2,654	2,533
<b>2.</b>	<b>Export Sales :</b>											
	Alumina/Hydrate	MT	610,940	479,801	465,139	415,209	407,405	371,286	429,428	378,446	335,401	448,616
	Aluminium	MT	39,865	55,475	60,357	49,128	65,307	60,037	85,771	61,117	27,877	27,391
<b>3.</b>	<b>Domestic Sales :</b>											
	Alumina	MT	282	348	3,515	4,870	4,608	428	764	3,380	7,549	24,734
	Aluminium	MT	98,573	140,660	145,521	143,092	136,356	135,490	104,390	108,302	128,813	98,843
	Power	MU	920	658	903	1,093	1,161	782	731	548	251	373

## 10 years performance at a glance - Financial

(Rs. in crore)											
Sl. No.	Particulars	1998-99	1997-98	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90
1.	<b>Income Statement:</b>										
	Gross Sales	1,506.65	1,853.54	1,768.86	1,743.98	1,474.96	1,195.96	1,169.11	974.03	884.04	846.01
	Export	632.17	679.48	637.86	577.58	485.64	411.72	538.34	385.77	277.78	416.01
	Domestic	874.48	1,174.06	1,131.00	1,166.40	989.32	784.24	630.77	588.26	606.26	430.00
	Earning before Interest, Tax & Depreciation (EBITD)	488.48	835.45	758.12	847.99	653.63	441.08	434.72	387.23	356.76	420.49
	Depreciation & Amortisation of DRE	286.04	274.32	265.79	285.78	258.36	223.29	219.52	232.73	164.31	141.31
	Interest & Financing charges	38.06	36.92	9.08	64.83	184.02	126.90	119.84	190.44	183.50	177.80
	Profit for the year	344.16	626.13	538.19	558.10	279.23	136.00	152.81	50.42	79.95	172.03
	Prior Period Adjustments (Net)	(6.94)	(0.70)	17.72	(22.82)	20.94	20.72	(17.93)	8.72	(8.00)	(15.16)
	Extraordinary Income	Nil	Nil	Nil	79.29	Nil	Nil	Nil	Nil	Nil	Nil
	Provision for Tax	88.97	78.46	64.15	0.02	Nil	Nil	Nil	Nil	Nil	Nil
	Net Profit/(Loss) (PAT)	248.25	546.97	491.76	614.55	300.17	156.72	134.88	59.14	71.95	156.87
2.	<b>Balance Sheet:</b>										
	Equity Capital	644.31	1,288.62	1,288.62	1,288.62	1,288.62	1,288.62	1,288.62	1,288.62	1,288.62	1,288.62
	Reserves & Surplus	2,191.17	2,088.50	1,681.91	1,300.67	717.05	475.42	281.33	157.51	127.05	48.56
	Networth	2,835.48	3,377.12	2,970.53	2,589.29	2,005.67	1,764.04	1,569.95	1,446.13	1,415.67	1,337.18
	Loans outstanding	643.58	594.10	580.00	1,024.91	1,774.28	2,321.54	2,630.57	2,652.06	1,835.49	1,728.64
	Net Fixed Assets	2,379.45	2,545.35	2,730.55	2,948.20	3,091.58	3,011.31	3,149.83	3,286.58	2,594.73	2,476.91
	Net Current Assets	635.01	1,192.56	689.53	582.34	566.45	772.49	788.64	612.26	512.63	357.27
	Capital Employed	3,014.46	3,738.00	3,420.08	3,593.70	3,658.03	3,783.80	3,938.47	3,898.84	3,107.36	2,834.18
3.	<b>Ratios:</b>										
	Operating Margin (OPM) (%)	16.48	29.51	27.80	30.69	20.35	13.10	11.54	6.07	8.14	18.54
	Return on Capital Employed (ROCE) (%)	8.24	14.63	14.38	14.89	8.21	4.14	3.42	1.52	2.32	5.53
	Return on Networth (RONW) (%)	8.76	16.20	16.55	20.67	14.97	8.88	8.59	4.09	5.08	11.73
	Debt Equity (%)	22.70	17.59	19.53	39.58	88.46	131.60	167.56	183.39	129.66	129.28
4.	<b>Book value per share (in Rs.)</b>	44.01*	26.21	23.05	20.09	15.56	13.69	12.18	11.22	10.99	10.38
5.	<b>Earning per share (in Rs.)</b>	3.85*	4.24	3.82	4.15	2.33	1.22	1.05	0.46	0.56	1.22

\* on reduced capital base

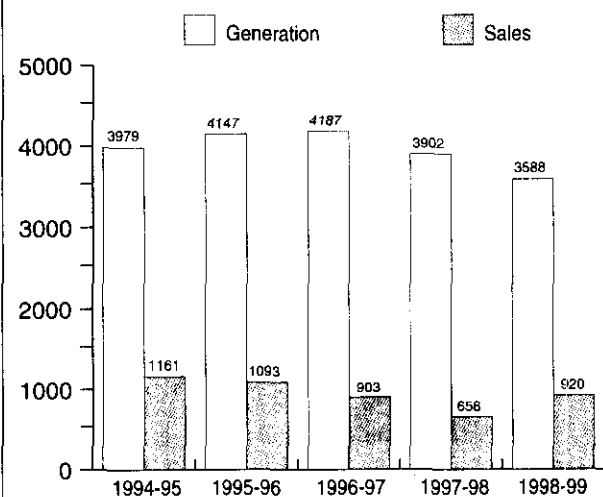
### Alumina (in '000 MTs)



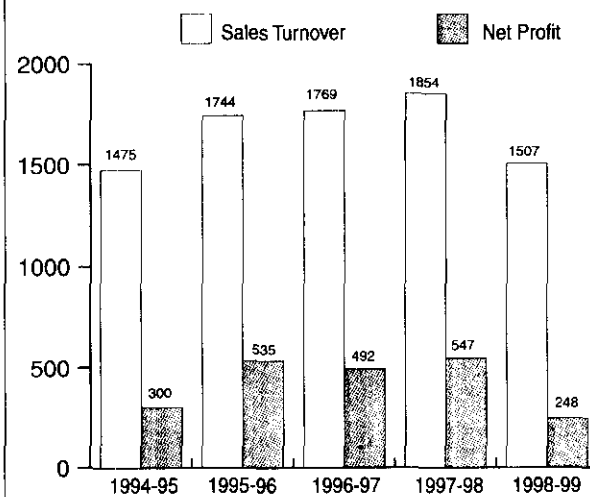
### Aluminium (in '000 MTs)



### Power (in Million Units)



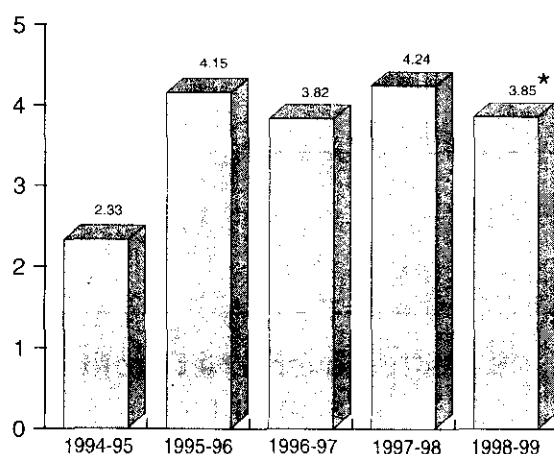
### Sales Turnover & Net Profit (Rs. in Cr.)



### Shareholding Pattern (As on 31.03.99)

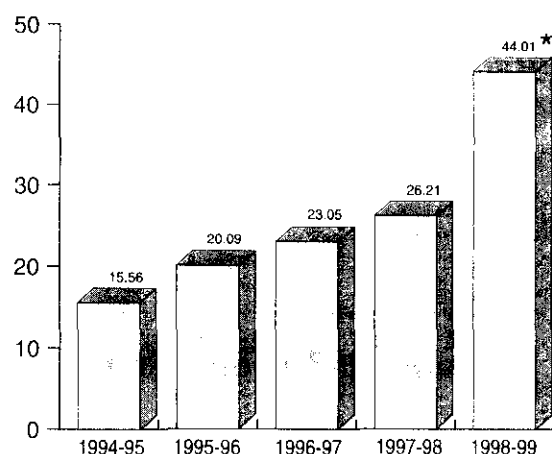
Category	No. of equity shares held	Number of Shareholders	Amount (in Cr.)	% of Equity
President of India	56,14,99,635	1	561.49	87.1475
Foreign Institutional Investors (FIIs)	126,43,550	40	12.64	1.9618
Unit Trust of India	504,97,650	1	50.49	7.8364
Insurance Companies	29,24,950	6	2.92	0.4532
Mutual Funds	67,98,300	23	6.79	1.0538
Others	99,45,543	25784	9.94	1.5427
		<b>25855</b>		

#### Earning per Share (in Rs.)



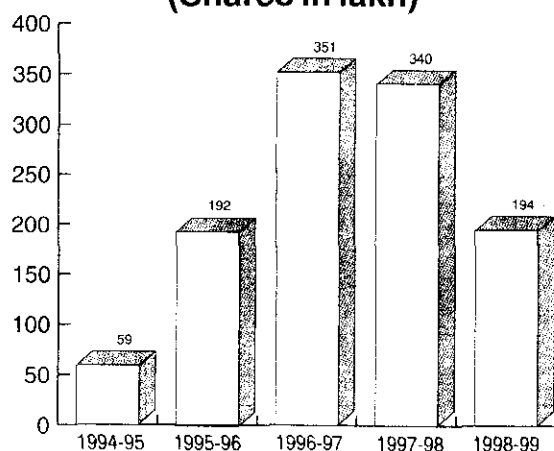
\*on reduced capital base.

#### Book Value per Share (in Rs.)



\*on reduced capital base.

#### Share Transfers effected (Shares in lakh)



#### Shareholding Profile (As on 31.03.99)





## Progress in Expansion Projects

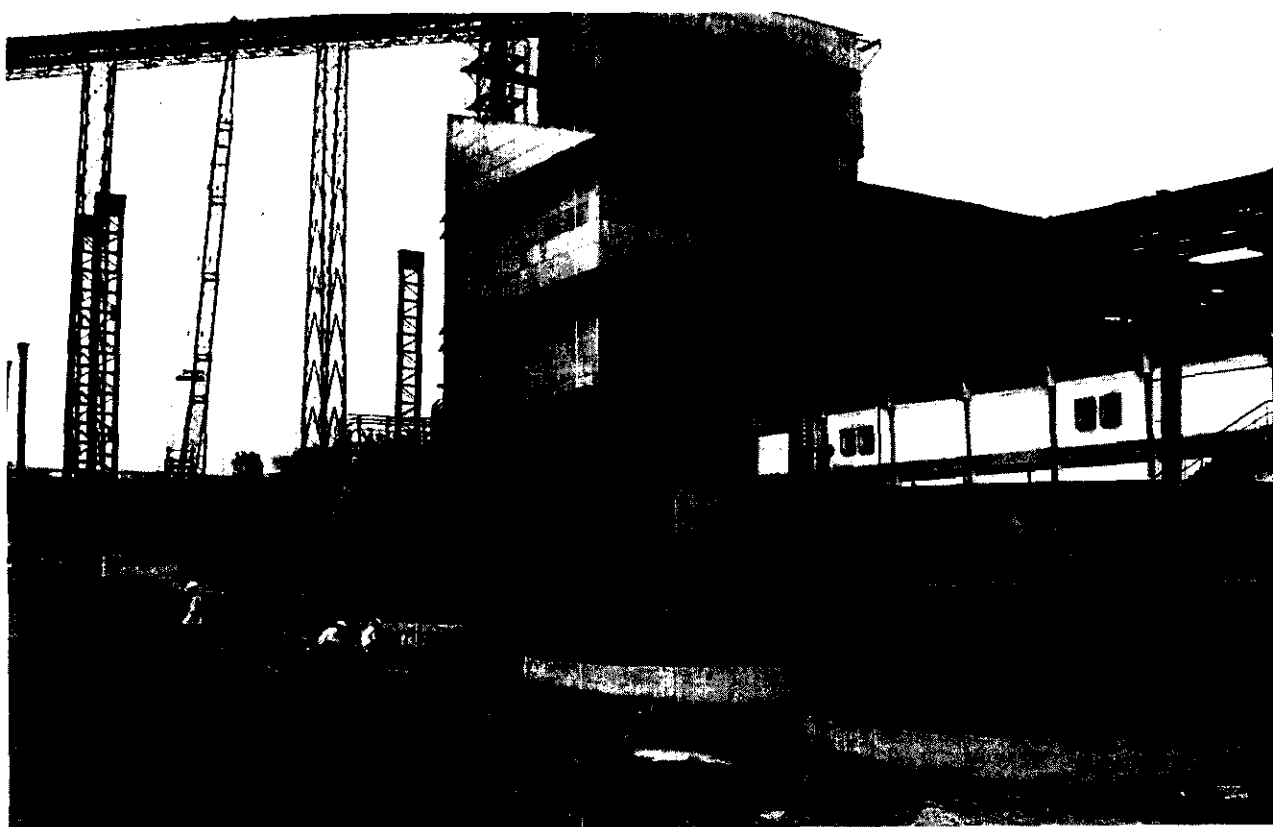
### Expansion of Bauxite Mines & Alumina Refinery

The expansion projects of Mines and Refinery Complex at Damanjodi at a total Cost of Rs. 1664.60 crore at June'96 price level are under implementation. The progress of the projects is as under:-

- The work of site grading, piling, construction water and construction power are completed.
- Detailed Engineering activities is 71.20 % complete.
- Orders for most of the major items have been placed. The progress of ordering is 54.20% complete.
- All the contracts for Civil & Structural works have also been awarded. Most of the erection Tenders are also awarded. The progress of tendering is 81.90% complete.
- The erection activities for Package items are also in full swing at site.
- The Primary Crusher & Apron Feeder for Mines Expansion has reached the site during March'99.

The salient features of expansion are :

Unit	Existing capacity	Capacity after expansion	Project cost	Project completion*
Bauxite Mines	24,00,000 TPY	48,00,000 TPY	Rs. 120.59 Cr.	36 months
Alumina Refinery	8,00,000 TPY	15,75,000 TPY	Rs. 1544.01 Cr.	51 months
*from 18.12.96, the date of Government approval.				



Work on Digestion Tanks in progress

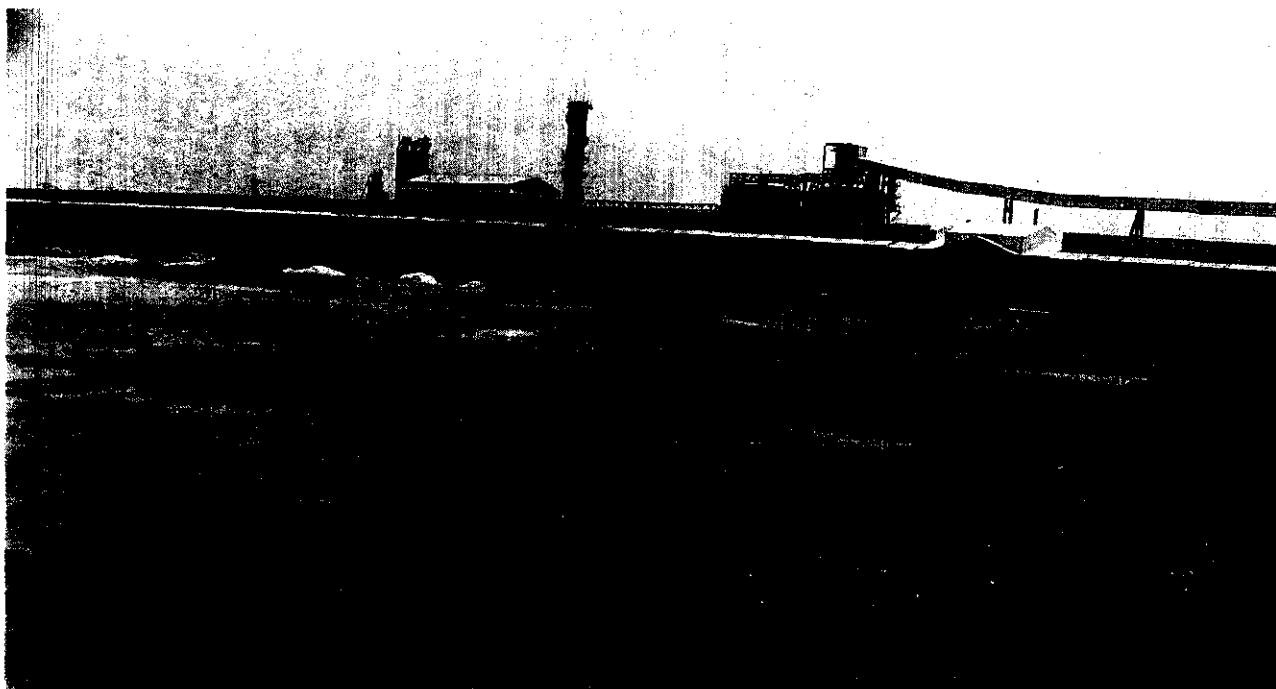
### Expansion of Aluminium Smelter & CPP

- The proposal for expansion of Aluminium Smelter from 2,30,000 TPY to 3,45,000 TPY and Captive Power Plant from 6x120 MW to 7x120 MW was approved by the Government at a cost of Rs.2061.98 crore on 3rd February, 1998.
- M/s Engineers' India Ltd. were appointed as the Consultant for Detailed Engg., Project Management & Construction Management, in 30th March'98.
- Addendum to the Original Agreement dated 09.01.81 was signed on 27.04.98 with M/s. Aluminium Pechiney, France, for supply of Basic Engg. for certain improvements in Smelter.
- Secretariat for Industrial Approvals (SIA) has approved the above amendment vide their letter dated 16.07.98 and the Zero date for supply of Basic Engineering Documents has started on 13.08.98.
- M/s M.N.Dastur & Co., Chennai was appointed as the Consultant for expansion of Captive Power Plant.
- Lot - A documents were received from AP in December'98.
- Site Grading Work awarded in December'98.
- M/s. NIDC was appointed as Consultant for Expansion of Township at S&P complex for Expansion Project.
- M/s. EIL was appointed as consultant for carrying out Time and Cost Monitoring Services for S&P Expansion.
- NALCO-EIL team visited AP, France in February'99 to review and finalise the above documents.
- The second Lot of Basic Engg. documents received from AP in March'98.
- The tendering activities for S&P complex are under way. Tenders for major packages have been issued.
- Construction activities have started at Smelter Plant with Site Grading and Construction Power Tender.

The salient features of the Smelter and Captive Power Plant expansion are :

Unit	Existing capacity	Capacity after expansion	Project cost	Project completion*
Smelter	2,30,000 TPY	3,45,000 TPY	Rs. 1641.98 Cr.	51 months
CPP	6 X 120 MW	7 X 120 MW	Rs. 420.00 Cr.	51 months

\*from 03.02.98, the date of Government approval.



Site grading area in Smelter Expansion Project

## Take Over of 100% Shares in IAPL

As a part of development of down stream projects, NALCO had earlier decided to invest up to 26% of equity amounting to Rs.30.82 crore in International Aluminium Products Ltd. (IAPL), a 100% EOU Company. In the meanwhile the promoters M/s. MUKAND Ltd., together with other promoters offered NALCO to take over 100% shares in IAPL.

NALCO got the proposals thoroughly examined by M/s. MECON and M/s. A F Ferguson & Co. (AFF). Since recommendations from the both consultants were for taking over the 100% shares of IAPL, the Board of Directors have decided to take over the 100% shares at face value of Rs.10/- each. The process of acquisition of 100% shares is on.

IAPL is a 50,000 tpa cold rolled product plant with the latest technology in casting and cold rolling along with attendant finishing line equipment which can meet international standards. The project integration of IAPL with your Company will go a long way in diversifying the product line and improving the bottom line of your Company. The project is in advanced stage of construction and is likely to be completed by March'2000.

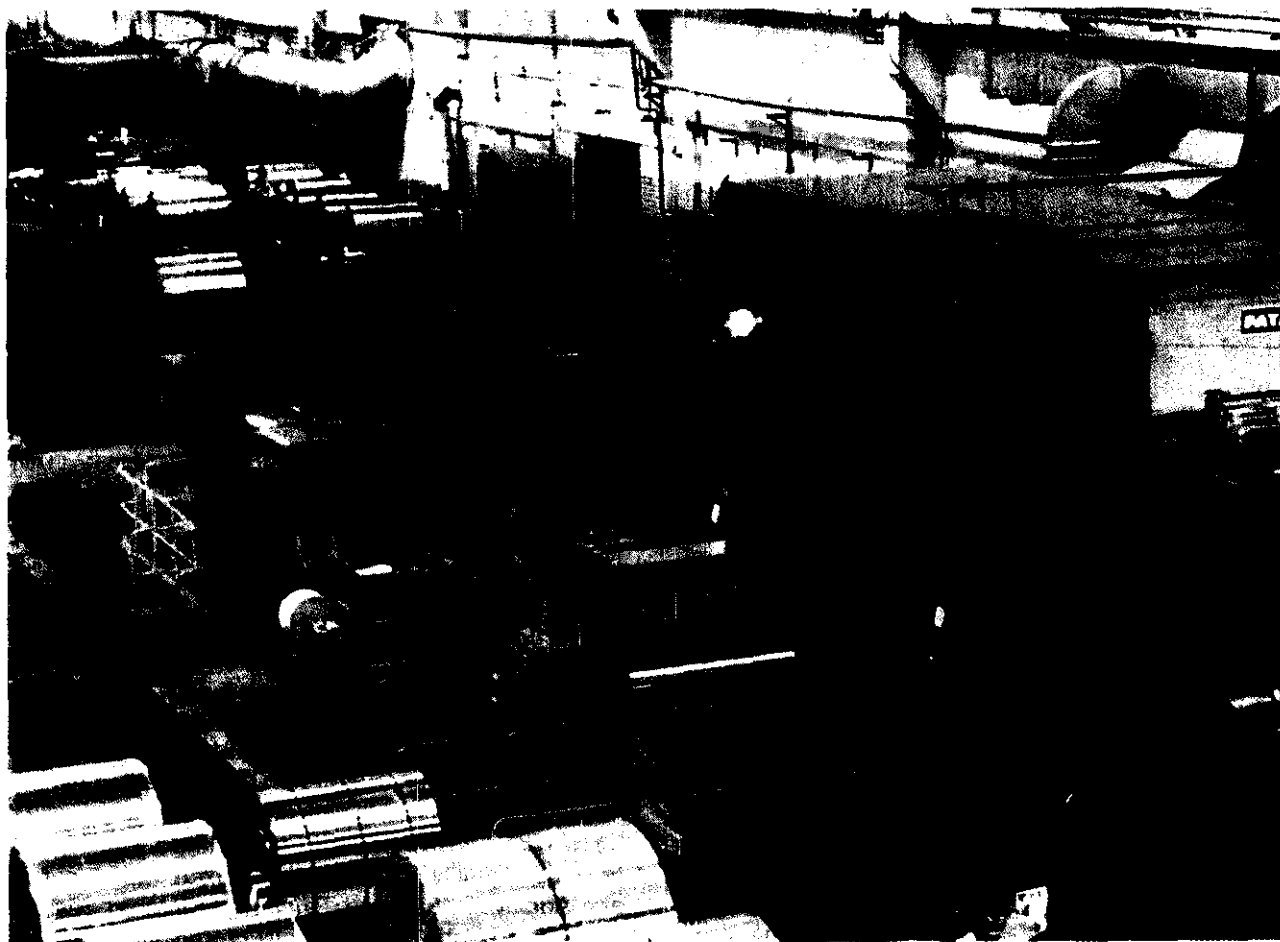
## PRODUCT RANGE

The product range of IAPL is as follows:

Capacity	: 50,000 Tonnes per annum
Location of plant	: Angul, Orissa
Products	: coils and sheets with thickness 0.12 mm to 4 mm and width upto 1600 mm.
End uses	: Foil Stock, Lamp Cap Stock, Standard Sheets, Standard Coils, Coil Stock for Roll Forming, Circle Stock/Circle, Fin Stock, Can Stock (conversion only), Paint Stock and Closure Stock.

## PLANT FACILITIES

The main plant facilities :- Melting Furnaces, Holding Furnaces, Annealing Furnaces, Hunter Super Casters with Sniff Degasser, Ceramic Foam Filter, Cold Rolling Mill and Process Lines.



Proposed Cold Rolling Mill of IAPL

## Waste to Wealth

Apart from producing prime Aluminium Metal, NALCO has undertaken scores of R&D projects, in the fields of Process and Product Development and waste utilisation in collaboration with various National Laboratories, Industrial Houses and Academic Institutions. Some of the products which can be commercially exploited are detailed below:

### SYNTHETIC WOOD FROM RED MUD

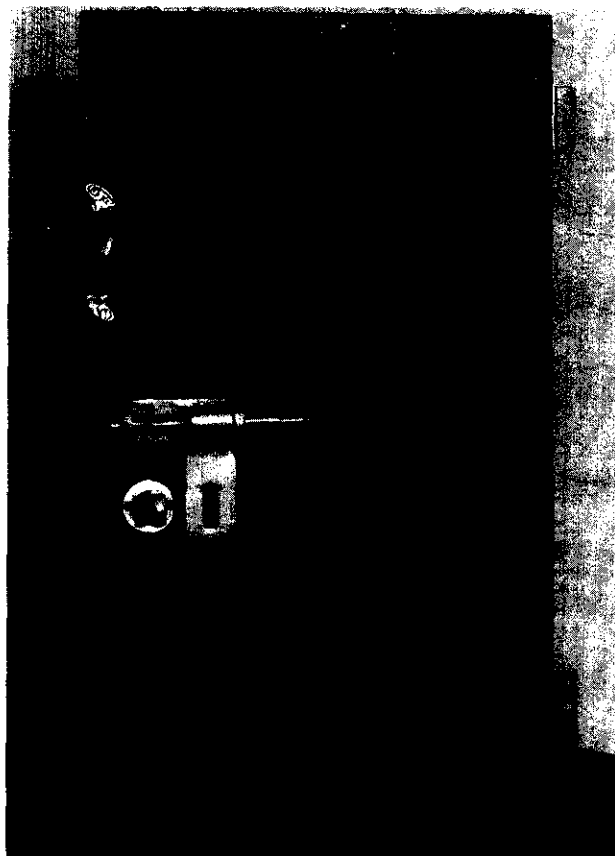
To save our fast depleting forest resources, we need wood substituting materials. Red Mud, a waste product of Alumina Refineries, provides excellent prospects as wood substitute.

#### TECHNOLOGY

NALCO, Bhubaneswar - RRL, Bhopal have collaborated and developed the technology for making synthetic wood from Red Mud using Natural Fibre & Polymeric Materials as Binder.

#### END USES

- Doors, Windows and Ventilators
- Partitions, False Ceiling, Flooring and Paneling
- Electrical Switch Boxes and Insulating Sheets for housing



Door frame made out of Synthetic wood from Red Mud

- Furniture like Sofa, Almirah, Shelves, Table, Chairs etc.
- Any regular/irregular shaped items

#### SPECIAL FEATURES

- Environment - friendly technology
- Commercial utilization of an Industrial Waste product.
- Energy Conservation
- Three times stronger than the wood
- Weather Resistant & Durable
- Termite, Fungus, Rot & Rodent resistant
- Fire Resistant Composites

Red Mud, also finds applications in:

- Cement (Ferrite Cement) Bricks, Blocks and Tiles
- Wasteland Development
- Soil Amending Agent/Fertilisers
- Cultivation of Aromatic & Medicinal Plants.



Sofa set made out of Synthetic wood from Red Mud

### FLY ASH

Nearly 60 million tonnes of coal ash is generated by thermal power plants in the country posing serious problems of safe disposal. R&D efforts to find useful application of this harmful waste have yielded encouraging results. Fly ash is now used as Building Materials like Bricks, Blocks, Tiles and Aggregates and for Mine Filling, Roads and Embankments, Cement Production, Beta Alumina Production etc.

### SYNTHETIC GRANITE TILES FROM FLY ASH

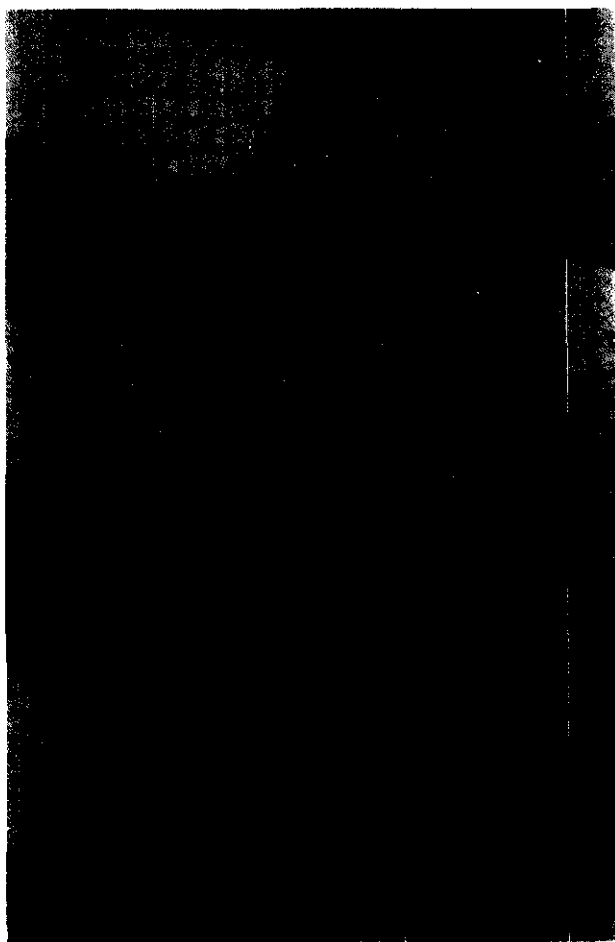
Superior Quality ESP Fly Ash, mixed with Binders and Additives, Pressed, Dried and Sintered, results in high strength uniformly structured tiles - much cheaper than natural granites.

#### TECHNOLOGY

Nalco, Bhubaneswar - Ceramic Technological Institute (BHEL), Bangalore have jointly developed technology for production of Synthetic Granite Tiles-a value-added product from Fly Ash of NALCO's Power Plant.

#### SPECIAL FEATURES

- Uniformly structured
- High Flexural and Compressive strength
- Colour can be varied on addition of dyes



Synthetic Granite tiles from Fly Ash

#### FLY ASH BASED WEAR RESISTANT CERAMIC PRODUCTS

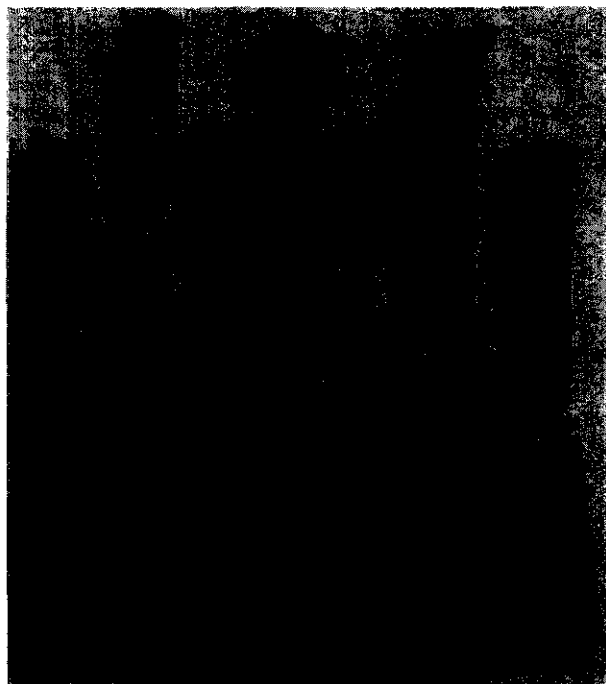
ESP Fly Ash mixed with Binders and Additives Pressed, Dried and Fired above 1500° C results in production of Wear Resistant Ceramic Products.

#### TECHNOLOGY

NALCO, Bhubaneswar in collaboration with NML, Jamshedpur under a sponsored R&D Project have developed technology for manufacture of Wear Resistant Ceramic Products from Fly Ash of NALCO's Power Plant.

#### END USES

Lining of Load Bearing Tankage and Floors and Special purpose applications.

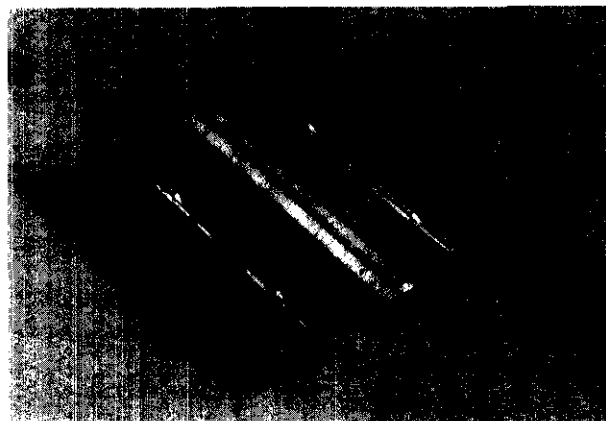


Ceramic products from Fly Ash

#### ALUMINA REFINERY CYCLONE UNDERFLOW SAND

A waste products of Alumina Refinery can be used commercially as raw material in the manufacture of Ferro Titanium, Micro Alloyed Steel, Wear Resistant Cast Irons, Extraction of Titania etc.

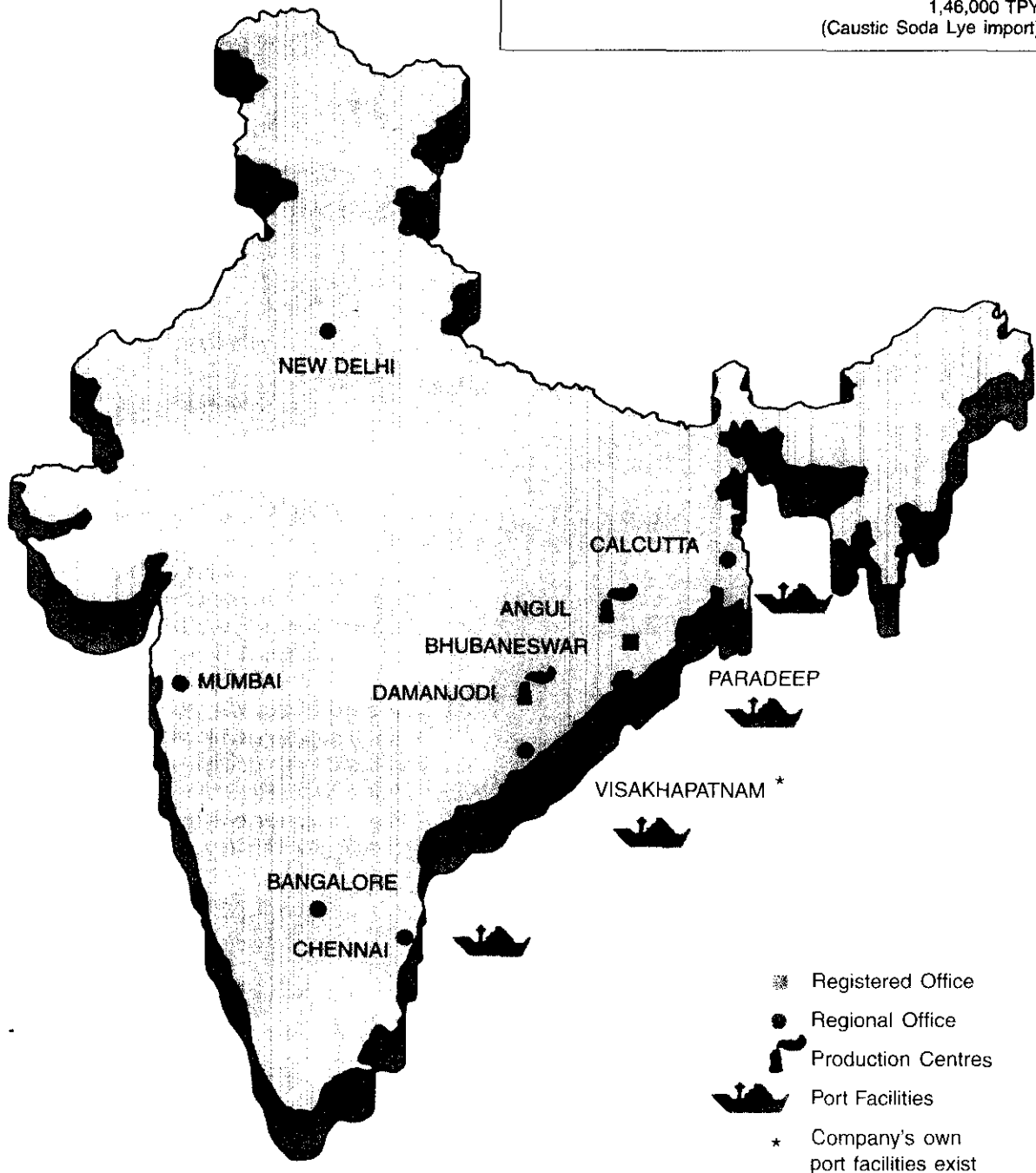
NALCO in collaboration with Department of Metallurgy of IIT Kharagpur has developed a technology at the laboratory scale for production of Ferro Titanium, Micro Alloyed Steel, Wear Resistant Cast Irons, Extraction of Titania etc. from cyclone underflow sand, a waste product of Alumina Refinery.



Micro Alloyed steel from Cyclone Underflow Sand

**NALCO'S VARIOUS PRODUCTION UNITS, THEIR LOCATION & INSTALLED CAPACITIES**

1. Bauxite Mines	Panchpatmali	24,00,000 TPY
2. Alumina Refinery	Damanjodi	8,00,000 TPY
3. Smelter Plant	Angul	2,18,000 TPY
4. Captive Power Plant	Angul	720 MW
5. Port Facilities	Visakhapatnam	3,75,000 TPY (Alumina Export) 1,46,000 TPY (Caustic Soda Lye import)



## Directors' Report

To

The Members,

Your Directors take pleasure in presenting the 18th Annual Report of your Company together with the Audited Accounts for the year ended the 31st March, 1999.

### Performance Highlights

You will be pleased to know that during 1998-99, new records were established in Bauxite Mining, Alumina production, Power Generation in auxiliary and steam power generating system at Refinery.

### Operations

There has been a marked improvement in manufacturing activities of the Company, especially in mining and refining sector. Bauxite Mining at 28,06,288 MT and Alumina production at 8,94,500 MT were all time records compared to earlier peak of 26,61,557 MT and 8,83,300 MT, respectively, during the previous year thereby surpassing the rated capacity for the 5th consecutive year in both Bauxite Mining & Alumina production. The 3 X 18.5 MW co-generation unit at Alumina Refinery has generated 268.95 MU against 262 MU achieved during 1997-98.

Port facilities at Visakhapatnam handled a record export of 6,10,940 MT of Alumina, and 34,207 MT of Aluminium apart from other input materials like baked anodes, caustic soda, cathode blocks, synthetic flocculants etc. Caustic soda movement of 1,44,646 MT during the year under report was also a record, surpassing the previous best of 1,13,159 MT achieved during 1995-96.

The 6 X 120 MW Captive Power Plant at Angul generated 3588 million units (MU) against 3902 MU during the previous year mainly due to off-take restriction by GRIDCO and lower power off take by the smelter plant during the year.

As you are aware, during the 1998 summer, the Smelter Plant had plunged into an unprecedented crisis in which almost 40% of pots were stopped. As a result, your Company suffered considerable loss of production against the projected levels of production, turnover and profits. Metal production was 1,46,206 MT against 2,00,162 MT during 1997-98.

A number of steps were taken to restore the normalcy as quickly as possible. A special task force was constituted and experts from Aluminium Pechiney were called in to tackle the problem. With sustained, dedicated efforts and due to inherent strength of your Company normalcy was restored by March'99. It is planned to produce 2,18,000 tonnes during the year 1999-2000.

### Marketing

On the marketing front, your Company performed quite satisfactorily, despite fall in Metal production and unfavourable market conditions world wide.

In spite of a depressed alumina market in terms of demand and prices during the year, your Company could export 6,10,940 MT, the highest ever since its inception mainly

due to lower captive consumption at the Smelter Plant. The Company could report handsome foreign exchange earning of Rs.422.84 crore on account of export of Alumina.

Metal production was affected due to the Smelter crisis. While your Company was saddled with huge inventories of metal, the LME aluminium prices continued to dip during the year to reach a 5 ½ year low of US\$ 1140 per tonne in March'99. Besides, the economic collapse of South Eastern Asian Countries, CIS and Latin America had an adverse impact on the global demand for aluminium.

During 1998-99, your Company exported 39,865 MT of aluminium, mainly on account of reduced production at Smelter Plant out of which 23,057 MT was lower grade metal.

The domestic market for aluminium remained very sluggish, with a high component of imports due to lower LME prices and favourable import policy especially for aluminium scrap. This led to price cuts by some producers. Despite these adverse conditions, your Company could perform reasonably well by selling 98,573 MT in the domestic market.

### Finance

The Smelter crisis and low LME prices had their impact on the Company's bottom line. Your Company posted Profit Before Tax of Rs.337.22 crore and Profit After Tax of Rs.248.25 crore against previous year's figures of Rs.625.43 crore and 546.97 crore, respectively.

The overall domestic and export revenue had decreased during the year under report by Rs.346.89 crore to Rs.1506.65 crore compared to Rs.1853.54 crore in previous year. The average export realisation of Calcined Alumina in terms of US\$ has gone down from US\$ 193 to US\$ 165 and in the case of Aluminium metal from US\$ 1628 to US\$ 1243. The realisation in terms of Rupee has also decreased in spite of higher exchange rate prevailing during the year. Total export turnover was Rs.632.17 crore against previous figure of Rs.679.48 crore.

Other Income for the year is Rs.178.93 crore as compared to Rs.101.17 crore during the last year, showing an increase of Rs.77.76 crore.

Your Company incurred a total capital expenditure of Rs.254.96 Crore during the year towards expansion, value added projects and additions, modifications and replacements on the existing operating plants. All of this was funded out of internal resources without resorting to any external borrowings. Besides, for the fifth year in succession, your Company successfully managed to finance all its working capital needs out of internal resources without any bank finance.

Your Company achieved the 'zero debt' status on 30.09.1998 on repayment of 20 billion yen (Rs 627.64 crore) on that date. The zero debt status continued till 26.03.99, the date on which 14.5% Non-convertible Redeemable Secured Debentures amounting to Rs.643.58 crore were allotted consequent upon capital restructuring scheme.

### Capital Restructuring

As you are aware, your Company has gone in for a major capital restructuring during the year. For a long time, your Company had been operating with a large paid up equity capital base of Rs.1288.62 crore consisting of 128,86,19,200 equity shares of Rs.10 each. As a result, Earning Per Share (EPS) was not commensurate with good performance over the years. Keeping in view the incompatibility of EPS with respect to performance, your Company effected capital restructuring of the company converting 50% of paid up capital amounting to Rs. 644.31 crore into debt at face value with your approval in the Extraordinary General Meeting held on 18.02.99 and after receiving the requisite approvals of the concerned authorities, the paid up capital was reduced to Rs. 644.31 crore as on 19.03.99.

### Investors relations

During the year, your Company further strengthened its interactions and relations with the investors including FIIs. The annual investors conferences being held in Mumbai have been quite successful and received very well by the investors, equity research analysts and investment bankers. For the third year in succession, your Company has made corporate presentations in the Asia Pacific Conference of Investors organised by Merrill Lynch Inc at London. Overseas investors interaction with your Company is noteworthy. These non-deal/non-issue road-shows both in India and outside, which is not normal with Indian corporates are of significant strategic importance for success of future capital issues for part financing your Company's major expansion plans, when necessary.

### Dividend

Your Directors are pleased to recommend a dividend rate of 12% on reduced paid up equity capital of Rs. 644.31 crore which works out to Rs. 77.32 crore in absolute terms and 32.14 % of Profit After Tax of Rs. 248.25 crore for the year. Proposed dividend is subject to the approval of Central Government under Section 205(1)(c) of the Companies Act, 1956.

### Human Resources

Training and Development activities remain a priority of the HRD Department. Emphasis was laid on conducting in-house programmes wherever possible, especially since the HRD Centre of Excellence, the nodal Training Institute has come into operation. Employees are also sponsored for specialised training programmes both inside and outside the country and visits to various established companies to study work practices. The training statistics bear ample testimony to HRD initiatives:

1996-97	1997-98	1998-99
Mandays	Mandays	Mandays
4502	4818	5071

The HRD Centre of Excellence has been working as a profit centre. There is greater emphasis on conducting training programmes not only for employees of the Company but also for other industries in the vicinity. The results have been encouraging. One of the first of such programmes, "Finance for Non-finance", was organised in association with SCOPE. Other programmes like "Developing Women Supervisors", "Reservation Policy",

"Development Programme for Women Executives", drew participation from organisations like IRE, Oriental Insurance, PPL, IMFA, GRIDCO etc.

In order to increase awareness about HR concepts and practices among the employees and to keep networking linkages among HR departments of other Companies, an HRD Meet was held on the 28th Nov'98. Organisations like Bhilai Steel Plant, Indal, PPL, IMFA etc. participated. Eminent dignitaries like Sri N. Vittal, CVC, Sri R. C. Khuntia, MP and Trade Union leader and Sri C. Appa Rao, Director(Personnel) VSP, graced HRD Meet'98. The occasion was a grand success with presentations, competitions among employees and exhibitions etc.

As part of your Company's policy of infusing fresh blood into the mainstream, 25 Graduate Engineer Trainees were recruited during 1998-99. Besides, 11 executives and 175 non-executives were also recruited.

Your Company has also been encouraging employees' participation in promoting production, productivity and savings on cost through various means. The Sarjana Suggestion Scheme is one of them and has been eliciting good response. Employees are rewarded for their creative suggestions and its implementation are ensured by the concerned authorities.

The manpower strength of your Company was as follows :

	As on 31.03.99	As on 31.03.98
Executives	1424	1364
Supervisors	841	853
Skilled/Highly Skilled	3007	2975
Unskilled/Semiskilled	1196	1115
<b>Total</b>	<b>6468</b>	<b>6307</b>

In line with the Presidential Directives, measures to improve the representation of SC/ST communities in employment of the Company continued. As on 31.03.99, there were 1096 employees belonging to Scheduled Castes, 1191 employees belonging to Scheduled Tribes and 491 employees belonging to OBC Category, out of 6468 employees including the trainees. Thus 16.94% of employees are SC, 18.41% are ST and 7.59% are OBC. Every third employee of the Company belongs to SC/ST Category.

### Peripheral Development

Your Company has been laying increased emphasis on peripheral development programmes by undertaking various measures like development of schools and colleges, construction/repair of roads, culverts, bridges of peripheral villages, development of community centres, play grounds, stadium, digging of tube wells, development of village bandha for people living around Damanjodi and Angul and gave contributions for development of hospitals, health and immunisation camps etc. During the year, your Company has spent Rs 431.93 lakhs in Angul sector and Rs.56.02 lakhs in Damanjodi sector for these developmental works. In addition to this, your Company has undertaken some important activities like improvement in medical facilities in various places in



Orissa at a cost of around Rs. 69 lakhs and other developmental works in and around Bhubaneswar at an expenditure of Rs. 63.62 lakhs.

#### Parliamentary Committee's Visit

During the year your Company was honoured by the visit of Parliamentary Committee on papers laid on the table of Rajya Sabha in January'99.

#### Corporate Excellence

Your Company has received many awards and recognitions from various quarters during 1998-99 as detailed below.

- Three Executives of your Company, namely, Dr. B K Satapathy, Chief Manager(Spl.Products Marketing), Shri S K Patnaik, Sr. Manager(Chem) and Dr.S C Patnaik, Dy.Manager(Lab) have been honoured with United Nations World Intellectual Property Organisation (WIPO's) Gold Medal, 1999 for their Meritorious Invention "Process for the Preparation of Alumina Hydrate of Superior purity and fineness and process for preparation of low soda high alpha alumina". Earlier they were honoured by the NRDC Independence Day Award, 1998 for the same.
- Your Company bagged the Prestigious All India Industrial Promotion Independence Gaurav Award, instituted by the Council for Industrial & Trade Development (CITD), Hyderabad.
- Your Company bagged the prestigious OASME award for the Best Ancillary Promotion Organisation in the State. Two executives of the Company have also been adjudged as the Best Ancillary Promotion Office's, at the XIII State Level Convention of Orissa Assembly of Small and Medium Enterprises (OASME), held at Sambalpur on August 12.
- The Panchpatmali Bauxite Mines of your Company bagged the Prestigious "Pollution Control Excellence Award - 1998" of Orissa State Pollution Control Board, for "Implementing Effective Pollution Control Measures and Excellent Environment Management".
- Your Company received the Special Commendation Award under the Golden Peacock Environment Management Award, 1998 scheme from World Environment Foundation, New Delhi.
- Shri S.N. Johri, CMD, received the "Excellent Manager of the Year 1998" award Instituted by Cuttack-Bhubaneswar Management Association, from Shri G.V. Ramakrishna, Chairman, Disinvestment Commission, Govt. of India, on March 24, at Bhubaneswar.
- Your Company bagged the top export award of Chemical & Allied Products Export Promotion Council (CAPEXIL) for the year 1997-98. This is the 11th time in succession that the Company has won this prestigious award.
- Your Company received a prestigious export excellence award for the first time from Engineering Export Promotion Council (EEPC) for the year 1997-98.

- Your Company has also been awarded top exporters award by EEPC (Eastern Region) in Non-SSI Manufacturing category.
- The Annual Report of your Company for the year 1997-98 has got first prize in the category of Best Annual Report from Public Sector Public Relations Forum.

#### Projects

##### Expansion of Bauxite Mines & Alumina Refinery

The expansion project of Mines and Refinery Complex at Damanjodi at a total cost of Rs. 1664.60 crore at June'96 price level is in full swing. The project will be completed within the projected cost and time frame. Against Rs.1664.60 crore, projected cost, your Company has already committed for Rs.1062.22 crore and Rs.350.63 crore has already been released till 31.07.99.

##### Expansion of Aluminium Smelter & CPP

The proposal for expansion of Aluminium Smelter from 2,30,000 TPY to 3,45,000 TPY and Captive Power Plant from 6x120 MW to 7x120 MW was approved by the Government at a cost of Rs. 2061.98 crore on 3rd February, 1998. The project is under progress and no time and cost overruns are anticipated. Against Rs.2061.90 crore, projected capital cost, Rs.93.68 crore has already been committed and Rs.19.33 crore has been released till 31.07.99.

Proposal for addition of 8th unit of 120 MW at a cost of Rs.465 crore is under the active consideration of the Govt.of India.

The Progress in various other Projects under implementation is as under:

##### Special Grade Alumina

A 26,000 TPY special alumina plant at Damanjodi at a capital cost of Rs.56.78 crore based on technical knowhow obtained from Alumina Technology Associates, USA and consultancy service rendered by Engineers India Limited is expected to be commissioned during the 2nd quarter of 2000. The plant is designed to produce a total of 24 grades of special hydrate and alumina. With in-house expertise your Company is already in the process of production and test marketing of several grades of special hydrates and alumina products produced from the pilot plant. The special products have been sold to different customers. The Special Products Marketing Group provides necessary technical and marketing services to customers for gainful application of the products and market development.

##### Zeolite-A Project

A 10,000 TPY Detergent Grade Zeolite (Zeolite-A) Plant at Damanjodi, at a capital cost of Rs.24.10 crore based on technical knowhow from Central Salt & Marine Chemical Research Institute (CSMCRI), Bhavnagar licenced through National Research Development Corporation (NRDC), New Delhi and with consultancy services rendered by Engineers India Ltd. is scheduled for completion during January 2000. Due to non-banning of sodium tri poly phosphate (presently used in detergents) in the country, marketing of Zeolite-A in domestic market will be a constraint. However, efforts are on for exploring overseas market for the same.

### Gallium Project

A 950 kg/annum 5N Purity Gallium Extraction Plant at Damanjodi at a capital cost of Rs.12.77 crore based on indigenous technology and financial assistance to the extent of Rs.5.54 crore coming from associated Govt. of India agencies viz.DSIR, DST, DRDO and NRDC is under implementation. The process knowhow is from Central Electrochemical Research Institute (CECRI), Karaikudi and Nuclear Fuel Complex (NFC), Hyderabad, licenced through NRDC, New Delhi and consultancy services rendered by EIL. The project is scheduled to be completed by March,2001. Your Company is also exploring technology support for further purification to 7N purity Gallium in future.

### Aluminium Wheel Project

Your Directors have approved the setting up of an Aluminium Wheel Project comprising a 10,000 TPY Wheel Ingot Line at Smelter, Angul and a 4,50,000 wheels per year Alloy Wheel Plant at Chandaka, Bhubaneswar at a capital cost of Rs.92.56 crore. M/s. MECON, Ranchi has been appointed as Engineering Consultant for the project. The finalisation of technology supplier is in an advanced state. The project will be implemented within 27 months from the date of appointment of the technology supplier. Land from IDCO has been registered at Chandaka Industrial Estate, Bhubaneswar and necessary construction for site development has been commenced.

### Take Over of 100% Shares in IAPL

As a part of development of down stream projects, your Company had earlier decided to invest up to 26% of equity amounting to Rs.30.82 crore in International Aluminium Products Ltd. (IAPL), a 100% EOU Company. Your Company has released so far Rs.20.28 crore. In the meanwhile the promoters M/s. MUKAND Ltd., together with other promoters offered your Company to take over 100% shares in IAPL.

Your Company got the proposals thoroughly examined by M/s. MECON and M/s. A F Ferguson & Co. (AFF). Since recommendations from the both consultants were for taking over the 100% shares of IAPL,your Board of Directors have decided to take over the 100% shares. The process of acquisition of 100% shares is on.

IAPL is a 50,000 tpa cold rolled product plant with the latest technology in casting and cold rolling along with attendant finishing line equipment which can meet international standards. The project integration of IAPL with your Company will go a long way in diversifying the product line and improving the bottomline of your Company. The project is in advanced stage of construction and is likely to be completed by March'2000.

### Corporate Planning

Monitoring and review of different corporate goals/strategies already set in the approved Corporate Plan 1995-2005 are being done on a regular basis for the implementation of the plan as incorporated. Based on changes in business environment and performance of the Company, the updation/revision work of the present Corporate Plan has been taken up.

### Ancillary & Downstream Development

During the year 1998-99, ancillary status was accorded to five units from Angul and five units from M & R sector which works out to total ten units. At present 37 SSI units of Orissa are operating under ancillary status with your Company. Further, in order to promote the procurement of your Company's requirement , tender enquiries are forwarded to the respective District Industries Centres in Orissa, Orissa Assembly of Small and Medium Enterprises (OASME) and Orissa Small Industries Corporation (OSIC), so as to give wide publicity for your Company's requirements and to ensure maximum participation by the existing suppliers as well as the new SSI units, who can cater to your Company's requirement of various items.

On ancillary and downstream development programme, your Company participated in various exhibitions and Buyers & Sellers meets at Bhubaneswar, Angul , Damanjodi, Rourkela and Rayagada, in which large range of spare parts and components were on display for benefit of the entrepreneurs interested in setting up Ancillary Industries. Your Company also exhibited spare part slides and blow ups in some of the Buyer & Sellers meets. Your Company also prepared a comprehensive list of spare parts required by our units located at Damanjodi & Angul and distributed at SSI units forums.

A team of officers from Angul & Damanjodi along with DIC officials & representatives of various associations visited industries at Rourkela, Cuttack, Dhenkanal, Sambalpur, Koraput, Rayagada & Bhubaneswar and identified various industries who can meet your Company's requirement.

### Computerisation

Pursuing the strategic plan and computerisation, following activities were taken up during the year :

#### Production Planning and Control System at Smelter

- Integrating the activities of pot lines for hot metal production, laboratory for quality control and cast house for manufacturing finished goods, a metal planning system was developed in-house with the help of an outside professional agency. The package was developed and implementation is in progress.
- Plant Wide Network in Smelter incorporating latest ATM technology was installed connecting approximately 150 nodes in the plant. Additional nodes are being procured for installation.
- Maintenance Management Module of M/s. Ramco Marshal ERP package was selected for implementation at Smelter Unit. Customised package was integrated with your Company's legacy systems and implemented.
- Implementation of Plant Wide Network in Captive Power Plant was taken up and order was placed.
- Appreciating the need for speedier data communication between engineering consultants and the sites for supporting project expansion activities at Mines and Refinery, Smelter and Power Plant, action for establishing VSAT connectivity at M/s. Dasturco, Chennai, engineering consultant office and your Company Mines, Damanjodi was initiated and orders released.

- As a part of improving computer usage for various functional needs of the organisation, several application packages were re-engineered to graphical user interface environment using Power Builder and Sybase RDBMS.
- procurement action for providing Internet access to the organisation, installing a mail message server and developing work flow Internet based applications were initiated during the financial year.
- Additional hardware resources like servers, PC's, Printers etc. were procured to augment computerisation activities in the organisation.

#### Y2K Compliance activities

All-out efforts for ensuring Y2K compliance on application software, hardware, operating systems & such other infrastructure related resources was taken up as a planned activity and Y2K compliance of all commercial infrastructure resources and software developed in-house were achieved before 31st March'99. In-house efforts were audited by two external agencies i.e. M/s. Millennium Reformation System (P) Ltd. and M/s. Electronic Corporation of India in Infrastructure, Commercial applications and embedded systems respectively. Your Company achieved Y2K compliance as per planned targets.

Y2K compliance on process related embedded systems was also made by in-house resources. Action for replacing non-compliant PLCs, condition monitoring equipment and supporting PCs were taken up. Based on the audit carried out, the following observations were made:

##### 1. Risk to the Company due to Y2K :

Based on the studies carried out and action initiated, all risk factors due to Year 2000 compliance have been eliminated both in the areas of process automation and commercial environment.

##### 2. Cost to address Company's year 2000 issues :

Based on the current status, an expenditure of Rs.54.94 lakh has been incurred for up-gradation of Operating Systems, replacement of computer servers, PLCs and other micro-processor embedded systems.

##### 3. Company's contingency Plan :

Contingency plans for various activities have been worked out to ensure availability of alternative services in the unlikely event of failure of computer server or application software. Skilled human resources are available at all units to meet any exigent situation arising out of Y2K non-compliance despite the efforts made through in-house resources and external audit carried out. Further, surveillance audits have been planned during September & December'99.

#### Quality Movement

- Your Company continues to give utmost importance to quality movement in the Company. During the year, Bauxite Mine and Captive Power Plant were recertified to ISO 9002, upto 2001 and quality assessment has been conducted at CPP.
- Out of 24 Multi-functional managerial level Quality Improvement Projects, launched in your Company, 6 nos. projects were completed.

- 3rd All Orissa Quality Circle Competition was organised by your Company in April'98.
- You will be pleased to know that your Company's Counselling for ISO 9000 Certification provided to Central Workshop, Mahanadi Coalfields - unit has resulted in recommendation by M/s. RWTUV. This is the first time that such counselling was provided to an external agency by your Company.
- Your Company also celebrated World Quality Day by conducting Quality Essay, Slogan & Poster Competition and Inter-Unit Quality Circle competitions.

#### Efficiency Unit

Efficiency Unit activities in all the four units i.e. Smelter, CPP, Mines & Refinery are being closely monitored by setting action plans under an Apex Level Committee at Corporate Office.

A series of exercises meant for efficient working of sub-units and departments are being implemented successfully in respect of optimisation of production and consumption, scientific inventory level and cost of production including maximisation of revenue and achieving savings. These activities largely involve progress in various aspects like orientation of workers training, the internal efficiency of work, process of decision making etc.

#### Environmental Management

During the year under review, the performance of your Company in pollution control and environmental management has been satisfactory and encouraging.

All the units of your Company are meeting the stipulated norms for air and water prescribed by Orissa State Pollution Control Board. The consent orders under Air(PC&P) Act, 1981 and Water(PC&P) Act, 1974 have been obtained for all units and the authorisations under Hazardous Waste(Mgt & Handling) Rules, 1989 have been received for CPP for Waste oil. NOC from OSPCB has been obtained for Special Grade Alumina Pilot Plant at Alumina Refinery.

After your Company's Smelter at Angul got certified to ISO-14001 by M/s RWTUV, Germany this year all the four operating units i.e. Mines, Refinery, CPP and Smelter have now ISO-14001 environment management system certificate. Process has been initiated for implementation of ISO-14001 at Port Facilities, Vizag. The surveillance audits for EMS at Mines, Refinery & CPP have been conducted successfully.

The final reports on the studies regarding Bio-pond culture in treated water of Redmud pond at Alumina Refinery and the Biological Monitoring of flora for fluoride around Smelter conducted by OUAT have been received. The vegetation survey around Alumina Refinery by OUAT and the epidemiological survey around Smelter by ROHC, Calcutta are in progress and are expected to be completed by the end of 1999.

To enhance the environmental performance of the Company, the construction of a defluoridation plant at Smelter and the recycling system of ash pond overflow at CPP has been undertaken. The defluoridation plant is commissioned in July'99 and is under stabilization process. The recycling

system at CPP is commissioned in June'99 and is being operated as & when required. Action has also been initiated for improvement in performance of ESP at CPP, dry disposal of fly ash at CPP, recycling of industrial drain water at CPP, setting up of a permanent sewage treatment plant at your Company's Township, Angul and modification of sewage treatment system at M&R Township.

The Rapid Environment Impact Assessment has been completed for the proposed Aluminium Wheel Plant at Chandaka, Bhubaneswar during this year.

Your Company has also entrusted a project work entitled "Biotechnological application of microbes for fly ash amelioration and their utilisation in agriculture and wasteland development" to Utkal University to explore avenues for large scale utilisation of fly ash.

Your Company's Laboratories at Smelter & Refinery were recognised by Central Pollution Control Board, New Delhi for carrying out monitoring of environmental parameters.

So far 53,49,850 trees have been planted at different units of your Company with 3,96,900 trees planted during the year against a target of 3,85,000.

To maintain a safe work environment in the Company, recommendations of M/s. Disaster Management Institute, Bhopal, are being implemented and reviewed. Fire Audit by M/s. Loss Prevention Association of India Ltd., Calcutta is also being undertaken at all the units of your Company.

Internal Safety audits and mock drills are regularly carried out at the units to keep the safety mechanism up-to-date. This year your Bauxite Mine achieved "zero accident status" which is an unique achievement.

Annual health survey report of employees and annual safety report have been prepared to analyse the status of occupational health of employees as well as performance on safety front.

### **Energy**

Rising cost of energy has become a matter of concern for all industries. Therefore, all efforts are being made to reduce the cost of energy consumed by adopting various energy conservation measures, specially in the Smelter.

In order to get the views of external professional agencies, your Company has engaged Tata Energy Research Institute (TERI) to conduct an energy audit of Alumina Refinery and Mines. TERI has submitted the report and its suggestions are under implementation.

Various Energy Conservation measures adopted during 1998-99 are given as Annexure forming part of this report.

### **Rajbhasha**

During the year 1998-99 special efforts were made towards achieving the targets for progressive use of Hindi in the Company. Original correspondence in Hindi, original work and noting and drafting in Hindi by the employees trained in Hindi was encouraged.

Hindi Week was celebrated from the 8th to 14th September'98 and Hindi Day on the 14th September was celebrated with a number of programmes. During this period many Hindi competitions were organised and prizes are distributed to the winners in the closing ceremony observed on 17th September.

On the occasion of Hindi Week special issue of Hindi magazine 'Akshar' was published and for the best compositions by the employees and officers prizes were awarded. Many letters of commendation at national level have been received for the articles published in 'Akshar'. Monthly Newsletter Hindi Parichaya is published regularly. Efforts were made for developing the design and contents of this newsletter and many letters of commendation are being received.

In the Angul sector of your Company, meetings of Town Official Language Implementation Committee were organised, which is working under the convenorship of your Company and constituted under the directions of Deptt. of Official Language, Ministry of Home Affairs, Govt. of India. Your Company played a significant role in providing guidance and cooperation in promoting the progressive use of Hindi in the Central Govt. offices and undertakings of this area.

At Damanjodi sector, special efforts have been made for encouraging the use of Hindi by the employees by organising different Hindi competitions with the assistance of Kendriya Sachivalaya Hindi Parishad.

The challenging task of computerisation originally in bilingual form of different forms used in the office has been taken up by the Hindi Cell of Corporate Office. Bilingual designing of most of the forms internally is continued successfully.

The meeting of Bhubaneswar Town Official Language Implementation Committee was hosted by your Company on 19th June'98 at Nalconagar auditorium.

### **Vigilance**

In line with the endeavour of Govt. of India to curb corruption in public life and make a transparent and corruption free environment, the Vigilance Deptt. of your Company made all possible efforts for achieving this goal. More emphasis was on building systems, making them simple, transparent and known to everyone concerned in each department and follow such systems religiously in letter and spirit. On the initiation of the Vigilance Deptt., the Company made an appreciable effort in finalising various manuals like Purchase, Stores and Contract etc. Some of these manuals are in the final stage of completion.

Various training programmes were conducted in order to educate and create vigilance awareness among all sections of employees. The Annual Vigilance day was celebrated at M&R Complex, Damanjodi in which several eminent personalities participated and delivered speeches on the importance of vigilance. Annual Vigilance Magazine "SATARK" was also released.

### **Sports**

Your Company continues to take interest in the promotion of sports by employing noted sports personnel. You will be pleased to know that your Company's employee Shri Debasis Mohanty represented India in the recently conducted World Cup Cricket at England. Further, your Company has also employed Shri Shiv Sundar Das, Captain of State Cricket team of Orissa who represented India-A&B teams abroad, Shri Bhagaban Behera who represented India in ASIAD in shooting,

Shri Laxminarayan Mahasuar who represented India in many bouts abroad in wrestling, Miss. Anuradha Biswal who represented India in ASIAD twice, SAAF & SAARC in 100 mtrs. hurdles, Miss. Gitanjali Samantray, Captain of the State Women Foot ball team who represented the State in National games and Miss. Sradhanjali Samantray who represented India in different matches abroad.

#### Statutory Disclosures

There was no employee in receipt of remuneration in excess of the limits viz. Rs. 50,000/- p.m or Rs. 6,00,000/- p.a prescribed under the provisions of Section 217 (2A) of the Companies Act, 1956 and the rules framed thereunder.

#### Status of listing in Stock Exchanges

Your Company's shares and debentures are listed in the following Stock Exchanges for which the listing fees for 1998-99 and 1999-2000 has been paid to all the listed Stock Exchanges for trading of shares and debentures of your Company:

1. Bhubaneswar Stock Exchange, A-22, Falcon House, Jharapada, Cuttack Road, Bhubaneswar - 751 006.
2. The Delhi Stock Exchange Association Limited, West Plaza, Indira Gandhi Stadium, Indraprastha Estate, New Delhi - 110 002.
3. The Calcutta Stock Exchange Association Limited, 7, Lyons Range, Calcutta - 700 001.
4. Madras Stock Exchange, Exchange Building, Post Box No.183,11, Second Line Beach, Chennai-600 001.
5. The Stock Exchange, Phiroze Jeejeebhoy Towers, 25th Floor, Dalal Street, Mumbai - 400 001.
6. National Stock Exchange of India Limited, Trade World, Senapati Bapat Marg, Lower Parel, Mumbai - 400 013.

#### Foreign Exchange Earnings and outgo

The foreign exchange earning (on cash basis) during the year 1998-99 was Rs. 559.88 crore as against Rs. 660.98 crore during the previous year.

The foreign exchange outgo (on cash basis) during the year was Rs.743.07 crore, which includes repayment of 20 billion Yen loan (Rs.627.64 crore) as against Rs.142.74 crore during the previous year.

#### C & AG Comments

Replies to the comments of C & AG on the Annual Accounts of the Company for the year 1998-99 are annexed to this report.

#### Auditors

M/s.Brahmayya & Co., Chartered Accountants, Vijayawada have been re-appointed as Statutory Auditors of the Company for the year 1998-99 by the Company Law Board on the recommendation of Comptroller & Auditor General of India. M/s. S S Associates, Cost Accountants, Bhubaneswar have been appointed as Cost Auditors of the Company for the year 1998-99.

#### Directors

Shri P K Mohanty, IAS, Additional Secretary to Govt. of India, Ministry of Steel & Mines, Dept. of Mines has been appointed as Chairman-cum-Managing Director under Article 63(1)(a)(i) of Articles of Association of your

Company with effect from 31.07.99 (AN) in place of Shri S N Johri whose term ended on 31.07.99.

Shri Pyarimohan Mohapatra, nominee of the President of India was appointed as an Additional Director w.e.f. 15.02.99. Shri Mohapatra holds office up to the date of the Annual General Meeting. A notice has been received from a member, under Section 257 of the Companies Act, 1956, proposing the candidature of Shri Mohapatra for the office of a Director.

Shri S N Malik, nominee of the President of India was appointed as an Additional Director w.e.f. 15.02.99. Shri Malik holds office up to the date of the Annual General Meeting. A notice has been received from a member, under Section 257 of the Companies Act, 1956, proposing the candidature of Shri Malik for the office of a Director.

Shri P G. Kakodkar, nominee of the President of India was appointed as an Additional Director w.e.f. 15.02.99. Shri Kakodkar holds office up to the date of the Annual General Meeting. A notice has been received from a member, under Section 257 of the Companies Act, 1956, proposing the candidature of Shri Kakodkar for the office of a Director.

The tenure of Shri G S Panda, Director (Projects & Technology) expired on 31.12.98.

Your Directors would like to place on record their deep appreciation for the valuable services and guidance received from Shri S N Johri and Shri G S Panda during their tenure on the Board of your Company.

#### Committees of Directors

You will be pleased to know that as a good Corporate citizen your Board has constituted an Audit Committee consisting of all the part time non-official Directors. The role of the Audit Committee would be as per clause 230 of the Companies Bill, 1997.

Your Board has also constituted a Technology Committee for assessment of the technology status, for acquiring and assimilating technologies necessary to make them competitive and intensifying R&D efforts to maintain a sustained strength in the technological field.

#### Acknowledgement

The Directors of your Company express their thanks and appreciation for the co-operation, guidance and support received from the different wings of Govt. of India in general and Dept. of Mines in particular, the Govt. of Orissa, SE Railways, Mahanadi Coal Fields Ltd., State Bank of India, GRIDCO and other organisations.

Your Directors would like to take this opportunity to express their gratitude to the customers for the support and understanding they have rendered and look forward to continued cooperation and a mutually beneficial future.

Your Directors are pleased to place on record their appreciation of the sincere and devoted services rendered by the employees at all levels in the Company during the year.

For and on behalf of the Board of Directors



(P K MOHANTY)  
CHAIRMAN-CUM-  
MANAGING DIRECTOR

Place : Bhubaneswar  
Date : 01.09.99

## Annexure-I

### STATEMENT OF PARTICULARS UNDER THE COMPANIES (DISCLOSURE OF PARTICULARS IN THE REPORT OF BOARD OF DIRECTORS) RULES, 1988.

#### A. CONSERVATION OF ENERGY :

Modern technology has been adopted in all the units of NALCO viz. Mines, Alumina Refinery, Smelter, Captive Power Plant and Port Facilities leading to optimal consumption of energy. In addition to that, best efforts are being made to conserve energy to the maximum extent by adopting new measures for energy conservation, constant monitoring of specific energy consumption figures, getting energy audit done by reputed external professional agencies, encouraging implementation of innovative ideas in this field, using renewable energy sources and adopting other useful measures in this direction and in some cases promising results have also been obtained.

Some of the important energy conservation measures implemented by the company are highlighted below:

#### a) Energy Conservation Measures taken :

##### (i) Mines & Refinery :

- Reduction in make-up water consumption has been obtained due to :
  - Successful island operation.
  - Availability of stand-by Boiler Feed Pump (BFP) in running boiler.
  - Modification of BFP warm up scheme.
  - Stringent monitoring of water/steam leakage.
- Reduction in oil consumption in Steam and Power Plant (SPP) Boilers due to :
  - Excellent maintenance of oil firing equipment.
  - Ensuring availability of coal mill.
  - Increasing direct coal feeding.

##### (ii) Smelter Plant :

Nearly 25% Electric motors in Carbon plant and 8% in Electrical repair shop have been replaced by energy efficient motors during the year from those identified by Tata Energy Research Institute (TERI) as per their recommendations during energy audit in 1997-98.

##### (iii) Captive Power Plant :

- Optimisation of running of cooling water pumps for condenser which is dependent on ambient temperature profile.
- Replacement of blower type air drying plant with "NO LOSS SPLIT FLOW AIR" type drying system for instrument air.
- Installation of capacitor banks on unit boards for improving power factor of drives and system stability during island operation.
- Installation of on-line condenser cleaning system in one unit to maintain condenser vacuum at all times and in turn minimise specific steam consumption.

- Installation of digital bearing temperature indicators at PA fan drives in place of analogue temperature gauges resulting in trip out due to malfunctioning of the same.
- Introduction of systematic coal yard management by reclaiming and stacking of coal in a cyclic manner to avoid loss of calorific value of coal due to self combustion which in turn resulted in reduction in trip out.
- Recycling of lub oil of coal mill gear box and bearing lubrication system by installing electrostatic type of oil purification machine.
- Reduction in coal rejects from bowl mill by improving coal mill performance with better preventive maintenance practices.

#### b) Additional investment and proposals being implemented :

1. Replacement of Silica gel with activated alumina for better performance of air drying system of CPP.
2. Replacement of two high pressure turbine drain valves with a new type to improve its operating life at CPP.
3. Replacement of thermodynamic steam traps with bucket type traps at CPP for reduction in drainage of steam with condensate.
4. Recycling of industrial drain water at CPP for saving in raw water pumping power.
5. Trial replacement of one cooling tower fan with aerofoil design.
6. Technological modification to by pass a part of the ESP dust to mix with the hot product for required degree of calcination to reduce oil consumption in Alumina Refinery Plant.
7. Replacement of existing motors by Energy efficient motors in other areas of Smelter in phases as per recommendation of TERI.
8. Replacement of Aluminium fan blades with fibre reinforced plastic (FRP) blades in one cooling tower of Smelter on trial basis to reduce load on motors.
9. Replacement of existing back up insulation (60% alumina castables) in the solid metal charging door of cast house holding furnaces of Smelter by low cement castable and ceramic fibre insulation board for reduction in surface heat loss.
10. Use of "Regenerative Burner" and use of ceramic fibre insulation on roof and sides of cast house furnaces of Smelter for HFO saving.
11. Further studies on fuel oil additive for reducing specific consumption in Cast House furnaces and Bake Oven of Smelter.

## FORM-A

### FORM FOR DISCLOSURE OF PARTICULARS WITH RESPECT TO CONSERVATION OF ENERGY

#### A. Power and Fuel Consumption :

	CAPTIVE POWER PLANT ANGUL		ALUMINA REFINERY DAMANJODI	
	CURRENT YEAR (1998-99)	PREVIOUS YEAR (1997-98)	CURRENT YEAR (1998-99)	PREVIOUS YEAR (1997-98)
<b>1. Electricity</b>				
a) Purchased from GRIDCO (Million KWH)	00.982	15.944	-	-
Total amount (Rs. in lakh)	28.93	469.61	-	-
Average Rate (Rs./KWH)	2.95	2.95	-	-
b) Own Generation				
Through Diesel Gen. Unit		Not applicable		Not applicable
Unit per Ltr. of Diesel				
Oil/cost/unit				
c) Through Steam Turbine/Generator				
Unit(Gross) (Million KWH)	4036.463	4389.690	268.950	261.691
Energy cost per unit (Rs./KWH)	0.4013	0.4041	-	-
<b>2. Coal (specify quality &amp; where used) (Quality F&amp;G grades)</b>				
Quantity (Tonnes)	3084606	3474656	607199	602134
Total cost (Rs. in lakh)	13943.34	15010.23	6311.62	6024.13
Average rate (Rs./Tonne)	452	432	1039	1000

#### 3. Fuel Oil & LDO

	CAPTIVE POWER PLANT ANGUL		ALUMINA REFINERY DAMANJODI		SMELTER ANGUL	
	CURRENT YEAR (1998-99)	PREVIOUS YEAR (1997-98)	CURRENT YEAR (1998-99)	PREVIOUS YEAR (1997-98)	CURRENT YEAR (1998-99)	PREVIOUS YEAR (1997-98)
Quantity (KL)	5227	9165	76427	74636	20462	20295
Total amount (Rs. in lakh)	411.14	700.47	4410.07	4619.75	1465.74	1270.08
Average	7866	7643	5770	6190	6258	6631

#### B. Consumption per unit of production

Raw materials (with details)	Unit	Standards If any	Current year (1998-99)	Previous year (1997-98)
<b>1. Alumina Refinery, Damanjodi</b>				
(a) Power	(KWH/Tonne)	380	350.26	347.55
(b) Fuel oil for calcination	(Kg/Tonne)	85.3	78.12	78.82
(c) Coal for steam	(Kg/Tonne)	750	674	671
(d) Oil for steam	(Kg/Tonne)	10	2.04	2.17
<b>2. Smelter, Angul</b>				
(a) A.C.Power	(KWH/Tonne)	14,600	17,725	15,911
(b) Fuel oil	(Kg/Tonne)	95	119.05	102.93
(c) Others				
i) C.P.Coke	(Kg/Tonne)	408	465	401
ii) C.T.Pitch	(Kg/Tonne)	106.5	122	106

## FORM - B

### FORM OF DISCLOSURE OF PARTICULARS WITH RESPECT TO RESEARCH & DEVELOPMENT AND TECHNOLOGY ABSORPTION

Efforts made in Research & Development.

#### I. Research & Development :

1. Specific areas in which R&D activities carried out by the Company are:

##### (A) In-house R&D Activities :

#### (a) Alumina Plant :

##### i) Revamping of R&D Centre :

Most of the R&D equipments acquired under the revamping plans are operational which will further reinforce company's emphasis on full scale exploitation and utilisation of such in-house facilities to the needs of day-to-day problems solving devices, in addition to, development of the expertise for growth of indigenous technology in the select areas.

##### ii) Development of Special Grade Alumina & Hydrate :

- A 600 tpa capacity Special Grade Alumina pilot plant set up at M&R Complex, Damanjodi at an investment of Rs 3.29 crore including financial support of Rs 1 crore from Department of Scientific & Industrial Research, Govt. of India under their "Programme Aimed at Technological Self-Reliance" (PATSER Scheme) has been fully commissioned with in-house technology support. Various grades of Special Grade Hydrates & Alumina were developed in the pilot plant and efforts were made in successful test-marketing of such products.
- Research & Developmental activities concerning Production of Low Soda High Alpha Thermally Reactive Alumina and Removal of Aluminium Ions from Condensates containing Traces of Sodium & Aluminium by Ion-Exchange Method continued during the year.

##### iii) Crystal Growth Modifier (CGM) Addition in Bayer Circuit :

Crystal Growth Modifier (CGM) addition continued for better control of nucleation and stronger alumina particles.

##### iv) On-line RP Measurement :

Commissioning and computerisation of On-line RP Measurement completed.

##### v) Increased Liquor throughputs in Bayer Circuits :

Use of a Speciality chemical which acts as Synthetic flocculant as well as filter aid contributed to increase liquor throughputs in Bayer circuits.

##### vi) Spent Liquor Separating Cyclone System :

Spent Liquor separating cyclone system is implemented to reduce carry-over and improvement in productivity.

#### (b) Smelter Plant :

##### i) Investigations on Premature Failure of Anode Bake Oven Flue Walls :

Investigative studies were undertaken to find out the exact cause for premature failure of Bake Oven Flue Walls and necessary actions were taken up to correct such premature failures.

##### ii) Prediction of Electrolytic Cell (Pot) Life Failure :

Necessary softwares were utilised to predict Electrolytic Pot Life and Failure.

#### (B) Collaborative R&D Projects in hand :

##### i) Gallium Project :

A 950 kg/annum 5N Purity Gallium Extraction Plant at Damanjodi at a cost of Rs.12.77 crore based on indigenous technology and financial assistance to the extent of Rs.5.54 crore coming from associated Govt. of India agencies viz. DSIR, DST, DRDO and NRDC is under implementation. The process knowhow is from CECRI, Karaikudi and NFC, Hyderabad, licenced through NRDC, New Delhi and consultancy services rendered by EIL. The project is scheduled to be completed by March, 2001.

##### ii) Development of Zeolite-P :

After successful completion of a collaborative R&D project both in the laboratory and pilot plant scales in collaboration with NCL, Pune for Development of Zeolite-P utilising NALCO's Alumina Tri-Hydrate (ATH) and Sodium Aluminate Liquors respectively, final report prepared by NCL has been accepted by NALCO.

##### iii) Development of Rare Earth Added Aluminium Alloys for Conductor Application :

Development of Rare Earth Added Aluminium Alloys for Conductor Application has been successfully completed in the laboratory scale in collaboration with RRL, Thiruvananthapuram. Further pilot scale studies undertaken with the help of facilities at DMRL, Hyderabad and BALCO, Korba have also been successfully completed. Final Report submitted on the project has been accepted by NALCO.

##### iv) Waste Land Development by Application of Fly Ash :

The project, Waste Land Development by Application of Fly Ash at Angul sector covering an area of 3 acres has been approved by NALCO for implementation for three more years at a total project cost of Rs 30 lakhs with 50% financial support from Fly Ash Mission, Dept. of Science &



Technology, Govt. of India. The project is aimed at study of the long term effect of use of fly ash on soil fertility and crop yield.

**v) Development of Fibre-Reinforced Polymer Composites for Building Components as Wood Substitute :**

After successful completion of a laboratory scale project for Development of Fibre Reinforced Polymer Composites for Building Components as Wood Substitute in collaboration with RRL, Bhopal, pilot scale project activities have been taken up at a cost of Rs 7.5 lakhs for technology verification of the production facilities in the scale up design and 20 nos. of door shutters are being made under the programme for necessary use at NALCO.

**vi) Development of Fly Ash based Wear Resistant Ceramic Products :**

Development of Wear Resistant Ceramic Products from NALCO Fly Ash of CPP origin has been successfully completed in the laboratory scale in collaboration with NML, Jamshedpur.

**vii) Characterisation of Spent Pot Lining & Development of Process Flow-Sheet for Extraction of Valuables :**

NALCO has taken up a collaborative R&D project with JNARDDC, Nagpur for Characterisation & Recovery of Valuables from Spent Pot Lining Material and the same is nearing completion.

**viii) Production of Wear Resistant Cast Irons from NALCO Red Mud & Conversion of NALCO Red Mud into Ferro-Titanium :**

A collaborative R&D project undertaken in laboratory scale with IIT, Kharagpur has resulted in successful development of Micro-Alloyed Steel & Micro-Alloyed Cast Irons and properties of the samples are being evaluated.

**ix) Physical Separation of Carbon & Bath Constituents from Spent Anode Residues :**

A collaborative R&D project has been taken up with RRL, Bhubaneswar for Physical Separation of Carbon & Bath Constituents from Spent Anode Residues generated at NALCO's Smelter Plant. The project is under active pursuit.

**2. Benefits Derived :**

- i) Keeping in view, the speculative long term Research plans and programmes to medium to short term developmental activities pertaining to

process & product development and adoption of new technologies, revamping of in-house R&D centres at both Damanjodi & Angul sectors completed successfully at a cost of Rs 5.2 crore which will go a long way in realisation of these objectives.

- ii) Full scale exploitation and utilisation of in-house R&D facilities for better linkage of R&D with process technology can fully cater to the needs of day-to-day problem solving devices in addition to development of in-house expertise for growth of indigenous technology in the company.
- iii) Thrust was laid on various trouble shooting exercises for managing effective plant production process and quality of the products which resulted in increase in productivity.
- iv) As a result of in-house R&D efforts, use of moulds and tooling designed for production of Anode Stems to meet in-house consumption continued leading to considerable savings.
- v) Four numbers of patents have been filed in India during the year.
- vi) Two technologists of NALCO have been honoured with the "Top World Intellectual Properties Organisation (WIPO)'s Gold Medals for the year 1998" for their Meritorious Invention for Development of a Process Technology for Manufacture of Detergent Grade Zeolite-A from NALCO's Sodium Aluminate Liquor in collaboration with CSMCRI, Bhavnagar.
- vii) Further, another three technologists of NALCO have received "NRDC's Independence Day Award-98" for their Meritorious Invention for Development of a Process for Preparation of Alumina Hydrate of Superior Purity & Fineness and Process for Preparation of Low Soda High Alpha Pure Alumina.

**3. Future Plan of Action :**

- i) Up gradation of In-house R&D facilities matching with the future R&D needs of the company.
- ii) Development of new varieties of Special Grade Hydrates & Alumina at pilot plant scales keeping in view the upcoming market requirements.
- iii) Development of Cast & Master Alloys for use in Aluminium Foundry industry.
- iv) Development of different types of Zeolites like Zeolite-X, Zeolite-Y, Zeolite Membrane etc. for catalysis and sorption applications.
- v) Pilot scale studies of Synthetic Granites from Fly Ash.
- vi) Technology marketing concerning development of different value added products from waste materials.

#### 4. Expenditure on R&D:

	(Rs. in lakhs)	
	1998-99	1997-98
a) Capital	127.59	494.16
b) Recurring	138.79	186.58
Total	266.38	680.74
c) Total R&D expenditure as % of turnover	0.177	0.367

#### II. Technology Absorption, Adoption & Innovation :

In this era of technological self-reliance, scientific & technological pursuits contribute significantly to the growth and prospect of an industrial enterprise. Now-a-days, technology has become the hallmark of success and achievements and is considered as the cutting edge. Technological excellence is directly proportional to the productivity, thereby contributing to the growth of the company. NALCO's scientific & technological workforce with their sheer dedication and commitments have ushered-in a culture which have been embedded into the fabrics of the organisation. Technology adoption, absorption & assimilation followed by innovative developments have culminated in implementation of state-of-the-art

process knowhows & development of scientific vision. As a prelude to the same, organisation is ready to march to the next millennium with a strong international presence. Further, the added advantage of Technological leadership and R&D strength of NALCO has brought home accolades in good numbers.

Growth and development of indigenous technology has been the driving force of Research and Developmental activities undertaken by the company by way of tapping both In-house and National S&T strengths to its best advantage. Continuous upgradation of the domestic technological base and commercialisation of the indigenously developed technologies matching with the market requirements has been the key word of success for NALCO. This positive and pragmatic out-look has revolutionised scientific and technological strength of the organisation which has resulted in technological self-reliance and gradual reduction on import of technologies.

Setting up of diversification projects specifically based on indigenously developed technologies has been one of the objectives and mission of the company and NALCO has taken up timely & appropriate steps in this direction. Development of appropriate technologies in the fields of Alumina & Aluminium and allied products, meeting with the organisational goals have been the driving force in fulfilling these objectives.

#### III. Details of the technology imported during the past five years :

Sl. No.	Technology imported	Year of import	Has technology been fully absorbed	If not fully absorbed, reason thereof & future plan of action
1.	Technology for production of Special Grade Alumina & Hydrate from M/s. ATA, USA.	1995	Project is under implementation.	Project is under implementation.
2.	AP technology is imported for deottlenecking of Alumina Refinery for capacity enhancement from 0.8 mln.tpy. to 1.05 mln. tpy.	1997-98	AP technology is being implemented.	AP technology is being implemented.
3.	AP technology imported earlier while setting up of the plant fully absorbed and now being exploited for expansion of Mines (24,00,000 MT to 48,00,000 MT) & Alumina Refinery (8,00,000 MT to 15,75,000 MT). However, in certain areas, technology developed in the recent past by AP are being imported for use in expansion of the Smelter Plant (2,30,000 MT to 3,45,000 MT).	1998-99	AP technology is being implemented.	AP technology is being implemented.

## Annexure-II

### COMMENTS OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA UNDER SECTION 619(4) OF THE COMPANIES ACT, 1956 ON THE ACCOUNTS OF NATIONAL ALUMINIUM COMPANY LIMITED, BHUBANSEWAR FOR THE YEAR ENDED 31<sup>ST</sup> MARCH, 1999.

#### COMMENTS OF C & AG

#### REPLY OF MANAGEMENT

#### BALANCE SHEET

CURRENT ASSETS, LOANS AND ADVANCES  
SUNDRY DEBTORS (SCHEDULE G) - Rs. 330.17 crore

Above amount includes Rs. 34.39 crore recoverable by the company from Pennar Aluminium Company Limited which has been referred to Board for Industrial and Financial Reconstruction (BIFR). No provision has been created in the accounts of the Company against this debt which is overdue for payment since July 1997.

Dated, Calcutta  
The 31st August 1999

Sd/-  
(A. Pattanayak)  
Principal Director of  
Commercial Audit &  
Ex-Officio Member,  
Audit Board - I,  
Calcutta

1. As per the accounting practice consistently being followed by the Company, provision for bad and doubtful debts is made under the following situations :  
(a) When debt remains outstanding over 3 years or  
(b) When money suit is filed for recovery of the debt.
2. In case of M/s. Pennar Aluminium Co. Ltd. the debt has become due from July '97 i.e. only 1 year 9 months old by the end of the accounting year. It may be stated that the main objective of reference of any Company to BIFR is to avoid sick industrial companies from becoming financially non-viable and to take such measures so as to rehabilitate such companies in the manner that they become financially viable. Some of the measures that are generally taken for such rehabilitation are (i) grant of certain reliefs by way of waiver of outstanding interest/penal interest, (ii) funding of certain loans either interest free or at concessional rates, (iii) granting of moratorium for repayment, (iv) waiver of certain statutory levies, (v) pumping of additional capital by existing promoters or by new promoters, (vi) conversion of term loans into share capital etc. etc. All these steps may not mean that debts of the nature referred to by Audit are doubtful of recovery. Therefore, mere reference to BIFR cannot be considered as a valid reason for making any provision as being doubtful of recovery.
3. In the case of M/s. Pennar, the issue is still under consideration of BIFR for granting a suitable rehabilitation package. M/s. IDBI is the operating agency appointed for the purpose. In view of time taking procedural aspects involved as stated above, the issue is taking time. It may be stated that certain other major aluminium industries reportedly have tried/are trying to take-over/acquire M/s. Pennar Aluminium. Such take-over bids have not yet come to a finality.
4. It is, therefore, premature to consider the debt as doubtful or even any part of it at this stage. The Company is making vigorous efforts by taking-up with BIFR and M/s. Pennar for expeditious recovery of the debt. In view of this, no provision for doubtful debts was made in the accounts of the year.

For and on behalf of Board of Directors

Bhubaneswar  
01.09.99

Sd/-  
(P K MOHANTY)  
CHAIRMAN-CUM-MANAGING DIRECTOR

**REVIEW OF ACCOUNTS OF NATIONAL ALUMINIUM COMPANY LIMITED FOR THE YEAR ENDED 31<sup>ST</sup> MARCH, 1999 BY THE COMPTROLLER & AUDITOR GENERAL OF INDIA**

(Review of accounts has been prepared without taking into account the comments under Section 619(4) of the Companies Act, 1956 and qualifications contained in Statutory Auditors' Report.)

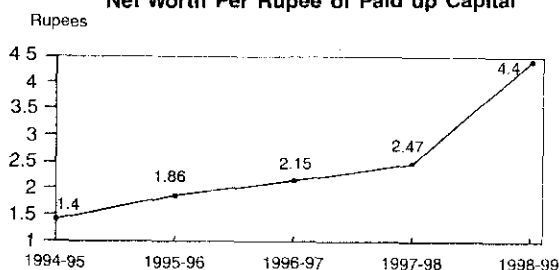
**1. Financial Position**

The table below summarises the financial position of the company under broad headings for the last three years :

(Rs. in crore)

	1996-97	1997-98	1998-99
<b>Liabilities</b>			
(a) Paid up capital			
i) Government	1123.00	1123.00	561.50
ii) Others	165.62	165.62	82.81
(b) Reserves and Surplus			
i) Free Reserves & Surplus	1488.22	1893.44	2189.94
ii) Investment Allowance Utilisation Reserve	198.46	198.46	-
iii) Capital Reserves	0.60	1.28	1.24
(c) Borrowings from			
i) Consortium of International Banks	580.00	594.10	-
ii) Non-convertible redeemable Debentures	-	-	643.58
(d) Current Liabilities & Provision	320.40	361.52	414.43
<b>TOTAL</b>	<b>3876.30</b>	<b>4337.42</b>	<b>3893.50</b>
<b>Assets</b>			
e) Gross block	4688.48	4771.67	4883.37
f) Less : Cumulative Depreciation	<u>1957.93</u>	<u>2226.32</u>	<u>2503.91</u>
g) Net Block	2730.55	2545.35	2379.46
h) Capital Work-in-Progress	98.95	189.31	379.68
i) Misc. Expenditure to the extent not written off	5.36	4.68	-
j) Investments	31.50	43.91	84.92
k) Current Assets, Loans and Advances	1009.94	1554.17	1049.44
<b>TOTAL</b>	<b>3876.30</b>	<b>4337.42</b>	<b>3893.50</b>
l) Working Capital [k-d]	689.54	1192.65	635.01
m) Capital Employed (g+l)	3420.09	3738.00	3014.47
n) Net Worth [a+b(i)-i]	2771.48	3177.38	2834.25
o) Net Worth per rupee of paid up capital (in Rupees)	2.15	2.47	4.40

**Net Worth Per Rupee of Paid up Capital**



Increase in net worth per rupee of paid up capital in 1998-99 was due to reduction of paid up capital from Rs. 1288.62 crore to Rs. 644.31 crore with effect from 26th March 1999.

**2. Working Results**

(Rs. in crore)

	1996-97	1997-98	1998-99
(i) Sales	1768.86	1853.54	1506.65
(ii) Less Excise Duty	140.20	148.11	109.04
(iii) Net Sales	1628.66	1705.43	1397.61
(iv) Other Misc. income	54.94	101.17	178.93
(v) Profit/Loss before tax and Prior period adjustment	538.19	626.13	344.16
(vi) Prior period adjustment	(17.72)	0.70	6.94
(vii) Profit/Loss before tax	555.91	625.43	337.22
(viii) Tax provision	64.15	78.46	88.97
(ix) Profit after tax	491.76	546.97	248.25
(x) Proposed Dividend including dividend tax	113.40	141.75	85.82

The Profit before Tax includes other miscellaneous income of Rs. 178.93 crore (53%) derived mainly from export incentives (Rs.76.17 crore), exchange variation gain (Rs. 46.63 crore) and interest earned (Rs. 44.86 crore).

### 3. Ratio Analysis

Some important financial ratios on the financial health and working of the company at the end of last three years as under :

	1996-97	1997-98	1998-99
A. Liquidity Ratio			
Current Ratio	315%	430%	253%
B. Debt Equity Ratio			
Long term Debt to Equity	21%	19%	23%
C. Profitability Ratio			
a) Profit before tax to :			
(i) Capital Employed	16.25%	16.73%	11.19%
(ii) Net Worth	20.01%	19.68%	11.90%
(iii) Sales	31.20%	33.55%	21.27%
b) Profit after tax to Equity Capital	38.16%	42.45%	38.53%
c) Earning per Share (Rupees)	3.82	4.24	3.85

Earning per Share (EPS) has been decreased from Rs. 4.24 in 1997-98 to Rs. 3.85 in 1998-99 even after reduction of paid up share capital from Rs. 1288.62 crore to Rs. 644.31 crore, mainly due to substantial fall in profit during the year.

### 4. Sources and Utilisation of Funds

Funds amount to Rs. 1129.14 crore from internal and external sources were generated and utilised during the year as shown below:

#### Sources of Funds

(Rs. in crore)

Funds from Operations :-

a) Net Profit for the year	248.25	
b) Add: Depreciation	277.59	525.84
c) Misc. Expenditure written off		
Adjusted during the year		4.68
d) Increase in borrowings		49.48
e) Decrease in Working Capital		549.14
<b>Total</b>		<b>1129.14</b>

#### Utilisation of Funds

a) Increase in Gross Fixed Assets	111.70
b) Increase in Capital Work-in-Progress	190.37
c) Increase in Investment	41.01
d) Reduction in paid up Capital	644.31
e) Dividend paid (including dividend tax)	141.75
<b>Total</b>	<b>1129.14</b>

### 5. Inventory Levels

The inventory levels at the close of last three years are given below :

(Rs. in crore)

	1996-97	1997-98	1998-99
(i) Raw Materials	33.22	34.31	37.96
(ii) Stores & Spares	236.81	249.14	249.07
(iii) Finished Goods and work-in-progress	89.27	112.50	156.33
(iv) Percentage of Finished goods to Sales	5.01%	6.04%	10%

### 6. Sundry Debtors

The Sundry debtors vis-a-vis sales during the last three years are given below :

Sundry Debtors				(Rs. in crore)	
Year ended as on	Considered Good	Considered Doubtful	Total	Sales during the year	% of total sundry debtors to sale
31.03.1997	340.18	3.46	343.64	1781.84	19%
31.03.1998	360.63	3.48	364.11	1863.87	20%
31.03.1999	330.17	5.05	335.22	1585.74	21%

Dated : Calcutta  
The 31<sup>st</sup> August 1999

Sd/-  
(A. Pattanayak)  
Principal Director of Commercial Audit &  
Ex-Officio Member, Audit Board - I,  
Calcutta

## Auditor's Report

To

The Members of

National Aluminium Company Limited.

We have audited the attached Balance Sheet of NATIONAL ALUMINIUM COMPANY LIMITED as at 31st March, 1999 and the Profit and Loss Account for the year ended on that date annexed thereto and report that:

1. As required by the Manufacturing and Other Companies (Auditor's Report) Order, 1988 issued by the Central Government in terms of Section 227 (4A) of the Companies Act, 1956, we annex hereto a statement on the matters specified in paragraphs 4 and 5 of the said order.
2. Further to our comments in the Annexure referred to in paragraph 1 above.
  - a. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit:
  - b. In our opinion, proper books of account as required by law have been kept by the Company so far as appears from our examination of the books:
  - c. The Balance Sheet and Profit and Loss Account referred to in this report are in agreement with the books of account:
  - d. In our opinion the Profit and Loss account and the Balance Sheet comply with the accounting standards referred to in Sub-section (3c) of section 211 of the Companies Act, except accounting for certain items of scrap on disposal and not on accrual as stated in Accounting Policy No. B.2.4 of Schedule-X.
  - e.
    - i) As stated in Note No.2.1 of Schedule Y to the Accounts depreciation charged for the year is higher by Rs.100.35 Crores and the accumulated depreciation charged upto 31.3.1999 is lower by Rs. 451.86 Crores, compared to the depreciation calculated at the rates prescribed under Schedule XIV of the Companies Act, 1956.
    - ii) As stated in note no.3 of Schedule Y to the accounts, there have been changes in the accounting policies relating to accounting of scrap arising out of replacement of major components of machineries on accrual basis, valuation of inventory of stores and spares other than insurance spares not moved for more than 5 years at 5% of the cost, valuation of Anode rejects and Butts at 45% of direct material cost and accounting of export incentives on accrual basis, which have the effect of increasing the profit for the year by Rs. 19.13 crores.

iii) Subject to the foregoing, in our opinion and to the best of our information and according to the explanations given to us, the said Balance Sheet and Profit and Loss Account together with notes thereon, give in the prescribed manner, the information required by the Companies Act, 1956 in the manner so required and give a true and fair view:

- a) in the case of the Balance Sheet of affairs of the Company as at 31st March, 1999.
- and
- b) in the case of the Profit and Loss Account, of the Profit of the Company for the year ended on that date.

For BRAHMAYYA & CO.  
CHARTERED ACCOUNTANTS.

Camp : New Delhi  
Date : 24-06-1999

V. SEETARAMAIAH  
Partner

### ANNEXURE TO THE AUDITOR'S REPORT REFERRED TO IN PARAGRAPH 1 OF OUR REPORT OF EVEN DATE.

- I.
  - a) The Company has maintained proper records to show full particulars including quantitative details and situation of its fixed assets.
  - b) The Company has a regular programme of verification of fixed assets, which is kept up during the year and which, in our opinion, is adequate and reasonable, having regard to the size of the Company and the nature of its assets, though all the fixed assets are not verified every year under the said programme. The discrepancies noticed on such verification are not material and we have noticed that they are being reconciled.
- II. None of the Fixed Assets have been revalued during the year.
- III. The Stocks of finished goods, stores, spare parts and raw materials of the Company at all its locations (except stocks with third parties and in transit) have been physically verified by the management at reasonable intervals.
- IV. In our opinion, the procedures of physical verification of stocks followed by the management are reasonable and adequate in relation to the size of the Company and the nature of its business.
- V. The discrepancies noticed on such physical verification of stocks as compared to book records were not material. Such discrepancies relating to

- shortages have been dealt within the books of account, while excesses have been ignored.
- VI. In our opinion and on the basis of our examination of the valuation of stocks, such valuation is fair and proper in accordance within the normally accepted accounting principles and is on the same basis as in the preceding year subject to the following:
- Excise Duty payable on stock of finished goods as on 31.3.1999 is not included in the value of such stock as stated in Note No.1.4 of Schedule Y to the Accounts, which has no effect on the profit for the year.
  - There have been changes in method of valuation of Scrap arising out of replacement of major components of machineries, stores and spares, other than insurance spares, not moved for more than 5 years and Anode rejects and butts as stated in Note Nos.3(a), 3(b) & 3(c) of Schedule Y to accounts.
- VII. The Company has not taken any loans, secured or unsecured, from Companies, firms or other parties listed in the registers maintained under section 301 of the Companies Act, 1956 and/or to Companies under the same management as defined under section 370(1B) of the Companies Act, 1956.
- VIII. The Company has not granted any loans, secured or unsecured, to Companies, firms or other parties listed in the register maintained under section 301 of the Companies Act, 1956 and/or to Companies under the same management as defined under section 370(1B) of the Companies Act, 1956.
- IX. The principal amounts and interest wherever applicable thereon in respect of loans and/or advances in the nature of loans given by the Company to bodies corporate and employees have been recovered regularly as stipulated except amounts due from Bharat Gold Mines Limited as stated in Note. No. 1.5 of Schedule Y to the Accounts.
- X. In our opinion and according to the information and explanations given to us, there are adequate internal control procedures commensurate with the size of the Company and the Nature of its business with regard to purchase of stores, raw materials including components, plant and machinery, equipments and other assets and with regard to sale of goods.
- XI. The Company has not purchased goods or materials or sold goods, materials or services from/to any of the parties listed in the register maintained under section 301 of the Companies Act, 1956.
- XII. As explained to us, the Company has a regular procedure for determination of unserviceable or damaged stores, raw materials finished goods. Adequate provision has been made in the accounts for the loss arising on items so determined.
- XIII. The Company has not accepted any deposits from public, in terms of Section 58A of the Companies Act.
- XIV. In our opinion, reasonable records have been maintained by the Company for the sale and disposal of realisable scrap. The Company has no by-product.
- XV. In our opinion, the Company has a reasonably adequate Internal Audit System commensurate with the size and nature of its business.
- XVI. We broadly reviewed the books of account maintained by the Company pursuant to the rules made by the Central Government for the maintenance of cost records under section 209 (1) (d) of the Companies Act, 1956 and are of the opinion that prima-facie the prescribed records have been maintained. We have not, however, made a detailed examination of the said records. As per the directions of the Central Government, Cost Auditors have been appointed to carry out detailed review of records for the year.
- XVII. The Company is regular in depositing Provident Fund dues with appropriate authorities. None of the employees of the Company is a member of the Employees' State Insurance. Family pension dues from 16.11.1995 amounting to Rs. 8.66 crores, have been deposited with NALCO Employees' Provident Fund Trust and not with Regional Provident Fund Commissioner, pending grant of exemption from such payment in view of creation of separate pension fund by the company as stated in Note No. 2.3 of Schedule Y to the Accounts.
- XVIII. According to the information and explanations given to us, no undisputed amounts payable in respect of income-tax, wealth-tax, sales-tax, customs duty and excise duty, were outstanding as at the last day of the financial year for a period of more than six months from the date they became payable.
- XIX. During the course of our examination of books of account carried out in accordance with the generally accepted auditing practices, we have not come across any personal expenses other than expenses under contractual obligations and/or generally accepted business practices which have been charged to revenue account.
- XX. The Company is not a Sick Industrial Company within the meaning of Clause(O) of Sub-section (1) of Section 3 of the Sick Industrial Companies (Special Provisions) Act, 1985.

For BRAHMAYYA & CO.,  
CHARTERED ACCOUNTANTS.

Camp : New Delhi  
Date : 24-06-1999

V. SEETARAMAIAH  
Partner

## Balance Sheet as at March 31, 1999

(In Thousand Rupees)

	Schedule	As at March 31, 1999	As at March 31, 1998
<b>SOURCES OF FUNDS :</b>			
<b>Shareholders' Funds</b>			
Share capital	A	644,30,96	1288,61,92
Reserves and Surplus	B	2191,17,14	2093,17,92
<b>Loan Funds</b>			
Secured loans	C	643,58,31	—
Unsecured loans		—	594,10,00
<b>TOTAL</b>		<b>3479,06,41</b>	<b>3975,89,84</b>
<b>APPLICATION OF FUNDS :</b>			
<b>Fixed Assets:</b>			
Gross Block	D	4883,36,83	4771,67,05
Less: Depreciation		2503,91,39	2226,32,32
Net Block		2379,45,44	2545,34,73
Capital Work-in-Progress	E	379,67,91	189,31,49
		2759,13,35	2734,66,22
<b>Investments</b>	F	84,92,40	43,91,00
<b>Current Assets, Loans and Advances</b>			
Inventories	G	443,36,63	395,94,85
Sundry Debtors		330,17,05	360,62,92
Cash and Bank Balances		22,05,23	367,91,48
Other Current Assets		26,82,29	44,67,73
Loans and Advances		227,02,69	384,99,82
		1049,43,89	1554,16,80
<b>Less: Current Liabilities &amp; Provisions</b>			
Liabilities	H	246,52,75	214,11,50
Provisions		167,90,48	147,40,33
		414,43,23	361,51,83
<b>Net current Assets</b>		635,00,66	1192,64,97
<b>Miscellaneous Expenditure</b>			
(To the extent not written off or adjusted)			
Deferred revenue expenditure	I	—	4,67,65
<b>TOTAL</b>		<b>3479,06,41</b>	<b>3975,89,84</b>
<b>Significant Accounting Policies</b>	X		
<b>Notes on Accounts</b>	Y		
<b>Additional information</b>	Z		

(Schedules A to Z form part of Accounts)

In terms of our report of  
even date attached.

For and on behalf of  
**Brahmayya & Co.**

Chartered Accountants

For and on behalf of Board of Directors

**V. Seetaramaiah**  
Partner

**New Delhi**  
24th June, 1999

**K.N. Ravindra**  
Company Secretary

**C. Venkataramana**  
Director (Finance)

**S.N. Johri**  
Chairman-cum-  
Managing Director



## Profit and Loss Account for the year ended March 31, 1999

(In Thousand Rupees)

	Schedule	Year ended March 31, 1999	Year ended March 31, 1998
<b>INCOME :</b>			
Sales	J	1506,65,01	1853,54,14
Finished goods internally consumed/capitalised		84,73	75,10
Accretion/(Decretion) to stock of finished/ intermediary products/work-in-process	K	43,83,29	23,22,81
Other income	L	178,93,16	101,17,39
		<b>1730,26,19</b>	<b>1978,69,44</b>
<b>EXPENDITURE :</b>			
Raw materials consumed	M	196,16,38	202,43,54
Power & Fuel	N	304,87,78	331,10,79
Repairs & Maintenance	O	141,66,48	106,02,93
Other Manufacturing Expenses	P	66,49,01	57,68,52
Excise Duty		109,04,04	148,10,61
Employees' Remuneration & Benefits	Q	126,06,85	116,39,26
Administrative Expenses	R	49,68,55	43,98,99
Other Expenses	S	33,91,47	4,40,61
Selling and Distribution Expenses	T	34,09,51	31,17,81
Interest & Financing Charges	U	38,05,92	36,91,59
Provisions	V	2,67,71	2,28,31
Depreciation		279,06,13	271,99,72
Deferred Revenue Expenditure written off		4,30,53	4,00
		<b>1386,10,36</b>	<b>1352,56,68</b>
<b>PROFIT FOR THE YEAR</b>		<b>344,15,83</b>	<b>626,12,76</b>
Less : Prior Period Adjustments (Net)	W	6,94,03	70,24
<b>PROFIT BEFORE TAX</b>		<b>337,21,80</b>	<b>625,42,52</b>
Less : Provision for taxation for the year		100,13,41	78,82,00
Add : Provision for taxation for earlier year written back		11,16,14	36,43
<b>PROFIT AFTER TAX</b>		<b>248,24,53</b>	<b>546,96,95</b>
Balance of profit brought forward from previous year		43,43,75	38,21,60
Transfer from Investment Allowance Reserve Utilised		198,46,18	—
Transfer from Capital Reserve		4,25	1
<b>Amount available for appropriation</b>		<b>490,18,71</b>	<b>585,18,56</b>
<b>APPROPRIATIONS</b>			
Proposed dividend		77,31,72	128,86,19
Tax on proposed dividend		8,50,49	12,88,62
Tax on deemed dividend by way of capital reduction		64,43,10	—
Transfer to General Reserve		300,00,00	400,00,00
		<b>450,25,31</b>	<b>541,74,81</b>
Balance of profit carried to Balance Sheet		<b>39,93,40</b>	<b>43,43,75</b>

**Significant Accounting Policies** X

**Notes on Accounts** Y

**Additional information** Z

(Schedules A to Z form part of Accounts)

In terms of our report of  
even date attached.

For and on behalf of

Brahmayya & Co.

Chartered Accountants

**V. Seetaramaiah**

Partner

**New Delhi**

24th June, 1999

**K.N. Ravindra**

Company Secretary

**C. Venkataramana**

Director (Finance)

**S.N. Johri**

Chairman-cum-  
Managing Director

For and on behalf of Board of Directors

## Schedules forming part of the Balance Sheet

(In Thousand Rupees)

	As at March 31, 1999	As at March 31, 1998
<b>Schedule A</b>		
<b>SHARE CAPITAL</b>		
<b>Authorised:</b>		
130,00,00,000 Equity Shares of Rs.10/- each	1300,00,00	1300,00,00
<b>Issued, Subscribed and Paid up:</b>		
64,43,09,628 Equity Shares (Previous year 128,86,19,200 shares ) of Rs. 10/- each fully paid up . Out of these shares, Government of India holds 56,14,99,635 shares (Previous year 112,29,99,270 shares). (64,43,09,572 Equity Shares were reduced on 26th March,1999 by way of capital restructuring. Refer Note 1.1 of Schedule Y )	644,30,96	1288,61,92
<b>Schedule B</b>		
<b>RESERVES &amp; SURPLUS</b>		
<b>Capital Reserve:</b>		
Grants-in-aid received from Government of India :		
As per last Balance Sheet	1,27,99	60,00
Add: Received during the year	—	68,00
	1,27,99	1,28,00
Less: Transfer to Profit & Loss Account	4,25	1
	1,23,74	1,27,99
<b>General Reserve:</b>		
As per Last Balance Sheet	1850,00,00	1450,00,00
Add: Transfer from Profit & Loss Account	300,00,00	400,00,00
	2150,00,00	1850,00,00
<b>Investment Allowance Reserve Utilised</b>		
As per Last Balance Sheet	198,46,18	198,46,18
Less: Transfer to Profit & Loss Account	198,46,18	—
	—	198,46,18
<b>Balance in Profit &amp; Loss Account</b>	39,93,40	43,43,75
<b>TOTAL</b>	<b>2191,17,14</b>	<b>2093,17,92</b>
<b>Schedule C</b>		
<b>LOAN FUNDS</b>		
<b>Secured Loans:</b>		
64,35,831 Nos of 14.5 % Non-convertible Redeemable Debentures of Rs.1,000 each, redeemable at par in three equal annual installments commencing from the end of 4th year from the date of allotment being 26th March, 2003 and secured by hypothecation of Plant & Machinery at Captive Power Plant at Angul.	643,58,31	—
<b>Unsecured Loans:</b>		
Medium term loans from Consortium of International Banks (Guaranteed by Government of India) Japanese yen loan: (Previous year 20 billion)	—	594,10,00
<b>TOTAL</b>	<b>643,58,31</b>	<b>594,10,00</b>

Note : Repaid during the year: - Japanese yen 20 billion (Rs.627,63,60), Previous Year Nil.

**Schedule D**  
**FIXED ASSETS**

(In Thousand Rupees)

Particulars of Assets	Gross Block				Depreciation				Net Block	
	As on 1.4.98	Additions	Sales/ Adjustments	As on 31.3.99	As on 1.4.98	For the Year adjustments	On sales/ 31.3.99	Upto 31.3.99	As on 31.3.99	As on 31.3.98
<b>A. PLANT, MINES AND OTHERS :</b>										
Freehold land including development costs	30,03,79	1,20	—	30,04,99	—	—	—	—	30,04,99	30,03,79
Leasehold land including development costs	2,10,03	1,13,56	3,28	3,26,87	1,06,79	10,27	—	1,17,06	2,09,81	1,03,24
Buildings	1,66,72,85	7,81,19	9,74	174,63,78	68,35,40	7,96,93	—	76,32,33	98,31,45	98,37,45
Roads, bridges and culverts	25,99,09	64,59	(6,55)	26,57,13	7,17,91	38,19	—	7,56,10	19,01,03	18,81,18
Railway sidings	50,00,65	1,61,53	—	51,62,18	29,94,67	4,45,22	—	34,39,89	17,22,29	20,05,98
Water supply, drainage and sewerage	43,34,45	2,88	(64)	43,36,69	22,70,43	2,05,64	—	24,76,07	18,60,62	20,64,02
Power supply, distribution and lighting	1,64,46,84	20,94,37	(7,28)	185,33,93	86,40,22	8,98,33	—	95,38,55	89,95,38	78,06,62
Plant and machinery	40,74,42,51	70,34,15	(37,68)	4144,38,98	1945,13,20	247,58,51	—	2192,71,71	1951,67,27	2129,29,31
Office equipments	11,96,62	2,05,61	(1,03,59)	12,98,64	4,91,53	1,25,87	(70,94)	5,46,46	7,52,18	7,05,09
Furniture and fittings	10,06,50	77,58	(12,91)	10,71,17	5,57,68	78,22	(8,19)	6,27,71	4,43,46	4,48,82
Vehicles	18,84,36	66,84	(36,35)	19,14,85	15,36,69	52,10	(34,90)	15,53,89	3,60,96	3,47,67
Miscellaneous equipments	29,77,46	2,90,07	(8,28)	32,59,25	9,09,84	1,56,50	(9,82)	10,56,52	22,02,73	20,67,62
<b>TOTAL</b>	<b>4627,75,15</b>	<b>108,93,57</b>	<b>(2,00,26)</b>	<b>4734,68,46</b>	<b>2195,74,36</b>	<b>275,65,78</b>	<b>(1,23,85)</b>	<b>2470,16,29</b>	<b>2264,52,17</b>	<b>2432,00,79</b>
<b>B.SOCIAL FACILITIES :</b>										
Freehold land including development costs	2,99,62	—	—	2,99,62	—	—	—	—	2,99,62	2,99,62
Leasehold land including development costs	35,12	—	—	35,12	17,82	1,76	—	19,58	15,54	17,30
Buildings	101,23,88	3,61,42	(20,57)	104,64,73	15,95,86	1,66,97	—	17,62,83	87,01,90	85,28,02
Roads, bridges and culverts	12,68,88	6,63	(5,29)	12,70,22	2,38,07	20,55	—	2,58,62	10,11,60	10,30,81
Water supply, drainage and sewerage	10,88,21	62,97	(40)	11,50,78	4,58,81	51,74	—	5,10,55	6,40,23	6,29,40
Power supply, distribution and lighting	10,23,58	—	(3,73)	10,19,85	4,54,18	48,33	—	5,02,51	5,17,34	5,69,40
Office equipments	8,14	4	—	8,18	6,71	29	—	7,00	1,18	1,43
Furniture and fittings	1,49,62	4,82	(7,26)	1,47,18	1,11,82	8,00	(5,00)	1,14,82	32,36	37,80
Vehicles	66,36	8,08	(1,20)	73,24	48,24	4,65	(1,19)	51,70	21,54	18,12
Miscellaneous equipments	3,28,49	65,52	5,44	3,99,45	1,26,45	18,31	2,73	1,47,49	2,51,96	2,02,04
<b>TOTAL</b>	<b>143,91,90</b>	<b>5,09,48</b>	<b>(33,01)</b>	<b>148,68,37</b>	<b>30,57,96</b>	<b>3,20,60</b>	<b>(3,46)</b>	<b>33,75,10</b>	<b>114,93,27</b>	<b>113,33,94</b>
<b>Total for current year</b>	<b>4771,67,05</b>	<b>114,03,05</b>	<b>(2,33,27)</b>	<b>4883,36,83</b>	<b>2226,32,32</b>	<b>278,86,38</b>	<b>(1,27,31)</b>	<b>2503,91,39</b>	<b>2379,45,44</b>	<b>2545,34,73</b>
<b>Total for previous year</b>	<b>4688,48,35</b>	<b>99,54,17</b>	<b>(16,35,47)</b>	<b>4771,67,05</b>	<b>1957,93,41</b>	<b>272,30,83</b>	<b>(3,91,92)</b>	<b>2226,32,32</b>	<b>2545,34,73</b>	<b>2730,54,94</b>

**Notes:**

- Plant and machinery includes capitalisation of Rs. 1760,52,81(Previous year Rs.1742,05,28)(including Rs.18,47,53during the year , Rs.7,76,78 previous year) towards net exchange variation loss in accordance with Accounting policy No. B 4.4 of schedule X.
- Depreciation for the year includes Rs.6,11 transferred to expenditure during construction period,pending capitalisation to Fixed Assets(previous year Rs.4,91) and Rs.(-)25,86 charged to prior period adjustment(Previous year Rs.26,20).
- Included in Gross Block above are the following assets laid on land not belonging to the Company:
  - Buildings - Rs. 96,87 (Previous year Rs. 95,77)
  - Roads , bridges and culverts - Rs. 295,32 (Previous year Rs.295,32)
  - Water supply , drainage and sewerage - Rs. 58,41 (Previous year Rs.12,71)
  - Power supply, distribution and lighting - Rs.482,92 (Previous year Rs.482,92).
  - Railway sidings - Rs.6,53,46 (Previous year Rs. 491,92)

(In Thousand Rupees)

	As at March 31, 1999	As at March 31, 1998
<b>Schedule E</b>		
<b>CAPITAL WORK-IN-PROGRESS</b>		
Construction and other work - in - progress at cost	229,77,83	99,48,02
Advances to contractors and suppliers for capital goods (Unsecured, considered good)	24,78,91	25,27,86
Stock of construction materials (at cost) (Including materials with contractors Rs. 98,95 Previous year Rs. 2,03,79)	36,90,25	29,50,71
Construction materials and Plant & machinery-in-transit (at cost)	26,74,24	4,18,30
Expenditure during construction pending allocation (Schedule E.1)	<u>61,46,68</u>	<u>30,86,60</u>
<b>TOTAL</b>	<b><u>379,67,91</u></b>	<b><u>189,31,49</u></b>

**Schedule E.1**

**EXPENDITURE DURING CONSTRUCTION**

(Pending allocation)

<b>Opening Balance</b>		30,86,60	6,06,65
Expenditure/Adjustments during the year			
Technical Knowhow	9,59,57		11,17,98
Technical Consultancy	18,64,28		8,52,71
Preproject Expenses	—		1,02,00
Other expenses	2,68,46		4,62,90
Depreciation	6,11		4,91
	<u>30,98,42</u>		<u>25,40,50</u>
Less: Income/Adjustments during the year			
Interest	13,26		—
Other Income	13		—
<b>TOTAL</b>	<b><u>13,39</u></b>		<b><u>—</u></b>
Net Expenditure during the year		<u>30,85,03</u>	<u>25,40,50</u>
Total Expenditure		<u>61,71,63</u>	<u>31,47,15</u>
Less: Amount allocated to Fixed assets		<u>24,95</u>	<u>60,55</u>
<b>Balance carried forward</b>		<b><u>61,46,68</u></b>	<b><u>30,86,60</u></b>

**Schedule F**

**INVESTMENTS: (At cost)**

	Face value per unit(Rs.)	As at March 31,1999 Number	As at March 31,1999 Book Value	As at March 31,1998 Number	As at March 31,1998 Book Value
<b>Trade :</b>					
<b>Long term Investments :(Unquoted)</b>					
Equity shares in International Aluminium Products Ltd. (Acquired during the year 35,14,000 shares)	10	15,924,000	15,92,40	12,410,000	12,41,00
<b>Non-Trade :</b>					
9% (Tax free)Power Finance Corporation Bonds,1988	1,000	—	—	125,000	12,50,00
10 year 9%(Tax free)Power Finance Corporation Bonds,1990	1,000	70,000	7,00,00	70,000	7,00,00
10 year 9% (Tax free) Indian Railway Finance Corporation Bonds, 1990	1,000	120,000	12,00,00	120,000	12,00,00
10 year 15% GRIDCO Bonds, 1999	1,000	500,000	50,00,00	—	—
<b>TOTAL</b>			<b><u>84,92,40</u></b>		<b><u>43,91,00</u></b>

(In Thousand Rupees)

	As at March 31, 1999	As at March 31, 1998
<b>Schedule G</b>		
<b>CURRENT ASSETS, LOANS &amp; ADVANCES</b>		
<b>Current Assets :</b>		
<b>Inventories :</b>		
<b>(As Certified by the Management)</b>		
Raw materials ( Including in transit Rs.17,70,99, Previous year Rs.18,64,33)	37,96,28	34,30,56
Stock of Finished/intermediary products/ work-in-process	156,33,19	112,49,90
Coal and fuel oil (Including in transit Rs.93,29, Previous year Rs.1,31,02)	19,98,05	27,16,96
Stores, spares and others (Including in transit Rs.22,01,67, Previous year Rs.17,32,48)	227,72,33	230,74,24
Less: Provision for nonmoving stores	—	9,18,48
	227,72,33	221,55,76
Fixed Assets retired from active use and unserviceable material	2,56,26	1,37,51
Less: Provision	1,19,48	95,84
	1,36,78	41,67
	443,36,63	395,94,85
<b>Sundry Debtors :</b>		
<b>(Unsecured)</b>		
Debts over six months		
Considered good	110,91,09	112,94,82
Considered doubtful	5,04,75	3,47,73
	115,95,84	116,42,55
Less: Provision for doubtful debts	5,04,75	3,47,73
	110,91,09	112,94,82
Other debts, considered good	219,25,96	247,68,10
	330,17,05	360,62,92
<b>Cash and Bank Balances :</b>		
Cash on hand including imprest & stamps	13,57	10,04
Cheques and postal orders on hand	8,69,68	3,03,92
Balances with Scheduled Banks:		
In Current Accounts	12,20,10	37,74,10
In Exchange Earner's Foreign Currency Account	40,87	301,73,34
In Term Deposits	30,00	30,00
In Certificates of Deposit	—	25,00,00
In Post Office Savings Accounts	7	8
Remittances in transit	30,94	—
	22,05,23	367,91,48
<b>Other Current Assets :</b>		
<b>Interest accrued :</b>		
Investments	1,89,48	83,28
Debtors	37,63	8,86,62
Bank deposits and others	1,84,31	8,56,45
Deposits with Financial Institutions	4,07,61	16,72,09
Loans to Employees	8,90,48	6,98,06
Certificate of Deposits	—	2,71,23
Accrued Export Incentives	9,72,78	—
	26,82,29	44,67,73
Sub-total of Current Assets:	822,41,20	1169,16,98

(In Thousand Rupees)

	As at March 31, 1999	As at March 31, 1998
<b>Loans and Advances :</b>		
(Unsecured, considered good unless otherwise stated)		
Loans to employees (Secured Rs.31,46,47 Previous Year Rs.28,25,71)	36,32,61	31,47,05
Stores on loan basis	30,19	60,57
Loans to Public Sector Companies(Previous year includes interest accrued and due Rs.157,50)	5,00,00	6,57,50
Short term Deposits with Financial Institutions:		
Industrial Development Bank of India	15,00,00	125,00,00
Industrial Finance Corporation of India	35,00,00	85,00,00
Industrial Credit and Investment Corporation of India	—	35,00,00
	50,00,00	245,00,00
Advances to Employees	1,90,37	2,01,78
Advance Income tax paid (net of provision)	—	7,02,57
Income Tax refund receivable	20,17,03	40,62
Advance for Sales Tax	3,95,21	—
Payments made towards disputed Sales Tax, Customs and Excise demands	18,85,21	19,84,30
Advances to others:		
Considered good	5,42,38	6,98,89
Considered doubtful	3,15,12	2,54,71
	8,57,50	9,53,60
Less: Provision for doubtful advances	3,15,12	2,54,71
	5,42,38	6,98,89
Prepaid Expenses	2,47,87	2,54,42
Claims Recoverable: Considered good	79,67,96	57,58,42
Considered doubtful	4,26,00	5,70,11
	83,93,96	63,28,53
Less: Provision for doubtful claims	4,26,00	5,70,11
	79,67,96	57,58,42
<b>Deposits with :</b>		
Customs Authorities	32,95	6,40
Port Authorities	33,29	23,90
Excise Authorities	3,09	47,08
Other Government Departments	68,64	77,20
Others	1,55,89	3,39,12
	2,93,86	4,93,70
Sub-total of Loans and Advances:	227,02,69	384,99,82
<b>Total</b>	<b>1049,43,89</b>	<b>1554,16,80</b>

Note : Loans due from Directors as on 31.3.99 - Rs.1,49 maximum amount due during the year Rs.1,95 (Previous year - Rs. 17 maximum amount due Rs. 1,70)

(In Thousand Rupees)

	As at March 31, 1999	As at March 31, 1998
<b>Schedule H</b>		
<b>CURRENT LIABILITIES &amp; PROVISIONS</b>		
<b>Current Liabilities:</b>		
Sundry creditors:		
on Capital account	47,84,34	18,32,16
Others	62,81,67	71,90,36
Other liabilities (Including advances from customers of Rs.9,73,03, previous year Rs.7,13,70)	97,34,19	94,11,46
Security deposits	36,99,15	29,65,55
Interest accrued but not due on foreign loans	—	11,97
Interest accrued but not due on debentures	1,53,40	—
	246,52,75	214,11,50
<b>Provisions:</b>		
For taxation (Net of advance payment)	11,27,22	1,90
For proposed dividend	77,31,72	128,86,19
For tax on proposed dividend	8,50,49	12,88,62
For tax on deemed dividend	64,43,10	—
For leave encashment and post retirement medical benefits	6,37,95	5,63,62
	167,90,48	147,40,33
<b>Total</b>	<b>414,43,23</b>	<b>361,51,83</b>

**Schedule I**

**DEFERRED REVENUE EXPENDITURE :**

Particulars	Balance as at April 1, 1998	Additions/ Adjustments during the year	Written off during the year	Balance As at March 31, 1999
Interest and Penalties on Sales Tax in respect of works contract	4,26,73	(20)	4,26,53	—
Expenditure on un-successful projects	4,00	—	4,00	—
Expenditure on new projects	36,92	36,92	—	—
<b>Total for current year</b>	<b>4,67,65</b>	<b>36,72</b>	<b>4,30,53</b>	<b>—</b>
<b>Total for previous year</b>	<b>5,36,58</b>	<b>(64,93)</b>	<b>4,00</b>	<b>4,67,65</b>

## Schedules forming part of Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1999	Year ended March 31, 1998
<b>Schedule J</b>		
<b>SALES</b>		
<b>Export :</b>		
Calcined Alumina	422,83,96	344,16,18
Aluminium Standard and Sow Ingots	187,29,89	314,89,43
Aluminium Billets	22,03,24	20,42,06
	<u>632,17,09</u>	<u>679,47,67</u>
<b>Domestic :</b>		
Alumina Hydrate	5,45,45	4,40,72
Calcined Alumina	30,73	37,97
Aluminium Standard and Sow Ingots	519,84,15	712,72,49
Aluminium Wire Rods	242,74,01	352,31,81
Aluminium Billets	22,41,05	45,20,12
Electricity	83,72,53	59,03,36
	<u>874,47,92</u>	<u>1174,06,47</u>
<b>TOTAL</b>	<b><u>1506,65,01</u></b>	<b><u>1853,54,14</u></b>

### Schedule K

#### ACCRETION/(DECRETION) TO FINISHED/WORK-IN-PROCESS/INTERMEDIARY PRODUCTS

	Year ended March 31, 1999	Year ended March 31, 1998
<b>Closing Stock :</b>		
Finished Products	82,90,24	42,79,76
Intermediary Products	45,09,84	46,16,52
Work-in-process	<u>28,33,11</u>	<u>23,53,62</u>
	<u>156,33,19</u>	<u>112,49,90</u>
<b>Opening Stock :</b>		
Finished Products	42,79,76	29,84,01
Intermediary Products	46,16,52	33,08,47
Work-in-process	<u>23,53,62</u>	<u>26,34,61</u>
	<u>112,49,90</u>	<u>89,27,09</u>
<b>Accretion/(Decretion)</b>	<b><u>43,83,29</u></b>	<b><u>23,22,81</u></b>



(In Thousand Rupees)

	Year ended March 31, 1999	Year ended March 31, 1998
--	------------------------------	------------------------------

**Schedule L**

**OTHER INCOME**

Interest on/from

Investments	3,33,45	2,83,50
Debtors	7,96,73	19,15,85
Bank Deposits and others	8,80,71	8,04,90
Certificates of Deposit	1,57,48	4,02,68
Deposits with Financial Institutions	20,94,41	27,63,71
Loans to Employees	2,23,11	1,87,90
Loans to Public Sector Companies	—	70,00
Exchange variation gain	46,67,73	18,20,49
Export incentives	76,16,62	7,47,24
Stock yard recoveries	3,16,94	2,77,03
Profit on sale of fixed assets	9,34	5,81
Sale of scrap	2,08,04	2,04,66
Receipt for rent, electricity & water charges	1,57,77	1,25,02
Miscellaneous Income	4,30,83	5,08,60
<b>TOTAL</b>	<b>178,93,16</b>	<b>101,17,39</b>

Tax deducted at source from interest from debtors Rs.32,19 (previous year Rs.66,00), from interest on deposits with banks and financial institutions Rs.5,54,10 (previous year Rs.2,18,58)

**Schedule M**

**RAW MATERIALS CONSUMED**

	Year ended March 31, 1999		Year ended March 31, 1998	
	Quantity (MT)	Value	Quantity (MT)	Value
Caustic soda	71,584	70,71,55	57,957	44,78,22
C.P.Coke	74,106	64,95,17	97,351	88,14,08
C.T.Pitch	16,822	16,85,20	21,392	21,23,81
Aluminium fluoride	5,161	19,70,71	6,168	22,88,76
Lime	12,429	3,51,37	21,908	3,63,90
Crystal growth modifier	287	3,60,60	201	2,21,59
Purchased anodes	1825 Nos	8,18,59	3810 Nos	12,33,07
Others		8,63,19		7,20,11
<b>TOTAL</b>		<b>196,16,38</b>		<b>202,43,54</b>

(In Thousand Rupees)

	Year ended March 31, 1999	Year ended March 31, 1998
<b>Schedule N</b>		
<b>POWER &amp; FUEL</b>		
Coal	202,54,96	210,34,36
Fuel oil	64,01,82	71,16,96
Duty on self generation	35,84,61	42,74,81
Power transmission charges	2,17,46	2,15,05
Purchased power	28,93	4,69,61
<b>TOTAL</b>	<b>304,87,78</b>	<b>331,10,79</b>
<b>Schedule O</b>		
<b>REPAIRS &amp; MAINTENANCE</b>		
Buildings	10,50,95	5,94,20
Machinery	123,55,66	91,97,08
Others	7,59,87	8,11,65
<b>TOTAL</b>	<b>141,66,48</b>	<b>106,02,93</b>
<b>Schedule P</b>		
<b>OTHER MANUFACTURING EXPENSES</b>		
Royalty & Cess	11,50,58	10,86,41
Freight inwards	14,57,70	21,42,14
Consumption of stores	31,22,02	19,67,38
Water charges	1,64,82	1,36,00
Technical assistance fee & expenses	5,98,82	4,36,59
Others	1,55,07	—
<b>TOTAL</b>	<b>66,49,01</b>	<b>57,68,52</b>
<b>Schedule Q</b>		
<b>EMPLOYEES' REMUNERATION AND BENEFITS</b>		
Salaries, wages, bonus & exgratia	91,97,89	83,25,61
Contribution to Provident & Pension funds	7,11,38	5,96,71
Provision for leave encashment and post-retirement medical benefits	74,32	1,22,34
Staff welfare expenses	24,44,00	24,97,53
Gratuity	1,79,26	97,07
<b>TOTAL</b>	<b>126,06,85</b>	<b>116,39,26</b>

(In Thousand Rupees)

	Year ended March 31, 1999	Year ended March 31, 1998
<b>Schedule R</b>		
<b>ADMINISTRATIVE EXPENSES</b>		
Rent	1,11,04	1,46,90
Rates and taxes	68,65	74,75
Insurance	2,28,73	1,94,08
Repairs & Maintenance :		
Buildings	2,22,21	1,97,58
Others	3,17,84	1,51,60
Vehicle operating expenses	85,05	79,27
Consumption of stores	94,51	77,31
Recruitment expenses	31,59	26,59
Bank charges	1,46,48	1,33,52
Legal expenses	55,47	46,21
Printing & Stationery	1,20,26	1,19,05
Electronic data processing expenses	1,37,09	75,54
Communication expenses	3,85,02	3,35,81
Advertisement & publicity	2,51,13	2,08,60
Electricity & water charges	2,40,17	2,33,26
Travelling expenses	4,59,83	5,26,74
Directors' sitting fees	—	13
Hire charges for machinery and vehicles	2,43,81	2,19,62
Management development & training	1,48,94	2,27,55
Consultancy charges	84,92	59,89
CISF and other security expenses	10,67,43	8,82,35
Fire fighting services	1,35,30	1,01,24
Miscellaneous expenses	3,33,08	2,81,40
	<u>49,68,55</u>	<u>43,98,99</u>
<b>Schedule S</b>		
<b>OTHER EXPENSES</b>		
Research & development expenses	61,08	30,91
Plantation and horticulture	98,87	74,77
Environment and pollution control	27,17	21,84
Peripheral development expenses	5,51,57	1,03,43
Debenture issue expenses	4,83,32	—
Auditors' remuneration :		
Statutory audit fee	2,25	2,25
Tax audit fee	75	75
Certification charges	15	15
Audit expenses *	4,60	1,20
Cost audit fee & expenses	86	1,20
Donations	—	17,14
Demurrage	23,71	17,17
Loss on sale of assets	5,75	10,16
Loss on sale of scrap	2,68	93,36
Non-moving stores & spares written off	30,00,94	—
Less : Provision in earlier years	<u>9,18,48</u>	
	20,82,46	—
Claims, receivables and debts etc. written off	46,25	66,28
	<u>33,91,47</u>	<u>4,40,61</u>

\*Audit expenses for the previous year is net of Rs.2,90 of excess provision of earlier years.

(In Thousand Rupees)

	Year ended March 31, 1999	Year ended March 31, 1998
<b>Schedule T</b>		
<b>SELLING AND DISTRIBUTION EXPENSES</b>		
Packing and forwarding	96,25	1,62,36
Freight outwards and handling (net of recoveries)	17,77,33	20,97,90
Cash discount	10,40,37	4,58,57
Commission to selling agents	—	9,54
Demurrage	14,06	11,27
Bank charges	70,69	51,42
Others	4,10,81	3,26,75
<b>TOTAL</b>	<b>34,09,51</b>	<b>31,17,81</b>
<b>Schedule U</b>		
<b>INTEREST AND FINANCING CHARGES</b>		
Interest on :		
Medium term foreign loans	11,73,39	21,45,03
Debentures	1,53,40	—
Others	3,77,91	3,34,36
Exchange variation	15,07,00	6,31,92
Guarantee fee on foreign loans	5,94,22	5,80,28
<b>TOTAL</b>	<b>38,05,92</b>	<b>36,91,59</b>
<b>Schedule V</b>		
<b>PROVISIONS</b>		
Non moving stores & spares	—	1,03,36
Unserviceable materials	23,64	57,50
Doubtful debts	1,57,02	2,27
Doubtful advances	70,54	(19,61)
Doubtful insurance claims	(8,58)	(11,56)
Sundry claims	25,09	96,35
<b>TOTAL</b>	<b>2,67,71</b>	<b>2,28,31</b>
<b>Schedule W</b>		
<b>PRIOR PERIOD ADJUSTMENTS(NET)</b>		
Interest from debtors	6,58,07	—
Interest on loan to public sector company	1,57,50	—
Raw materials consumed	10,28	30,52
Power & fuel	—	(21,26)
Repairs & maintenance	45,94	91,18
Other manufacturing expenses	(3,41)	—
Employees' remuneration & benefits	—	12,91
Administrative expenses	18,04	49,90
Selling & distribution expenses	(1,63)	12,69
Provisions	(1,64,90)	(1,31,90)
Depreciation	(25,86)	26,20
<b>TOTAL</b>	<b>6,94,03</b>	<b>70,24</b>

Figures in brackets represent credits.

## Schedules forming part of the Accounts

### Schedule - X

#### SIGNIFICANT ACCOUNTING POLICIES

##### A. BASIS OF ACCOUNTING :

The Company prepares its accounts on accrual basis under historical cost convention in accordance with mandatory accounting standards.

##### B. BALANCE SHEET :

###### 1. FIXED ASSETS :

- 1.1 All fixed assets are stated at historical cost less depreciation. Cost of acquisition is inclusive of freight, duties, taxes and net of MODVAT credit.
- 1.2 Direct revenue expenditure including financing cost incurred during construction period on New/ Expansion projects is treated as expenditure during construction and is allocated to relevant fixed assets.
- 1.3 Expenses on development of land including leasehold land is capitalised as part of cost of land.
- 1.4 Expenses of capital nature incurred on assets laid on land not belonging to the Company are capitalised under appropriate asset heads.
- 1.5 Where final bills/statements of account are not received, capitalisation of assets has been made provisionally on the basis of technical assessments which may undergo change on settlement of final bills / receipt of statements of account.
- 1.6 Fixed assets acquired out of financial grant from Government are shown at gross cost by crediting the grants-in-aid received to Capital Reserve. Equivalent amount of depreciation written off on such assets in each year is transferred from Capital Reserve to Profit & Loss Account.

###### 2. INVENTORIES :

- 2.1 Raw materials, stores, spare parts and loose tools are valued at weighted average cost and net of MODVAT credit.
- 2.2 Finished goods are valued at lower of cost or net realisable value. Cost is determined on the basis of relevant year's average cost of production and excludes administrative overheads, selling and distribution overheads, interest, exchange variation, depreciation on capitalised exchange variation.
- 2.3 Intermediary product, viz. Anodes are valued at direct material cost. Anode butts and anode rejects are valued at 45 % of direct material cost (being 50% of direct material cost less 10% thereof towards reprocessing cost).
- 2.4 Aluminium scrap and scrap arising out of replacement of major machinery components, is accounted for on accrual basis. Other scrap is accounted on disposal.

- 2.5 Stocks of work-in-process are ascertained on the basis of technical estimates and are valued at annual average direct material and power & fuel cost.

- 2.6 Inventory of stores and spares, other than insurance spares, not moved for more than 5 years is valued at 5 % of cost.

##### 3. DEFERRED REVENUE EXPENDITURE :

Expenditure on feasibility studies, preparation of project reports, documentations and other related matters on new/expansion projects and unsuccessful projects and capital contribution to external Research & Development Institutions to the extent not adjusted, are grouped under this head pending capitalisation / write off. Expenditure on unsuccessful projects and capital contribution to external Research & Development Institutions are written off over a period of three years.

##### 4. FOREIGN CURRENCY TRANSACTIONS :

- 4.1 Exports and imports during the year in foreign currency are recorded in Indian rupees by applying average Bill Buying and Bill Selling rates of the respective months.
- 4.2 Other transactions in foreign currency are accounted for at the exchange rates prevailing on the date of the transactions.
- 4.3 All foreign currency assets and liabilities are stated at the rates prevailing as on the date of the Balance Sheet.
- 4.4 Exchange differences relating to acquisition of fixed assets are adjusted against relevant fixed assets. Other exchange differences arising out of their settlement and restatement are dealt with in the Profit & Loss Account.

##### C. PROFIT AND LOSS ACCOUNT :

###### 1. DEPRECIATION :

- 1.1 Depreciation is provided under straight line method.
- 1.2 Depreciation was charged in respect of main Plant and Machinery and related Factory Buildings and Storage godowns etc., at the rate of 5 per cent up to 31st March, 1994, based on estimated useful life of assets being 20 years without retention of 5 per cent residual value. The useful life of these assets have been revised to 18 years to bring at par with life of "Continuous process plant" as envisaged in Schedule XIV of Companies Act, 1956. Such change in life of assets has been considered from 1.4.93 i.e. from the year of introduction of "Continuous process plant" concept in Schedule XIV of Companies Act, 1956. Depreciation rates on such assets have been recomputed based on guidelines

issued under Circular No.14/93 dated, 20.12.93 by Department of Company Affairs, by allocating the unamortized value over the remaining life after retention of 5 per cent residual value except for assets already written off fully.

- 1.3 Depreciation rates on the following assets are considered based on the estimated useful life of assets which are higher than the respective rates prescribed in Schedule XIV of Companies Act, 1956.

Assets	Rate of Depreciation
Red mud pond (Earth work portion)	14.29%
Ash pond at Alumina Refinery (Earth work portion)	13.34%
Ash pond at Captive Power Plant	15.38%

- 1.4 Depreciation on all other assets is provided as per rates laid down in Schedule XIV of the Companies Act, 1956.
- 1.5 Assets costing Rs. 5,000/- or less individually are depreciated fully in the year in which they are put to use.
- 1.6 Exchange variation loss/gain adjusted to cost of Plant and Machinery is fully depreciated prospectively over the residual life of assets.
- 1.7 Assets laid on land not belonging to the Company are depreciated over a period of five years.
- 1.8 Cost of leasehold land including development expenses thereon is amortised over a period of 25 years in the case of Mines and 20 years or the period of lease whichever is less in other cases commencing from the year of commercial operation.

## 2. PRIOR PERIOD INCOME/EXPENDITURE AND PRE-PAID EXPENSES :

*Income/Expenditure relating to prior period and prepaid expenses which do not exceed Rs.1 lakh in each case are treated as income/expenditure of the current year.*

## 3. RECOGNITION OF REVENUE :

- 3.1 Export sales are recognised based on the date of Bill of Lading irrespective of terms of sale viz. FOB, C&F, CIF etc. Indigenous sales are recognised based on the date of Railway Receipt, Lorry Receipt or Delivery Challan.
- 3.2 Claims are accounted for in the Profit and Loss Account based on certainty of their realisation.

- 3.3 Interest receivable is accounted for based on certainty of realisation from past experience.

- 3.4 Export incentives in the form of credit earned on exports made during the year, under Duty Entitlement Pass Book (DEPB) and Special/ Advance Licences, are treated as income at actual credit and estimated realisable value respectively.

- 3.5 Consumption of raw materials and stores & spares are accounted for at net of MODVAT credit.

## 4. EXCISE DUTY :

Excise Duty is accounted for on despatch of products from the factory.

## 5. REPAIRS AND REPLACEMENTS :

- 5.1 Replacements of major machinery components of high value items of gear boxes, transformers, conveyor belts, wire ropes etc are charged to Profit & Loss account in the year of replacement after adjustment of estimated realisable value of the scrap arising there from.
- 5.2 Pot relining expenses are charged to Profit and Loss Account in the year of occurrence.

## 6. RETIREMENT BENEFITS :

- 6.1 Contributions to Provident Fund is recognised in Profit & Loss Account on the basis of actual liability.
- 6.2 Liability on account of service gratuity is covered under Group Gratuity Life Assurance Scheme of Life Insurance Corporation of India. Contributions to the scheme are charged to Profit and Loss Account.
- 6.3 Liabilities towards other retirement benefits like leave encashment and post retirement medical facilities to employees as at the end of the year are provided for on the basis of actuarial valuation.

## 7. RESEARCH & DEVELOPMENT EXPENDITURE :

Research and development expenditure except of capital nature, is charged to Profit & Loss Account in the year of incurring after setting off of incidental income.

## 8. DIVIDEND :

Proposed dividend, subject to approval of Central Government under Section 205(1)(c) of the Companies Act, 1956 and awaiting approval of shareholders, is provided in the accounts.

**Schedule -Y**

**NOTES FORMING PART OF THE ACCOUNTS**

**1. Balance Sheet :**

**1.1 Share Capital :**

As per Capital Restructuring scheme of the Company, approved by the shareholders in the Extraordinary General Body Meeting held on 18th February, 1999 and confirmed by the Central Government, 64,43,09,572 equity shares of Rs 10 each have been reduced from the paid up equity capital of Rs.1288.61 crores of 128,86,19,200 equity shares in lieu of allotment of 64,35,831 number of 14.5% Non-convertible Redeemable Secured Debentures of Rs.1000/- each amounting to Rs.643.58 crore and refund of Rs.0.73 crore to the shareholders.

**1.2 Land :**

a) Value of Freehold land includes advance payments made for acquisition through State Government. Land acquisition proceedings are still in progress and it is possible that further claims may be made upon the Company. Relevant title deeds for the acquired land, except a few have been executed.

b) Land taken by the Company includes Government land on lease basis. Though the Company has been permitted by the Government to use such land, formalities for legal transfer are yet to be completed. Value of leasehold land represents amount deposited with the State Government and estimated liabilities provided for.

**1.3 Contingent Liabilities :**

	As at 31st March'99	As at 31st March'98 (Rs.in crore)
a) Estimated amount of contracts to be executed on capital account (net of advances and Lcs opened)	618.49	197.89
b) Outstanding letters of credit, guarantees and counter guarantees	104.88	43.32
c) Claims against the Company not acknowledged as debts :		
i) Sales Tax on:		
Works contracts	6.05	8.87
Sale of products	61.08	124.47
ii) Excise Duty on fabrication works	6.12	6.10
iii) Customs Duty on design/ engineering charges, steel billets & other claims	17.57	16.97

	As at 31st March'99	As at 31st March'98 (Rs.in crore)
iv) Claims of contractors & suppliers	25.68	26.64
v) Land acquisition & interest thereon	19.68	14.00
vi) Claims made by GRIDCO not covered by contractual terms:		
Transmission charges	66.28	—
Energy charges	6.55	0.25
vii) Contribution to Mineral Exploration Fund	1.28	1.28
viii) Excise Duty for non submission of :		
a) Proof of export	3.55	16.61
b) Other documents	29.63	39.76
ix) Unrealised bank guarantees due to court injunctions.	0.77	1.13
x) Income Tax	0.17	—
xi) Bauxite cess	8.34	—
xii) Road Tax	0.40	—
<b>TOTAL</b>	<b>253.15</b>	<b>256.08</b>

An amount of Rs.18.85 crore (Previous year Rs.19.84 crore) paid under protest against some of the above demands is shown under Loans and Advances. Besides above, a few more cases in respect of escalation and extra claims for works contracts have been referred to arbitration and monetary value of such claims is not ascertainable.

1.4 Liability towards Excise Duty is accounted for at the time of clearance of the goods from the factory. Accordingly, no provision has been made in the accounts towards estimated Excise Duty payable on the stocks of finished goods held at the factory as on 31.3.99, amounting to Rs.11.92 crore (previous year as on 31.3.98 Rs.5.67 crore). This method of accounting has no effect on the profit for the year.

1.5 Bharat Gold Mines Limited (BGML) was paid a working capital loan of Rs. 5 crore during May 1989, repayable within six months. BGML has been referred to BIFR under Sick Industrial Companies (Special Provisions) Act, 1985 and has defaulted in repayment of principal. The above amount is considered good, in view of assurance given by Government of India and as BGML is a Government Company.

1.6 The Company has explained to Excise & Customs Authorities that the transit and handling losses of exportable alumina occurred during earlier years were within 1.5% of the quantity handled considered as normal. Accordingly, no provision is considered necessary towards probable excise

duty liability amounting to Rs.0.98 crore (previous year Rs.1.52 crore) that may arise in the event of the Excise Authorities not accepting the Company's plea and levying duty on such shortages, as the Company has not received any show cause notice from the Excise Authorities.

- 1.7 Dues to various Small Scale Industrial Units amounting to Rs.1.02 crore has been grouped under Current Liabilities. There are no dues to Small Scale Industrial Units for more than thirty days in excess of rupees one lakh in each case.

## 2. Profit and Loss Account :

- 2.1 The depreciation rates followed by the Company in respect of certain assets are at variance with the rates specified in Schedule XIV as explained in Accounting Policy No.C1.2, 1.3 and 1.6. Had the depreciation been calculated in respect of those assets by applying the rates specified in Schedule XIV of Companies Act, 1956, the charge for the year would have been lower by Rs.100.35 crore (previous year lower by Rs. 98.88 crore). However the cumulative shortfall in depreciation under Section 205(2) of the Companies Act upto 31.3.99 is Rs.451.86 crore (previous year Rs.552.21 crore). Such shortfall of depreciation is being provided through higher rates adopted as above than those required under Schedule XIV of Companies Act, over the balance life of assets.
- 2.2 Pending finalisation of revision of pay scales of IDA employees with effect from 01.01.1997, a provision of Rs.13.45 crore (previous year Rs.10.46 crore and cumulative provision of Rs.27.67 crore) has been made towards likely liability on account of such revision.
- 2.3 The Company has introduced its own "Employees Pension Scheme" with effect from 1.4.95 which has been recognised by Income Tax Department. In terms of para 39 of Employees Pension Scheme'95 (EPS'95), the Company has sought exemption from operation of EPS'95, which is awaited. Pending grant of recognition to Company's Pension scheme, the amounts otherwise payable to RPFC under EPS'95, amounting to Rs.8.66 crore from 16.11.95 to 31.3.99 has been retained with the Nalco Employees Provident Fund Trust.
- 2.4 In respect of self generation of power, the cost under "Power and Fuel" consists of consumption of

coal and fuel oil but does not include other expenses of generation and consumption of certain other materials, which have been included under the primary heads of account.

- 2.5 Disputed interest/penalty amounting to Rs.4.27 crore (previous year Rs.4.27 crore) in respect of works contracts treated as deferred revenue in earlier years has been charged to Profit and Loss Account for the year.
- 2.6 Provision made for taxation in previous year has been written back to the extent of Rs.11.16 crore based on the opinion of the Counsel and the return of income filed by the Company.
3. The changes made in the method of accounting during the year have the following effect on the amounts in financial statements :
- Consequent to change in method of accounting of scrap arising out of replacement of major components of machineries to accrual basis (Policy No.B.2.4), both the inventory and profit for the year are increased by Rs.0.24 crore.
  - Consequent to change in method of valuation of inventory of stores and spares other than insurance spares not moved for more than five years to 5% of the cost (Policy No. B.2.6), both the inventory and profit for the year are reduced by Rs.20.82 crore.
  - Consequent to change in method of valuation of Anode rejects and butts from lower of cost or net realisable value to 45 % of direct material cost, both the inventory and profit for the year are increased by Rs.0.58 crore.
  - Consequent to change in method of accounting in respect of export incentives from cash basis to accrual basis (Policy No. C.3.4), there is an increase in Capital Work in progress by Rs.3.68 crore, inventory by Rs.11.05 crore, accrued export incentives by Rs.9.73 crore, claims receivable by Rs.14.67 crore, with corresponding increase in the profit for the year by Rs.39.13 crore (inclusive of Rs.7.34 crore relating to accrual of previous year).
4. Previous year's figures have been regrouped/ rearranged wherever necessary to make them comparable with those of current year.



## Additional information forming part of accounts for the year ended 31st March, 1999

### Schedule – Z

	Current Year (Rs. in lakhs)	Previous Year (Rs. in lakhs)
<b>1. Whole-time Directors' Remuneration :</b>		
Salaries (Previous year including arrear salary)	15.86	18.74
Company's contribution to Provident Funds & Gratuity scheme	1.80	1.55
Leave travel concession	0.48	1.08
Medical benefits	1.29	0.76
Other Benefits	5.89	8.37
<b>TOTAL</b>	<b>25.32</b>	<b>30.50</b>

(In addition, each whole time director is allowed the use of Company's car for private purposes up to 750 kms per month on payment of Rs. 7,200/- or Rs. 4,800/- per annum as applicable)

<b>2. Expenditure incurred in Foreign Currency on cash basis :</b>		
Interest on loans	1,186.28	2,161.26
Continued technical assistance to Aluminium Pechiney	348.83	270.98
Payments to consultants/supervision charges	387.00	886.73
Travelling expenses	60.04	58.16
Agency commission on sales	--	9.54
Books, periodicals , advertisement , bank charges etc.	40.36	25.84
<b>TOTAL</b>	<b>2,022.51</b>	<b>3,412.51</b>

<b>3. Earnings in Foreign Currency on cash basis :</b>		
Export of goods	55,049.86	65,646.75
Interest on bank deposits	889.18	403.57
Despatch money	48.91	47.19
<b>TOTAL</b>	<b>55,987.95</b>	<b>66,097.51</b>

<b>4. Value of Imports calculated on CIF basis :</b>		
Raw materials	4,798.53	5,132.60
Components, spare parts and construction materials	1,268.63	2,662.80
Capital goods	3,453.27	3,066.56
<b>TOTAL</b>	<b>9,520.43</b>	<b>10,861.96</b>

### 5. Value of Raw materials, stores, spares & components consumed during the year :

	Current Year		Previous Year	
	Value	%	Value	%
<b>a) Raw materials:</b>				
Imported	6,072.97	30.96	5,817.00	28.74
Indigenous	13543.41	69.04	14426.54	71.26
<b>TOTAL</b>	<b>19616.38</b>	<b>100.00</b>	<b>20243.54</b>	<b>100.00</b>
<b>b) Stores, spares and components:</b>				
Imported	5192.48	34.75	3800.77	32.13
Indigenous	9748.48	65.25	8026.88	67.87
<b>TOTAL</b>	<b>14940.96</b>	<b>100.00</b>	<b>11827.65</b>	<b>100.00</b>

**6. Licenced Capacity, Installed Capacity and Actual Production/Generation :**

Products	Licenced Capacity	Installed Capacity		Actual Production/Generation	
		Current year (In Tonnes)	Previous year (In Tonnes)	Current year (In Tonnes)	Previous year (In Tonnes)
Bauxite	Not Applicable	24,00,000	24,00,000	28,06,288	26,61,557
Aluminium Hydrate	Not Applicable	8,00,000	8,00,000	9,01,000	8,88,000
Calcined Alumina	Not Applicable	8,00,000	8,00,000	8,94,500	8,83,300
Aluminium Standard Ingots	Not Applicable	1,00,000	1,00,000	53,666	75,246
Aluminium Sow Ingots	Not Applicable	—	—	54,332	70,869
Aluminium Wire rods	Not Applicable	100,000	100,000	30,996	43,248
Aluminium Billets	Not Applicable	30,000	30,000	6,742	10,529
Electricity	Not Applicable	720 MW	720MW	3,588 MU	3,902 MU

Note: 1. Installed capacities are as per project report.

2. Bauxite of 27,92,105 MT (previous year 26,91,824 MT), Alumina Hydrate of 8,94.906 MT (previous year 8,83,460 MT), Calcined Alumina of 2,81,353 MT (previous year 3,92,478 MT) and Electricity of 2,668 MU (previous year 3,244 MU) have been consumed internally during the year.

3. The Aluminium production does not include production of 131 MT (previous year 182 MT) of bus bar and 339 MT (previous year 88MT) of Anode stem and wedges produced for internal consumption.

**7. Stocks and Sales :**

Products	Opening Stock		Sales		Closing Stock	
	Quantity	Value	Quantity	Value	Quantity	Value
	In Tonnes	Rs. in lakhs	In Tonnes	Rs. in lakhs	In Tonnes	Rs. in lakhs
Bauxite	4,04,534 (4,42,796)	424.75 (615.48)	- -	- -	4,15,923 (4,04,534)	453.35 (424.75)
Alumina Hydrate	6 (11)	0.15 (0.31)	5,869 (4,771)	545.45 (440.72)	4 (6)	0.12 (0.15)
Calcined Alumina	67,131 (58,055)	2,284.03 (2109.94)	6,11,222 (4,80,149)	42,314.69 (34,454.15)	71,609 (67,131)	2,645.04 (2,284.03)
Aluminium Standard ingots	2,397 (390)	800.22 (127.14)	1,02,327 (1,44,024)	70,714.04 (102,761.92)	8,006 (2,397)	3,378.58 (800.22)
Aluminium Wire rods	116 (282)	40.27 (112.89)	29,622 (43,412)	24,274.01 (35,231.81)	1,492 (116)	760.08 (40.27)
Aluminium Billets	1,878 (48)	730.34 (18.25)	6,489 (8,699)	4,444.29 (6,562.18)	2,129 (1,878)	1,053.07 (730.34)
Electricity (in MU net)	- -	- -	920 (658)	8,372.53 (5,903.36)	- -	- -

Note : 1. Figures in brackets pertain to those of previous year.

2. The closing stock of Aluminium ingots includes 5294 MT of Sow ingots (previous year 1659 MT)

3. Figures of closing stock are after adjustment of shortages of Bauxite 2794 MT (Previous year 7995 MT), Aluminium Standard & Sow ingots 62 MT (previous year 84 MT), Aluminium Billets 2 MT (previous year NIL), Alumina Hydrate 227 MT ( previous year excess 226 MT) and excess in Calcined Alumina 2571 MT (previous year shortage 1597 MT), Aluminium Wire rods 2 MT (previous year shortage 2 MT). Corresponding insurance claims are lodged in respect of transit shortages of Aluminium Ingots, Wire rods and billets.

**8. Social Amenities :**

(Rs. in lakhs)

Expenses	Township	Education	Medical	Social/Cultural	Canteen	Total
Payments to employees	138.81	—	418.08	5.61	102.63	665.13
Welfare expenses	—	510.58	343.00	69.13	265.31	1,188.02
Materials consumed	73.39	—	136.49	—	0.59	210.47
Repairs & maintenance	615.35	6.02	8.24	8.29	—	637.90
Power, fuel & water charges	266.21	—	0.44	—	0.13	266.78
Depreciation	287.95	9.94	8.23	8.59	5.89	320.60
<b>TOTAL</b>	<b>1,381.71</b>	<b>526.54</b>	<b>914.48</b>	<b>91.62</b>	<b>374.55</b>	<b>3,288.90</b>
Less: Recoveries	144.53	—	7.84	—	—	152.37
<b>Net Expenditure</b>	<b>1,237.18</b>	<b>526.54</b>	<b>906.64</b>	<b>91.62</b>	<b>374.55</b>	<b>3,136.53</b>
For previous year	975.07	381.92	714.82	157.64	581.62	2,811.07

**9. Balance Sheet Abstract and Company's General Profile :**

**i) Registration Details :**

Registration No. 1500920  
State Code 15  
Balance Sheet Date 31st March 1999

(in thousand rupees)

	<u>Current Year</u>	<u>Previous Year</u>
<b>ii) Capital raised during the year :</b>		
Public Issue	Nil	Nil
Right Issue	Nil	Nil
Bonus Issue	Nil	Nil
Private Placement	Nil	Nil
<b>iii) Position of mobilisation and deployment of Funds :</b>		
Total Liabilities	3479,06,41	3975,89,84
Total Assets	3479,06,41	3975,89,84
<b>Sources of Funds :</b>		
Paid-up Capital	644,30,96	1288,61,92
Reserves & Surplus	2191,17,14	2093,17,92
Secured Loans	643,58,31	Nil
Unsecured Loans	Nil	594,10,00
<b>Application of Funds :</b>		
Net Fixed Assets	2759,13,35	2734,66,22
Investments	84,92,40	43,91,00
Net Current Assets	635,00,66	1192,64,97
Misc. Expenditure	Nil	4,67,65
Accumulated losses	Nil	Nil
<b>iv) Performance of the Company :</b>		
Turnover	1506,65,01	1853,54,14
Total Expenditure	1393,04,39	1358,28,53
Profit/Loss before Tax	337,21,80	625,42,52
Profit/Loss after Tax	248,24,53	546,96,95
Earning per Share (In Rupees)	3.85*	4.24
Dividend rate (%)	12.00	10.00
<b>v) Generic Name of Principal products/services : (Disclosed as per licence)</b>		
Item Code no.	335000000	
Product	Aluminium Ingots	

\*on reduced capital

In terms of our report of even date attached  
For and on behalf of  
Brahmayya & Co.  
Chartered Accountants

For and on behalf of Board of Directors

**V. Seetaramaiah**  
Partner

**New Delhi**  
24th June, 1999

**K.N. Ravindra**  
Company Secretary

**C. Venkataramana**  
Director (Finance)

**S.N. Johri**  
Chairman-cum-  
Managing Director

## Cash Flow Statement for the Year ended March 31st, 1999

(Rs. in Crores)

	Year ended March 31st, 1999	Year ended March 31st, 1998
<b>A. Cash flow from Operating Activities</b>		
Net Profit before tax and Extraordinary Income	337.22	625.43
Adjustments for:		
Depreciation	278.80	272.26
Foreign Exchange loss/(gain) on loans	15.07	6.33
Interest & Financing charges	19.21	27.25
Miscellaneous Expenses written off	4.31	0.04
Provisions (Net)	1.77	3.50
Claims/Recoverables written off	0.46	0.66
Store written off	20.82	--
Interest income	(44.82)	(64.29)
Debenture issue expenses	4.83	--
Loss/(Profit) on sale of assets (net)	(0.03)	0.04
	<u>300.42</u>	<u>245.79</u>
Operating Profit before working capital changes	637.64	871.22
Adjustments for:		
Inventories	(68.50)	(38.26)
Trade & other receivables	1.04	(27.48)
Trade payables	(6.34)	22.06
	<u>(73.80)</u>	<u>(43.68)</u>
Cash generated from Operations	563.84	827.54
Adjustments for:		
Interest & financing charges paid	(15.95)	(25.14)
Direct taxes paid	(90.46)	(91.56)
	<u>(106.41)</u>	<u>(116.70)</u>
Cash flow before Extraordinary Items	457.43	710.84
Extraordinary Items	--	--
<b>Net cash from operating activities</b>	<b>457.43</b>	<b>710.84</b>
<b>B. Cash Flow from Investing Activities:</b>		
Purchase of Fixed Assets	(254.96)	(174.78)
Exchange loss on repayments of loans (Capital)	--	--
Sale/write off of Fixed Assets	0.22	0.53
Purchase of Investments	(53.51)	(12.41)
Deposits with Financial Institutions	195.00	(215.00)
Sale of Investments*	12.50	--
Interest received	72.41	32.77
<b>Net cash used in investing activities</b>	<b>(28.34)</b>	<b>(368.89)</b>

\* at face value

(Rs. in Crores)

	Year ended March 31st, 1999	Year ended March 31st, 1998
<b>C. Cash Flow from Financing Activities:</b>		
Refund to share holders due to Capital reduction	(0.73)	—
Repayment of long term borrowings	(627.64)	—
Grants-in-aid received from Government of India	—	0.68
Debenture issue expenses	(4.83)	—
Dividends including dividend taxpaid	(141.75)	(113.40)
<b>Net cash used in Financing activities</b>	<b>(774.95)</b>	<b>(112.72)</b>
<b>D. Net changes in Cash &amp; Cash equivalents (A+B+C)</b>	<b>(345.86)</b>	<b>229.23</b>
<b>E. Cash &amp; Cash equivalents - Opening balance</b>	<b>367.91</b>	<b>138.68</b>
<b>F. Cash &amp; Cash equivalents - Closing balance</b>	<b>22.05</b>	<b>367.91</b>

Note: a) Figures in brackets are cash outflows/incomes as the case may be.

b) Working Capital borrowing facility of Rs. 48 crores (previous year Rs. 48 crores ) have not been availed throughout the current and previous years since the Company could manage with its own internal resources.

For and on behalf of Board of Directors

New Delhi  
24th June, 1999

K.N. Ravindra  
Company Secretary

C. Venkataramana  
Director (Finance)

S.N. Johri  
Chairman-cum-  
Managing Director

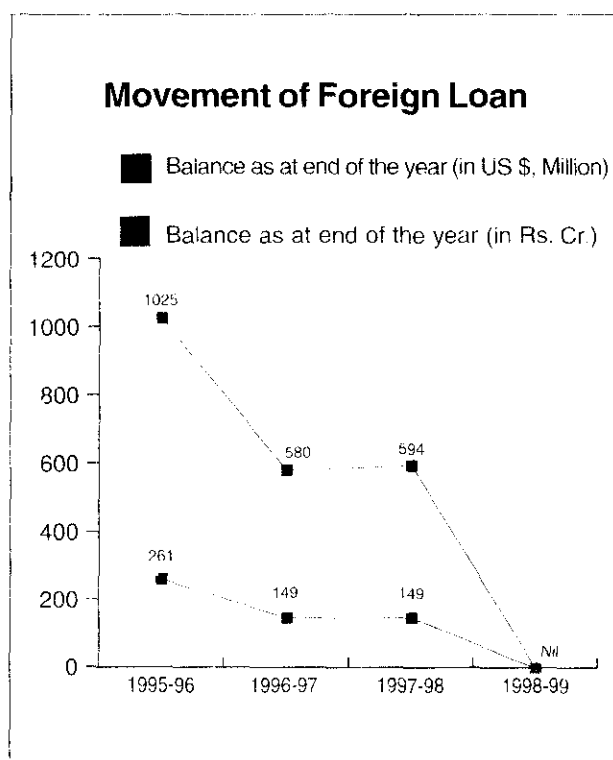
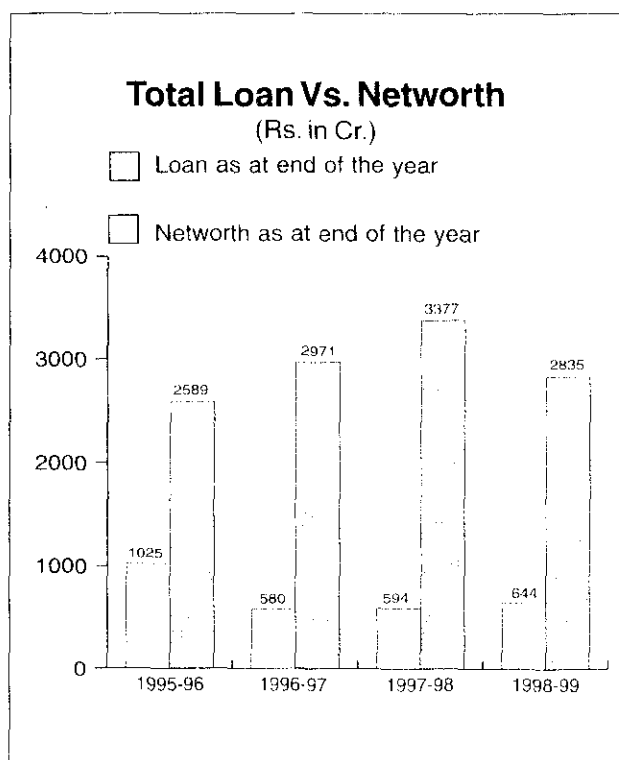
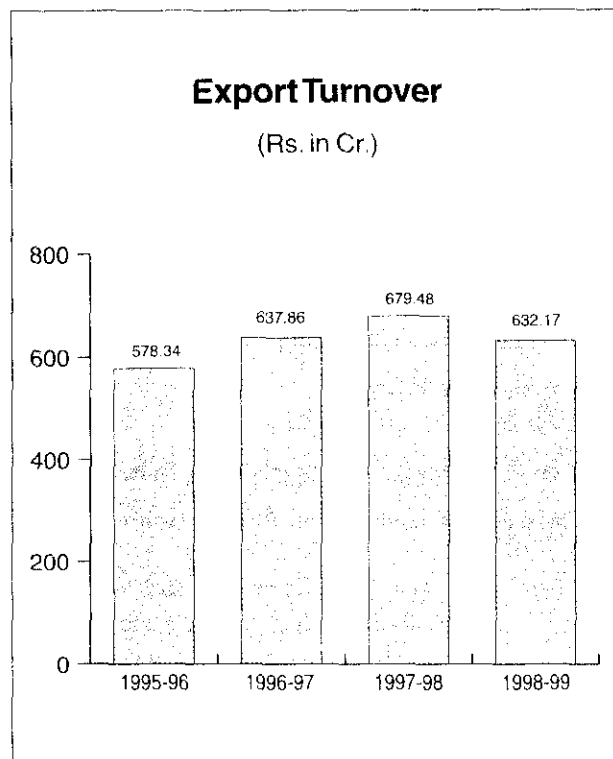
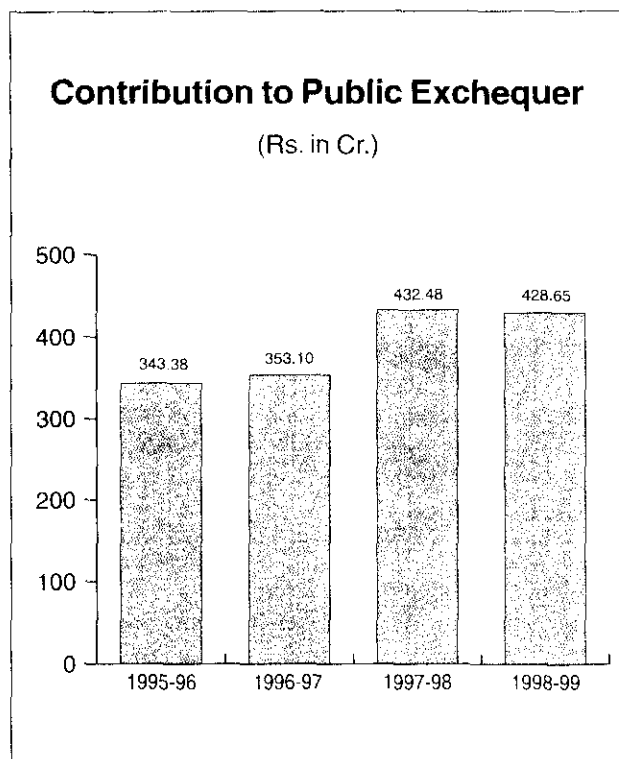
### Auditor's Certificate

We have audited the above cash flow statement of National Aluminium Company Limited from the audited financial statements for the year ended March 31, 1999 and found the same to be drawn in accordance therewith and also with the requirements of Clause 32 of the listing agreements with stock exchanges.

For and on behalf of  
Brahmayya & Co,  
Chartered Accountants

New Delhi  
24th June, 1999

V. Seetaramaiah  
Partner



**LOVELOCK & LEWES**  
**Chartered Accountants**

The Board of Directors  
National Aluminium Company Ltd.  
Nalco Bhawan  
Plot No. P/1, Nayapalli  
Bhubaneswar – 751 013  
Orissa

Dear Sirs,

We have participated in reformatting the non-reformatted balance sheets of National Aluminium Company Ltd. ("NALCO") as at 31 March 1999, and 31 March 1998 and related non-reformatted statements of profit and loss account for the financial years ended on those dates and the accompanying notes (herein collectively referred to as the "financial statements").

The financial statements of NALCO for the years ended 31 March 1999 and 31 March 1998 were audited and reported on by Brahmayya & Co., Chartered Accountants.

The scope of our work was limited to :

- (a) discussing with the management of the company the accounting practices used in the preparation of the financial statements referred to above.
- (b) making inquiries with persons responsible for financial and accounting matters and
- (c) participating in reformatting the financial statements of NALCO for the periods mentioned in the first paragraph with reference to the audited accounts of the company and also on the basis of information and explanations given by the company. We have not verified the information furnished by the company.

Yours faithfully,

Lovelock & Lewes  
Chartered Accountants  
26 Forest Park  
Bhubaneswar - 751 009  
Orissa

Dated 27 August 1999

## PRINCIPAL ACCOUNTING POLICIES

### CONVENTION

The financial statements have been prepared in accordance with applicable Accounting Standards in the US, UK and France, respectively.

### BASIS OF ACCOUNTING

The financial statements have been prepared under the historical cost.

### TANGIBLE FIXED ASSETS

The cost of tangible fixed assets is their purchase cost together with any incidental costs of acquisition. Direct revenue expenditure including financing cost incurred during construction period on new/expansion projects is treated as expenditure during construction and is allocated to relevant fixed assets. Expenses on development of land including leasehold land are capitalised as part of cost of land. Expenses of capital nature incurred on assets laid on land not belonging to the Company are capitalised under appropriate asset heads.

Depreciation is provided on tangible fixed assets other than on leasehold and freehold land on a straight-line basis from the time they are available for use, in accordance with the provisions of the Indian Companies Act, 1956. Cost of leasehold land including development expenses thereon is amortised over a period of 25 years in the case of mines and otherwise over a period of 20 years or the period of lease whichever is less. No depreciation is provided on freehold land.

The applicable depreciation rates are given below:

	Under straight-line method
Buildings (non-factory)	1.63%
Factory buildings	5.28%
Plant and machinery	4.75% to 5.28%
Furniture, fittings and equipment	6.33%
Vehicles	9.50%
Red mud pond	14.29%
Ash pond at Alumina Refinery	13.34%
Ash pond at captive power plant	15.38%
Assets costing Rs.5000/- or less	100%

### GOVERNMENT GRANTS

Grants that relate to specific capital expenditure are treated as deferred income and included in creditors. (They are classified as part of shareholders' funds under French GAAP only). Amount equivalent to depreciation written off on such asset is credited each year to the profit and loss account.

### FIXED ASSET INVESTMENTS

Investments in associated undertaking are stated in the balance sheet at the company's share of its net assets. The company's share of profits or losses of associated undertaking is included in the company profit and loss account.

Other investments are stated at cost.

### INVENTORIES

Raw materials, stores, spare parts and loose tools are valued at weighted average cost and net of MODVAT credit. Finished goods are valued at lower of cost or net realisable value. Cost is determined on the basis of relevant year's average cost of production and excludes administrative, selling and distribution overheads, interest, exchange variation, depreciation on capitalised exchange variation. Intermediary products are valued at direct material cost. Anode butts and anode rejects are valued at 45% of direct material cost (being 50% of direct material cost less 10% thereof towards reprocessing cost). Aluminium scrap and scrap arising out of replacement of major machinery components, is accounted for on accrual basis. Other scrap is accounted on disposal. Stocks of work-in-process are ascertained on the basis of technical estimates and are valued at annual average direct material and power & fuel cost. Inventory of stores and spare, other than insurance spares, not moved for more than 5 years is valued at 5% of cost.

### FOREIGN CURRENCY TRANSACTIONS

Exports and imports during the year in foreign currency are recorded in Indian rupees by applying average bill buying and bill selling rates of the respective months. Other transactions in foreign currency are accounted for at the exchange rates prevailing at the time of the transactions. Assets and liabilities in foreign currencies are translated into Indian Rupees at the rates of exchange prevailing at the end of the financial year. Exchange differences relating to acquisition of fixed assets are adjusted to the value of related fixed assets. All other foreign exchange differences are taken to the profit & loss account in the year in which they arise.

### PRIOR PERIOD INCOME/EXPENDITURE

Income/expenditure relating to prior period are treated as income/expenditure of the current year in the financial statements prepared under French GAAP. For UK and US GAAP previous years' figures have been restated.

### RECOGNITION OF REVENUE

Turnover represents invoiced value of goods sold and services rendered and is stated net of sales tax.



Export sales are recognised based on the date of bill of lading irrespective of terms of sale viz. FOB, C&F, CIF etc. Indigenous sales are recognised based on the date of railway receipt, lorry receipt or delivery challan.

Claims are accounted for in the profit and loss account based on certainty of their realisation.

Interest receivable is accounted for based on certainty of realisation from past experience.

Export incentives in the form of credit earned on exports made during the year, under Duty Entitlement Pass Book (DEPB) and special/advance licences, are treated as income at actual credit and estimated realisable value respectively.

Consumption of raw materials and stores & spares are accounted for at net of MODVAT credit.

#### **EXCISE DUTY**

Excise Duty is accounted for on despatch of goods from the factory.

#### **REPAIRS AND REPLACEMENTS**

Replacements of major machinery components of high value items of gearboxes, transformers, conveyor belts, wire ropes etc. are charged to profit and loss account in the year of replacement after adjustment of estimated realisable value of the scrap arising therefrom.

Pot relining expenses are charged to profit and loss account in the year of occurrence.

#### **RETIREMENT BENEFITS**

##### *Provident fund*

The company operates provident fund for its employees to which both the company and employees contribute. Company's contribution is charged to the profit and

loss account. The scheme, which is fully funded, is administrated by trustees and independent of the company's finance.

##### *Gratuity*

The company has taken out a Group Gratuity Life Assurance Policy with the Life Insurance Corporation of India (LIC) for future payment of retirement gratuities to employees and pays annual premia as determined by the LIC which is charged to the profit and loss account. The scheme is maintained by the LIC.

##### *Others*

Liabilities towards other retirement benefits like leave encashment and post retirement medical facilities to employees as at the end of the year are provided for on the basis of actuarial valuation.

#### **RESEARCH & DEVELOPMENT EXPENDITURE**

All expenditure other than capital expenditure on research and development are written off in the year it is incurred. Capital expenditure on research and development is included under fixed assets.

#### **DEFERRED TAXATION**

In respect of UK GAAP deferred tax asset is recognised if such asset is expected to be realised in near future. For US GAAP deferred tax assets is reduced, if necessary, by a valuation allowance of any tax benefit of which future realisation are uncertain.

#### **DIVIDEND**

Proposed dividend, subject to approval of central government and awaiting approval of shareholders, is provided in the financial statements, except for French GAAP. Under French GAAP, proposed dividend is not provided for in the financial statement. The dividends owed to the shareholders are shown as current liability only when the dividends are approved.

**Unaudited financial statements prepared in substantial compliance with US GAAP**

**Balance sheet as at 31 March**

(Million USD)

	1999	1998
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	5.195	93.061
Short term investments	11.779	61.970
Accounts receivable, net of allowance	77.779	91.218
Inventories	104.444	100.125
Prepaid expenses and other current assets	48.021	42.872
Prepaid income taxes	-	1.777
<b>Total current assets</b>	<b>247.218</b>	<b>391.023</b>
Property, plant and equipment - net	649.972	691.865
Deferred tax assets	15.945	6.793
Investments	20.006	11.107
<b>Total assets</b>	<b>933.141</b>	<b>1100.788</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	26.068	22.971
Taxes, including taxes on income	20.409	2.712
Customer deposits	11.006	9.306
Other accrued liabilities	39.215	54.208
Long term debt due within one year	-	150.272
<b>Total current liabilities</b>	<b>96.698</b>	<b>239.469</b>
Long term debt, less amount due within one year	151.610	-
Accrued post retirement benefits	1.503	1.425
Other noncurrent liabilities	0.291	0.324
<b>Total liabilities</b>	<b>250.102</b>	<b>241.218</b>
<b>SHAREHOLDERS' EQUITY</b>		
Common stock	151.781	325.944
Retained earnings	531.258	533.626
<b>Total shareholders' equity</b>	<b>683.039</b>	<b>859.570</b>
<b>Total liabilities and shareholders' equity</b>	<b>933.141</b>	<b>1100.788</b>

**NOTES**

1. The above does not include adjustment in respect of depreciation of tangible fixed assets, in India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not lower than the derivable estimated life of the assets as per Indian Companies Act.
2. Deferred tax asset does not include adjustment for timing differences, if any in respect of year ended 31st March 1997 or earlier years.

**Unaudited Financial statements prepared in substantial compliance with US GAAP**

**Profit and loss account for the year ended 31 March**

(Million USD)

	1999	1998
<b>Revenues</b>		
Sales	354.923	468.836
Other income	42.161	24.040
	<b>397.084</b>	<b>492.876</b>
<b>Costs and expenses</b>		
Cost of goods sold	182.228	207.895
Selling, general administrative and other expenses	57.910	49.692
Research and development expenses	0.144	0.078
Provision for depreciation, depletion and amortisation	65.739	68.734
Interest expenses	8.965	9.337
	<b>314.986</b>	<b>335.736</b>
<b>Earnings</b>		
Income from operations before taxes on income	82.098	157.140
Provisions for taxes on income	11.913	12.500
<b>Net income</b>	<b>70.185</b>	<b>144.640</b>
Dividends	35.395	35.854
Retained profit for the financial year	34.790	108.786

**Notes**

1. The above does not include adjustment in respect of depreciation of tangible fixed assets. In India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not shorter than the derivable estimated life of the assets as per Indian Companies Act.
2. The company's financial statements are prepared in Indian rupees, the reporting currency. These financial statements have been prepared by translating all the figures in US dollars at the year-end average of TT buying & TT selling rate i.e. 31st March 1999 - Rs. 42.450 = 1 USD ( 31st March 1998 - Rs.39.535 = 1 USD).
3. Earning per share  
The calculation for earnings per share has been based on profit for on ordinary activities after deduction of taxation, applying the number of paid up equity shares in issue and ranking for dividend as on year end date and also on weighted average number of shares in issue during the respective year.

	1999	1998
	(USD)	(USD)
a) On basis of equity share in issue at the year end	0.11	0.11
b) On weighted average basis	0.05	0.11

**Reconciliation between the Indian GAAP and the US GAAP statements**

(Million USD)

	1999	1998
Net income as per Indian GAAP	58.479	138.351
Amortisation of government grants accounted for as other income above the line	0.010	0.000
Reversal of deferred revenue expenditure written off to profit and loss account	1.014	0.010
Reversal of prior year items charged to profit and loss account	1.063	0.730
Restatement of figures for prior year items accounted in 1998-99	—	(1.244)
Provision for deferred taxes	9.619	6.793
Net income for the financial year as per the US GAAP	<b>70.185</b>	<b>144.640</b>

**Undaudited Financial statements prepared in substantial compliance with UK GAAP**

**Balance sheet as at 31 March**

(Million GBP)

	1999	1998
<b>Fixed assets</b>		
Tangible assets	403.412	412.625
Investments	12.416	6.624
	415.828	419.249
<b>Current assets</b>		
Stocks	64.824	57.195
Debtors (due within one year) (Refer note below)	78.079	82.137
Investments	7.311	36.959
Cash at bank and in hand	3.224	55.501
Deferred tax asset	9.896	4.051
	163.334	235.843
<b>Creditors (amounts falling due within one year)</b>		
Other creditors	59.661	53.526
	59.661	53.526
<b>Net current assets</b>	103.673	182.317
<b>Total assets less current liabilities</b>	519.501	601.566
<b>Creditors (amounts falling due after more than one year)</b>		
Loans and other borrowings	94.098	89.621
Other creditors	0.181	0.193
	94.279	89.814
<b>Provisions for liabilities and charges</b>	1.288	0.521
<b>Capital and reserves</b>		
Called up share capital	94.204	194.391
Profit and loss account	329.730	316.840
<b>Total equity shareholders' funds</b>	423.934	511.231
	519.501	601.566

**NOTES**

1. Debtors due within one year include amounts of dues from employees for house building and motor vehicle loans taken from the company, which are recoverable in more than one year. The quantum of such advances recoverable beyond one year has not determined. The total outstanding as on 31 March 1999 and 31 March 1998 are GBP 5.31m and GBP 4.75m respectively.
2. The above does not include adjustment in respect of depreciation of tangible fixed assets, in India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not lower than the derivable estimated life of the assets as per Indian Companies Act.
3. Deferred tax asset does not include adjustment for timing differences, if any in respect of year ended 31st March 1997 or earlier years.

**Unaudited Financial statements prepared in substantial compliance with UK GAAP**

**Profit and loss account for the year ended 31 March**

(Million GBP)

	1999	1998
<b>Turnover</b>	220.286	279.611
Change in stocks of finished goods and work in progress	6.409	3.504
Own work capitalised	0.124	0.113
Other operating income	18.536	6.672
	245.355	289.900
<b>Operating costs</b>		
Raw materials and consumables	26.239	33.057
Staff costs	18.433	17.558
Depreciation	40.801	40.993
Other operating charges	108.552	109.191
	194.025	200.799
<b>Operating profit</b>	51.330	89.101
Income from fixed asset investments	0.487	0.428
<b>Profit on ordinary activities before interest and taxation</b>	51.817	89.529
Interest receivable and similar income	6.071	8.345
Interest payable and similar charges	(5.564)	(5.569)
<b>Profit on ordinary activities before taxation</b>	52.324	92.305
Tax on profit on ordinary activities	7.394	7.455
<b>Profit for the financial year</b>	44.930	84.850
Dividends	21.969	21.383
Retained profit for the financial year	22.961	63.467

**Notes**

- The above does not include adjustment in respect of depreciation of tangible fixed assets. In India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not shorter than the derivable estimated life of the assets as per Indian Companies Act.
- The company's financial statements are prepared in Indian rupees, the reporting currency. These financial statements have been prepared by translating all the figures in pound sterling at the year-end average of TT buying & TT selling rate i.e 31st March 1999 Rs. 68.395 = 1 GBP ( 31st March 1998 Rs. 66.29 = 1 GBP).
- Earning per share**  
The calculation for earnings per share has been based on profit for on ordinary activities after deduction of taxation, apply the number of paid up equity shares in issued and ranking for dividend as on year end date and also on weighted average number of shares in issue during the respective year.

	1999	1998
	(GBP)	(GBP)
a) On basis of equity share in issue at the year end	0.07	0.07
b) On weighted average basis	0.04	0.07

**Reconciliation between the Indian GAAP and the UK GAAP statements**

(Million GBP)

	1999	1998
Net income as per Indian GAAP	36.296	82.512
Amortisation of government grants accounted for as other income above the line	0.006	—
Reversal of deferred revenue expenditure written off to profit and loss account	0.630	0.006
Reversal of prior year items charged to profit and loss account	0.660	0.435
Impact of giving effect of accounting policy changes in previous years' accounts	1.368	—
Restatement of figures for prior year items accounted in 1998-99	—	(0.742)
Restatement of figures for accounting policy changes in 1998-99	—	(1.412)
Provision for deferred taxes	5.970	4.051
<b>Profit for the financial year as per the UK GAAP</b>	<b>44.930</b>	<b>84.850</b>

**Undaudited Financial statements prepared in substantial compliance with French GAAP**

**Balance sheet as at 31 March**

(Million FRF)

<b>ASSETS</b>	<b>1999</b>	<b>1998</b>
<b>FIXED ASSETS</b>		
<b>Tangible fixed assets</b>		
Land	50.937	53.625
Buildings	267.436	287.635
Industrial equipment, machinery and tools	2816.267	3334.836
Other tangible assets	298.916	310.352
Fixed assets in progress	512.107	256.909
Advances and on-account payments	35.771	40.169
<b>Total</b>	<b>3981.434</b>	<b>4283.526</b>
<b>Financial fixed assets</b>		
Investments in affiliated companies	22.978	19.436
Other investments	99.567	49.335
<b>Total</b>	<b>122.545</b>	<b>68.771</b>
<b>Total fixed assets</b>	<b>4103.979</b>	<b>4352.297</b>
<b>CURRENT ASSETS</b>		
<b>Stocks</b>		
Raw materials, stores and supplies	414.191	443.930
Work-in-progress : goods	33.963	44.371
Semi-finished and finished goods	191.624	131.821
<b>Total</b>	<b>639.778</b>	<b>620.122</b>
<b>Advances and on-account payments against orders</b>		
<b>Debtors</b>		
Trade debtors and similar accounts	476.436	564.807
Other debtors	290.579	285.249
<b>Total</b>	<b>767.015</b>	<b>850.056</b>
<b>Miscellaneous</b>		
Marketable securities/short term deposits	72.150	383.712
Cash and bank balances	31.822	576.217
<b>Total</b>	<b>103.972</b>	<b>959.929</b>
<b>Prepayments</b>	<b>3.577</b>	<b>3.985</b>
<b>Total current assets and prepayments</b>	<b>1514.342</b>	<b>2434.092</b>
Deferred charges	—	—
<b>TOTAL ASSETS</b>	<b>5618.321</b>	<b>6786.389</b>

**Undaudited Financial statements prepared in substantial compliance with French GAAP**

**Balance sheet (continued) as at 31 March**

<b>LIABILITIES</b>	<b>1999</b>	<b>1998</b>
<b>SHARE CAPITAL AND RESERVES</b>		
Capital (fully paid up)	929.740	2018.198
<b>Retained earnings</b>		
Statutory or contractual reserve	-	310.825
Other reserves	2669.553	2270.947
Previous results awaiting appropriation	342.846	53.044
Results for the current year	364.495	856.710
Net result prior to appropriation	707.341	909.755
Government grants	1.785	2.004
<b>Total</b>	<b>4308.419</b>	<b>5511.729</b>
<b>Other own funds</b>		
Debentures: "titres participatifs"	928.691	-
<b>Total</b>	<b>928.691</b>	<b>-</b>
<b>PROVISIONS</b>		
Provisions for charges	9.206	8.827
<b>Total</b>	<b>9.206</b>	<b>8.827</b>
<b>LIABILITIES</b>		
<b>Borrowings and similar debts</b>		
Other debenture loans	-	-
Borrowings from and debts due to credit institutions	-	930.462
<b>Total</b>	<b>-</b>	<b>930.462</b>
<b>Advances and on-account payments against orders</b>		
Trade creditors and similar accounts	104.405	123.791
Liabilities for taxation and social charges	16.266	0.030
Liabilities for fixed assets and similar items	69.318	28.695
Other liabilities	182.016	182.855
<b>Total</b>	<b>372.005</b>	<b>335.371</b>
Prepaid expenses	-	-
<b>Total liabilities and prepaid expenses</b>	<b>372.005</b>	<b>1265.832</b>
Unrealised exchange gains	-	-
<b>TOTAL LIABILITIES</b>	<b>5618.321</b>	<b>6786.389</b>

**NOTES**

1. The above does not include adjustment in respect of depreciation of tangible fixed assets, in India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not lower than the derivable estimated life of the assets as per Indian Companies Act.

**Unaudited Financial statements prepared in substantial compliance with French GAAP**

**Profit and loss account for the year ended 31 March**

(Million FRF)

	1999	1998
<b>OPERATING INCOME</b>		
Sales of production : goods	2174.098	2902.962
<b>Net turnover</b>	<b>2174.098</b>	<b>2902.962</b>
Stock variance	63.251	36.379
Own production capitalised	1.223	1.176
Write-back of depreciation and provisions, transfers of charges	15.633	2.066
Other	126.173	29.262
<b>Total</b>	<b>2380.378</b>	<b>2971.845</b>
<b>OPERATING EXPENSES</b>		
Raw materials and supplies		
Purchases	291.150	301.150
Stock variance	(7.937)	16.377
Other purchases and external charges	439.939	518.238
Taxes and similar charges	157.345	231.959
Wages and salaries	181.917	182.493
Depreciation and provisions		
On fixed assets: depreciation	402.313	426.404
On current assets	3.501	2.067
For risks and future costs	0.362	1.509
Other expenses	484.304	383.440
<b>Total</b>	<b>1952.894</b>	<b>2063.637</b>
<b>OPERATING RESULT</b>	<b>427.484</b>	<b>908.208</b>
<b>Financial income</b>		
Income from other securities and loans	43.739	70.676
Other interest and similar income	9.224	30.006
Exchange gains	67.355	28.512
<b>Total</b>	<b>120.318</b>	<b>129.194</b>
<b>Financial expenses</b>		
Interest and related expenses	33.173	47.920
Exchange losses	21.746	9.897
<b>Total</b>	<b>54.919</b>	<b>57.817</b>
<b>FINANCIAL RESULT</b>	<b>65.399</b>	<b>71.377</b>
<b>ORDINARY RESULT BEFORE TAX</b>	<b>492.883</b>	<b>979.585</b>
Taxation on income	128.388	122.875
<b>NET PROFIT</b>	<b>364.495</b>	<b>856.710</b>



## Notes

1. The above does not include adjustment in respect of depreciation of tangible fixed assets. In India depreciation is normally provided based on the rates prescribed under Indian Companies Act in order to be eligible to declare dividend and such depreciation stands charged in the accounts. The estimated useful lives of the assets in the opinion of management are not shorter than the derivable estimated life of the assets as per Indian Companies Act.
2. The company's financial statements are prepared in Indian rupees, the reporting currency. These financial statements have been prepared by translating all the figures in French franc at the year-end average of TT buying & TT selling rate i.e 31st March 1999 - Rs. 6.930 = 1 FRF ( 31st March 1998 - Rs.6.385 = 1 FRF).
3. Earning per share  
The calculation for earnings per share has been based on profit for on ordinary activities after deduction of taxation, applying the number of paid up equity shares in issue and ranking for dividend as on year end date and also on weighted average number of shares in issue during the respective year.

	1999	1998
	(FRF)	(FRF)
a) On basis of equity share in issue at the year end	0.57	0.66
b) On weighted average basis	0.28	0.66

## Reconciliation between the Indian GAAP and the French GAAP statements

(Million FRF)

	1999	1998
Net income as per Indian GAAP	358.218	856.648
Amortisation of government grants accounted for as other income above the line	0.061	0.000
Reversal of deferred revenue expenditure written off to profit and loss account	6.216	0.062
Net profit as per the French GAAP	364.495	856.710

## Offices and Customer Contact Centres

### UNITS

#### 1. Mines & Refinery

Damanjodi - 763 008  
Dist : Koraput (Orissa)  
Phone : 06853-32201  
Fax : 06853 - 32214/32288

#### 2. Captive Power Plant

Dist : Angul (Orissa)  
Pin : 759 122  
Phone : 06764- 20360  
Fax : 06764 - 20646

#### 3. Smelter Plant

Nalco Nagar - 759 145  
Dist : Angul (Orissa)  
Phone : 06764 - 20169  
Fax : 06764 - 20132

### PORT FACILITIES

#### Visakhapatnam

Opp. Ore Handling Complex  
Visakhapatnam -530 035  
Andhra Pradesh  
Phone : 0891-561433/561435  
Fax : 0891-561598

### MARKETING OFFICES

#### 1. Mumbai

215, T.V. Industrial Estate  
S. K. Ahire Marg, Worli,  
Mumbai - 400 025  
Phone : 022-4939288/4939289  
Fax : 022-4950500

#### 2. Calcutta

Binoy Bhawan,  
6th Floor, 27-B,  
Camac Street  
Calcutta -700 016  
Phone : 033-2401373  
Fax : 033-2478936

#### 3. New Delhi

303, Mercantile House  
15, Kasturba Gandhi Marg  
New Delhi - 110 001  
Phone : 011-3713430/  
3713757/3711634  
Fax : 011-3711636

#### 4. Chennai

3J, Century Plaza,  
560, Anna Salai  
Teynampet,  
Chennai-600 018  
Phone : 044-4344162  
Fax : 044-453495

#### 5. Bangalore

Reshma Complex  
5th Floor, 50, M.G. Road,  
Bangalore - 560 001  
Phone : 080-5587298/5587086  
Fax : 080-5586151

#### 6. Pondicherry

J.K. Towers, II Floor (East)  
100, Feet Road,  
Ellaipillaichavady,  
Pondicherry-605 013  
Phone : 0413-250276/251109  
Fax : 0413-250277

### STOCKYARDS

#### 1. New Delhi

National Small Industries  
Corporation Ltd.  
PDTC/NSIC Complex  
Okhla Industrial Estate  
New Delhi - 110 020

#### 2. Bhiwandi

Godown No.A/20  
Gupta Warehousing complex  
Mhatre Compound  
Dapoda Village  
Taluka, Bhiwandi  
Dist. Thane

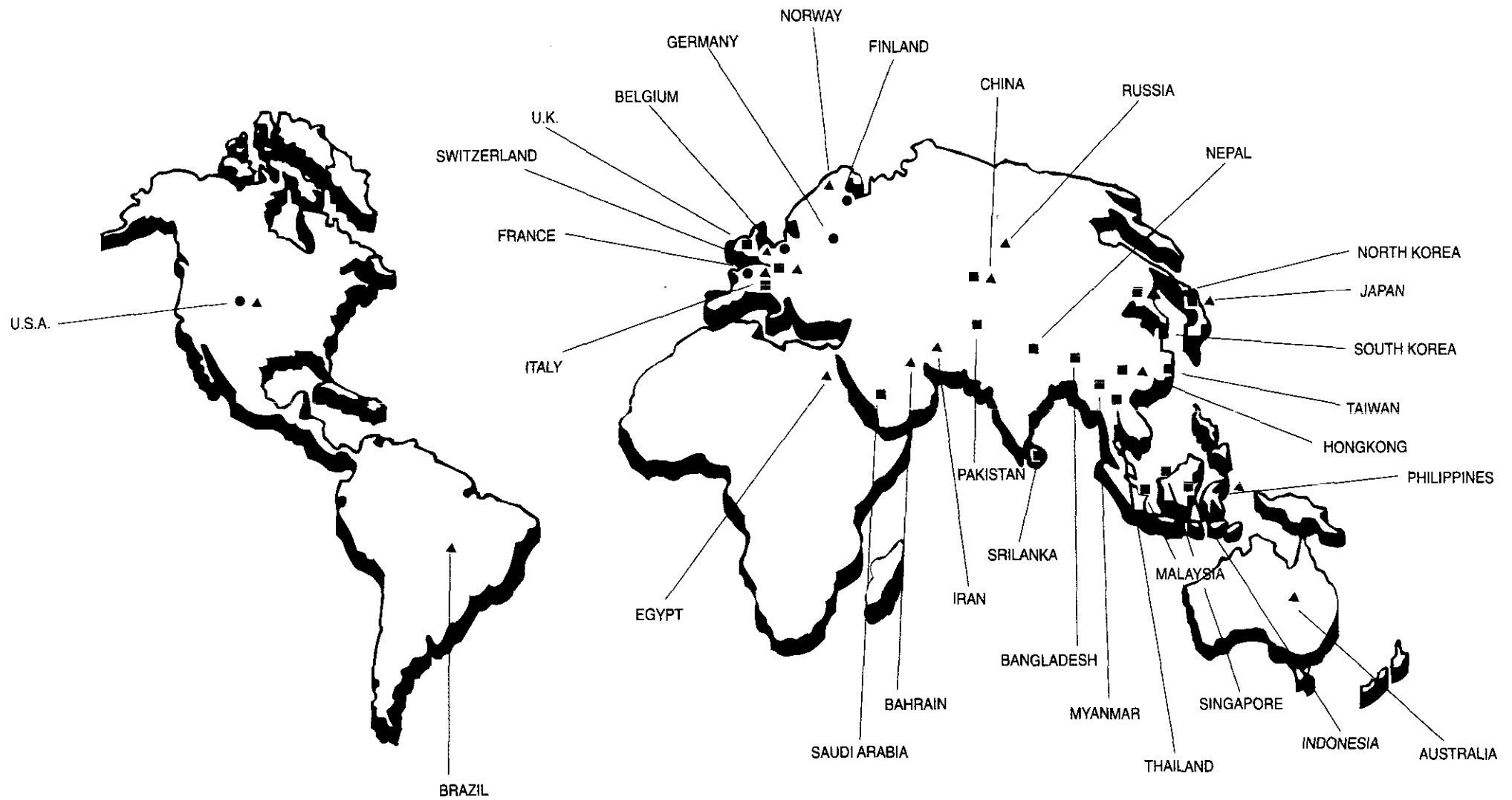
#### 3. Faridabad

The Haryana State Small  
Industries & Export  
Corporation Ltd.  
17/6, Mathura Road,  
Faridabad  
Haryana - 121 007

#### 4. Pondicherry

N.S.I.C.  
20, Industrial Estate  
Thattanchavady  
Pondicherry

# GLOBAL PRESENCE



● Technology associates   ■ Aluminium export   ▲ Alumina export