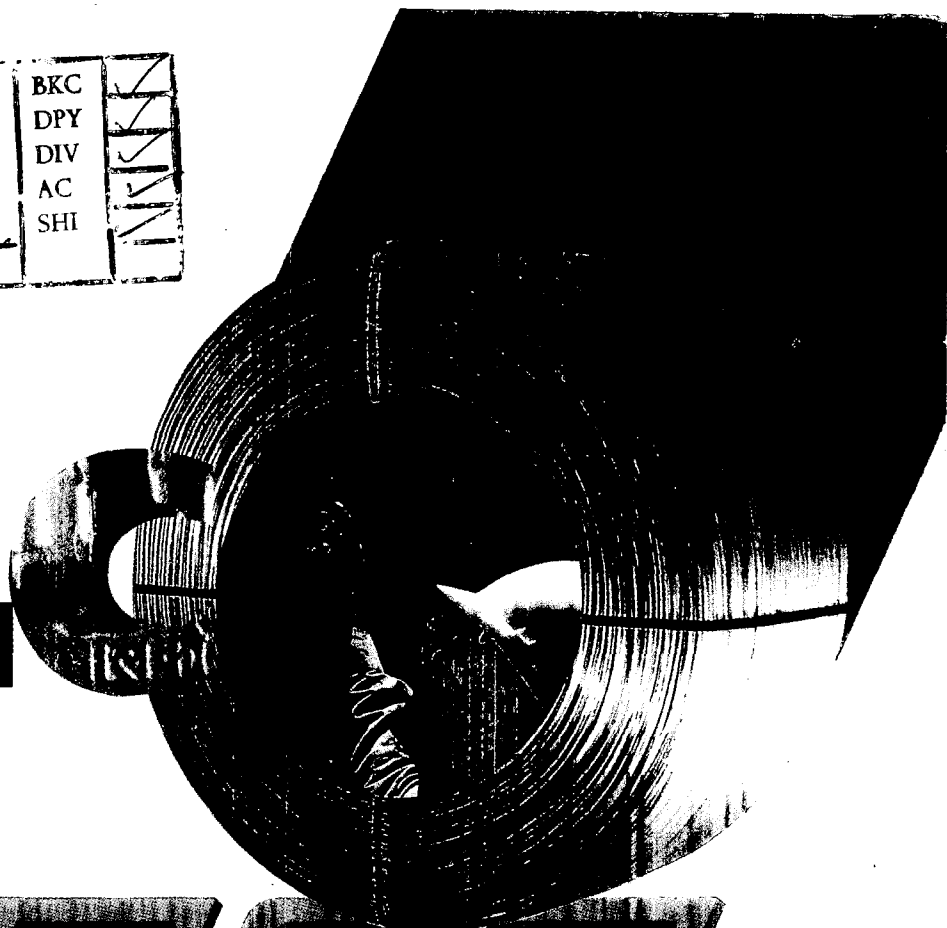


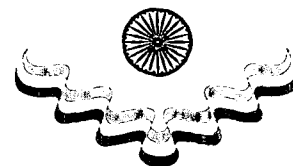
MD	✓		BKC	✓
CS	✓		DPY	✓
RO	✓		DIV	✓
TRA	NA		AC	✓
ACM	✓	✓	SHI	✓
YE	✓	✓		✓

NALCO



ANNUAL REPORT 1996-97

नालको  NALCO



National Aluminium
Company Limited



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

(A Government of India Enterprise)

Regd. Office : NALCO BHAWAN, Plot No. P/1,
Nayapalli, Bhubaneswar - 751 013 (Orissa)

NOTICE

Notice is hereby given that the 16th Annual General Meeting of the Company will be held on Tuesday, the 30th September, 1997 at 11.00 A.M. at NALCO BHAWAN, Plot No.P/1, Nayapalli, Bhubaneswar-751 013 to transact the following business :

ORDINARY BUSINESS :

1. To receive, consider and adopt the Directors' Report, audited Balance Sheet as on 31st March '97 and the Profit & Loss Account for the year ended 31st March, 1997 together with the report of the Auditors thereon.
2. To declare a dividend.
3. To appoint Directors in place of those who are retiring by rotation.

SPECIAL BUSINESS :

4. Appointment of Shri A. H. Jung, as Director whose period of office is liable to be determined by rotation.

To consider and if thought fit, to pass with or without modifications, the following resolution as an ordinary resolution :

"Resolved that Shri A. H. Jung be and is hereby appointed as a Director of the Company, whose period of office is liable to be determined by rotation."

By order of the Board

(K. N. RAVINDRA)
Company Secretary

Place : Bhubaneswar
Date : 04.09.1997

Notes :

- (a) Explanatory Statement pursuant to Section 173(2) of the Companies Act, 1956, in respect of item No 4 set out above is annexed hereto.
- (b) The agenda item No. 3 regarding retirement of Directors and appointment in their place is proposed, to comply with the provisions of Section 255 and 256 read with Section 9 of the Companies Act, 1956 which have become applicable to the Company, consequent on its ceasing to be a wholly owned Government Company as a result of disinvestment of some shares by the Government. Action for amendment of the relevant Article(s) of the Articles of Association of the Company has been taken. On receipt of over all policy decision of the Government in this regard, the Articles of Association will be amended.

- (c) A member entitled to attend and vote is entitled to appoint a proxy to attend and on a poll to vote instead of himself and a proxy need not be a member of the Company. Proxies in order to be valid and effective, must be deposited at the Registered Office of the Company not less than forty-eight hours before the commencement of the meeting. A blank proxy form is enclosed.
- (d) The Register of Members and Share Transfer Books of the Company will remain closed from 19.08.1997 to 16.09.1997 (both days inclusive) as notified in the press.
- (e) If dividend on shares as recommended by the Directors is passed at the Meeting, payment of such dividend will be made on or after 30.09.1997 to those members, whose names are on the Company's Register of Members on 16.09.1997.
- (f) Members are requested to notify immediately, change in their address, if any, to the Registered Office of the Company, quoting their Folio Number.

ANNEXURE TO NOTICE

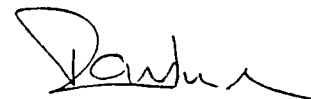
Explanatory Statement under Section 173(2) of the Companies Act, 1956.

Item No. 4 :

Shri A. H. Jung was inducted to the Board as an Additional Director of the Company w.e.f. 26.08.97. In terms of Section 260 of the Companies Act, 1956, Shri A. H. Jung holds office only upto the date of the ensuing Annual General Meeting. The Company has received a notice in writing from a member of the Company under Section 257 of the Companies Act, 1956, signifying his intention to propose the candidature of Shri A. H. Jung as a Director of the Company, whose period of office is liable to be determined by rotation, along with the prescribed deposit. At present Shri A. H. Jung is serving as Additional Secretary and Financial Adviser in the Ministries of Steel & Mines, Govt. of India. Your Directors feel that his association with the Board will be in the interest of the Company. It is considered desirable that the Company should continue to avail itself of his services as a Director and recommend passing of the resolution at item No. 4.

None of your Directors except Shri A. H. Jung, whose appointment is proposed herein, is interested in the proposed resolution.

By order of the Board



(K. N. RAVINDRA)
Company Secretary

Place : Bhubaneswar
Date : 04.09.1997



NATIONAL ALUMINIUM COMPANY LIMITED

(A Government of India Enterprise)
Regd. Office : NALCO BHAWAN, Plot No. P/1,
Nayapalli, Bhubaneswar - 751 013 (Orissa)

ATTENDANCE SLIP

16th Annual General Meeting — 30th September, 1997 at 11.00 A.M.

Reg. Folio No.....

I certify that I am a registered shareholder/proxy for the registered shareholder of the Company and hereby record my presence at the SIXTEENTH ANNUAL GENERAL MEETING of the Company at NALCO BHAWAN, Plot No. P/1, Nayapalli, Bhubaneswar - 751 013, on Tuesday, the 30th September, 1997.

.....
Member's/Proxy's name in Block letters

.....
Member's/Proxy's Signature

Note : Please fill this attendance slip and hand it over at the Entrance of the Hall.

----- t e a r h e r e -----



NATIONAL ALUMINIUM COMPANY LIMITED

(A Government of India Enterprise)
Regd. Office : NALCO BHAWAN, Plot No. P/1,
Nayapalli, Bhubaneswar - 751 013 (Orissa)

FORM OF PROXY

I/We
..... of in the district of being a member/members of the
above named company hereby appoint of in the
district of or failing him of
..... in the district of as my/our proxy to vote for me/us
on my/our behalf at the 16th ANNUAL GENERAL MEETING of the Company to be held on 30th September, 1997 and
at any adjournment thereof.

Signed this day of 1997

Reg. Folio No.

Signature

Affix a
Revenue
Stamp of
Re.1/-

Note : This form in order to be effective should be duly stamped, completed and signed and must be deposited at the Registered Office of the Company, not less than 48 hours before the commencement of the Meeting.



NATIONAL ALUMINIUM COMPANY LIMITED

(A Government of India Enterprise)

Regd. Office : NALCO BHAWAN, Plot No. P/1,
Nayapalli, Bhubaneswar - 751 013 (Orissa)

Dear Member,

We wish to print the name of your Banker, its Branch and Bank account number on the dividend warrant in order to protect you from any loss. This is necessary in view of frequently reported fraud cases of encashment of warrants by opening fake accounts.

We, therefore, request you to kindly send us the information as stated below. Your reply should reach the Company on or before the date of 16th Annual General Meeting.

In case you have already furnished Bank information for payment of Dividend in the previous years and there is no change in these particulars no further information need be given.

Please send the information in the attached proforma in a sealed cover.

Yours truly,

for National Aluminium Company Limited

(K. N. RAVINDRA)
Company Secretary

Bhubaneswar

-----tear here-----

(USE CAPITAL LETTERS ONLY)

Regd. Folio No.

Name

Name of the Bank

Branch

Account : Current ☐ Savings ☐
(Please ✓ at appropriate box)

Account No.

Signature

Note : Signature shall be same as recorded with the Company earlier.

	Participant	Address	Phone
19.	Infrastructure Leasing & Financial Services Ltd.	4th Floor, Mahindra Towers, RBC, Worli, Mumbai - 400 018	493 5127
20.	Industrial Credit & Invst. Corp. of India	Shanti Bldg., 2nd Floor, 13, Walchand Hirachand Marg, Ballard Estate, Mumbai - 400 001	267 2530 (D), 261 8251 Ext. 4015
21.	James Capel Batlivala & Karani Pvt. Ltd.	Construction House, 5, Walchand Hirachand Marg, Ballard Estate, Mumbai - 400 038	2659944-59 Fax : 2659991
22.	Kotak Securities	1st Floor, Bakhtawar, Nariman Point, Mumbai - 400 021	202 7040 Extn. 272
23.	Morgan Stanley Trust Company	Forbes Building, 5th Floor, Charanjit Rai Marg, Fort, Mumbai - 400 001	209 6600
24.	National Securities Clearing Corporation Ltd.	Trade World, 2nd Floor, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel, Mumbai - 400 013	4972950 Ext. 242
25.	Reliance Share and Stock Brokers Ltd.	1203-6, Arcadia, 12th Floor, 195, NCPA Nariman Point, Mumbai - 400 021	2845656
26.	Standard Chartered Bank	Poonam Chambers-B, Shivsagar Estate, Dr. A. B. Rd., Worli, Mumbai	4951451/91 Fax : 4950612
27.	Stock Holding Corporation of India Ltd.	44/1, Mehra Estate, L.B.S. Marg, Vikhroli (West), Mumbai - 400 079	2045483/84/85 5772836
28.	The Hongkong and Shanghai Banking Corporation Ltd.	52/60, M. G. Road, Fort, Mumbai - 400 001	265 8964 (D) 267 4921
29.	Dayco Securities Private Ltd.	Stock Exchange Building, 3rd Floor, 7, Lyons Range, Calcutta - 700 001	033-2202066/5066/ 5680/6775/3072/6372
30.	Janata Sahakari Bank Ltd.	Stock Exchange Branch, 754B Sadashiv Peth Dr. Kumthekar Road, Pune - 411 030	0212-473429 Fax : 0212-471510
31.	Munoth Financial Services Ltd.	1st Floor, Sanghvi Plaza, No. 56 Jermiah Road, Chennai - 600 007	044-5324833/6420608-11 Fax : 044-6425382

ANNEXURE-A

LIST OF DEPOSITORY PARTICIPANTS

Participant	Address	Phone
1. Abhipra Capital Ltd.	BM-1, Dilkhush Industrial Complex, G. T. Karnal Road, Azadpur, New Delhi-110 033	011-7127362/724 4166
2. Alankit Assignments Ltd.	103/104, Anarkali Market, Jhandelwala Extn., New Delhi-100 055	011-7535516-21
3. Canara Bank	NSDL Unit, 1st Floor, Verma Chambers, 11, Homji Street, Fort, Mumbai-400 001	2693157/2651086/2658291
4. Citibank N.A.	Custody Services, Ramnord House, 77, Dr. A. B. Road, Mumbai-400 018	494 9275 Ext. 344
5. Coimbatore Capital Market Services Pvt. Ltd.	K. G. House, 86, Government Arts College Road, Coimbatore - 641 018	0422-312163, 0422-218446 Fax : 0422 211617
6. Dalmia Securities Ltd.	2nd Floor, 7, Lyons Range, Calcutta - 700 001	033-221 1672-5, 033-220 0080
7. Deutsche Bank A. G.	D. B. House, Hazarimal Somani Marg, Fort, Mumbai - 1	207 5778/5976/3262/3292 Fax : 207 5975
8. Geojit Securities Ltd.	40/7997, Veekshanam Road, Cochin - 682 035	0484-371 675, 0484-373 686
9. Global Trust Bank Ltd.	67, Mumbai Samachar Marg, Opp. The Stock Exchange, Mumbai, Mumbai - 400 023	288 4383, 265 4794/95/97
10. HDFC Bank Ltd.	Custody Services, Sandoz House, Dr. A. B. Road, Worli, Mumbai - 400 018	4951616
11. IDBI Capital Market Services Ltd.	IDBI towers, 13th Floor, Cuffe Parade, Mumbai - 400 005	2160180/81/82
12. IIT Corporate Services Ltd.	IIT House, Off : M. Vasanji Road Opp. : Vazir Glass, Near J. B. Nagar, Andheri (E) Mumbai - 400 059	822 5599, 822 1410
13. Indsec Securities and Finance Ltd.	4th Floor, Express Building, 14, 'E' Road, Churchgate, Mumbai - 400 020	287 2277, 282 6056 204 6753
14. Action Financial Services Ltd.	Sonawala Bldg., Ground Floor, Green Street Corner, Opp. Old Custom House, Fort, Mumbai - 400 001	267 8506/07
15. Reliance Capital Ltd.	3rd Floor, Vrindavan Building, Shree Ram Mills Premises, Ganapatrao Kadam Marg, Worli, Mumbai - 400 013	4962780 Fax : 4962425
16. S. S. Kantilal Ishwarlal Pvt. Ltd.	3-A, Khatau Building, A. D. Modi Marg, Fort, Mumbai - 400 001	2650120/2651350 Fax : 2651358
17. IndusInd Bank Ltd.	IndusInd House, 425, Dadasaheb Bhadkamkar Marg, Mumbai - 400 004	385 7474/9494
18. Industrial Development Bank of India	3rd Floor, Investment Division, IDBI Towers, Cuffe Parade, Mumbai - 400 005	2181055/2189117/ 21891111

whom NSDL interacts with the investors. Annexure-A gives list of participants who are presently offering Depository services. Choose a participant and

- fill up an Account Opening Form available with the participant.
(You can open multiple accounts with the same participant as also with different participants).
- sign "Participant - Client Agreement"
- receive your account number which should be quoted in all your correspondence with your participant.
- your participant will provide you a Statement of Holdings and Statement of Transactions (like a bank pass book) every fortnight giving details of your holdings and transactions in your account.

Dematerialisation

You can deposit (i.e. dematerialise) Share Certificate(s) of NALCO which are registered in your name and convert your physical certificate(s) into electronic book entry.

You have to just

- fill a Dematerialisation Request Form available with your participant.
- submit your share certificate(s) along with the above form (Please write "Surrendered for Dematerialisation" on the face of each certificate before you submit it for dematerialisation).
- your account will be credited within 15 days.
- if you wish to convert your electronic shares back to physical shares at a later stage, you may do so by applying for rematerialisation.

How do you trade in electronic shares ?

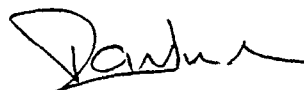
Buying and selling electronic shares is just like buying and selling physical shares, the only difference is trading in electronic shares is simpler and safer :

- if you wish to sell your electronic shares, you place an order with your broker (presently an NSE member broker) under the BE segment and instruct your participant by way of a Delivery Instruction (which is a cheque-like instrument) to debit your account with the number of shares sold by you.
- when you buy electronic shares, you must inform your broker about your Depository account number so that the electronic shares bought by you are credited into your account and instruct your participant by way of Receipt Instruction to receive credit in your account.
- payment for the electronic shares, either bought or sold, is made in the same way as in case of physical securities.
- the shares you have bought are transferred in your name the very next day of pay out with no fear that the shares may turn out to be bad deliveries or fakes ! No formalities of filling transfer deeds, affixing share transfer stamps and applying to the company for registering the shares in your name.

It is expected that the depository facilities should be available in NALCO from November, 1997.

For further details, you may contact the undersigned.

Yours truly,
For National Aluminium Co. Ltd.



(K. N. RAVINDRA)
Company Secretary

Encl. : As above



NATIONAL ALUMINIUM COMPANY LIMITED

(A Government of India Enterprise)

Regd. Office : NALCO BHAWAN, Plot No. P/1,
Nayapalli, Bhubaneswar - 751 013 (Orissa)

Dear Shareholder,

NALCO JOINS DEPOSITORY SYSTEM

We take pleasure in informing you that your Company has entered into an agreement with M/s. National Securities Depository Ltd. (NSDL) to facilitate investors to hold securities in electronic form and trade in these securities. We feel we should share with you certain information regarding the Depository System which would assist you in deciding to opt for holding your securities in electronic (also known as 'book entry') form.

NSDL has been registered by the Securities and Exchange Board of India (SEBI) on 7th June, 1996 as India's first Depository to facilitate trading and settlement of securities in dematerialised form. Settlement of securities in dematerialised form will eliminate problems that are normally associated with settlement through physical certificates, like tearing/mutilation of share certificates due to careless handling, loss of certificates by postal authorities or investors, problems of bad delivery of shares. Cases of forgery of certificates will be eliminated in an electronic environment. Settlement of trades will be faster and hassle-free leading to shorter settlement cycles. NSDL has a capital base of Rs.100 crores promoted by IDBI, UTI and NSE.

What is a Depository ?

A Depository is an organisation which holds your securities in the form of electronic book entries in the same way a bank holds your money. Further, a Depository transfers securities without actually handling securities, the way a bank transfers funds without actually handling money.

Benefits to an investor

- No stamp duty for transfer of securities in the Depository. In case of physical shares, stamp duty of 0.5% is payable on transfer of shares.
- Elimination of bad deliveries and all risks associated with physical certificates such as loss, theft, mutilation, etc.
- After the settlement, pay in and pay out are on the same day for scripless trading, which means you get your securities as well as cash immediately.
- Securities stand transferred in your name on the very next day of pay out. In case of physical shares, transfer of ownership takes 30-60 days, sometimes even more.
- No courier/postal charges.
- Facility for freezing/locking of investor accounts, which enables you to make your account non-operational, for instance if you are abroad.
- Facility to pledge and hypothecate your securities.

Services offered by NSDL

NSDL offers the following services to the investors, through its agents viz., Depository Participants :

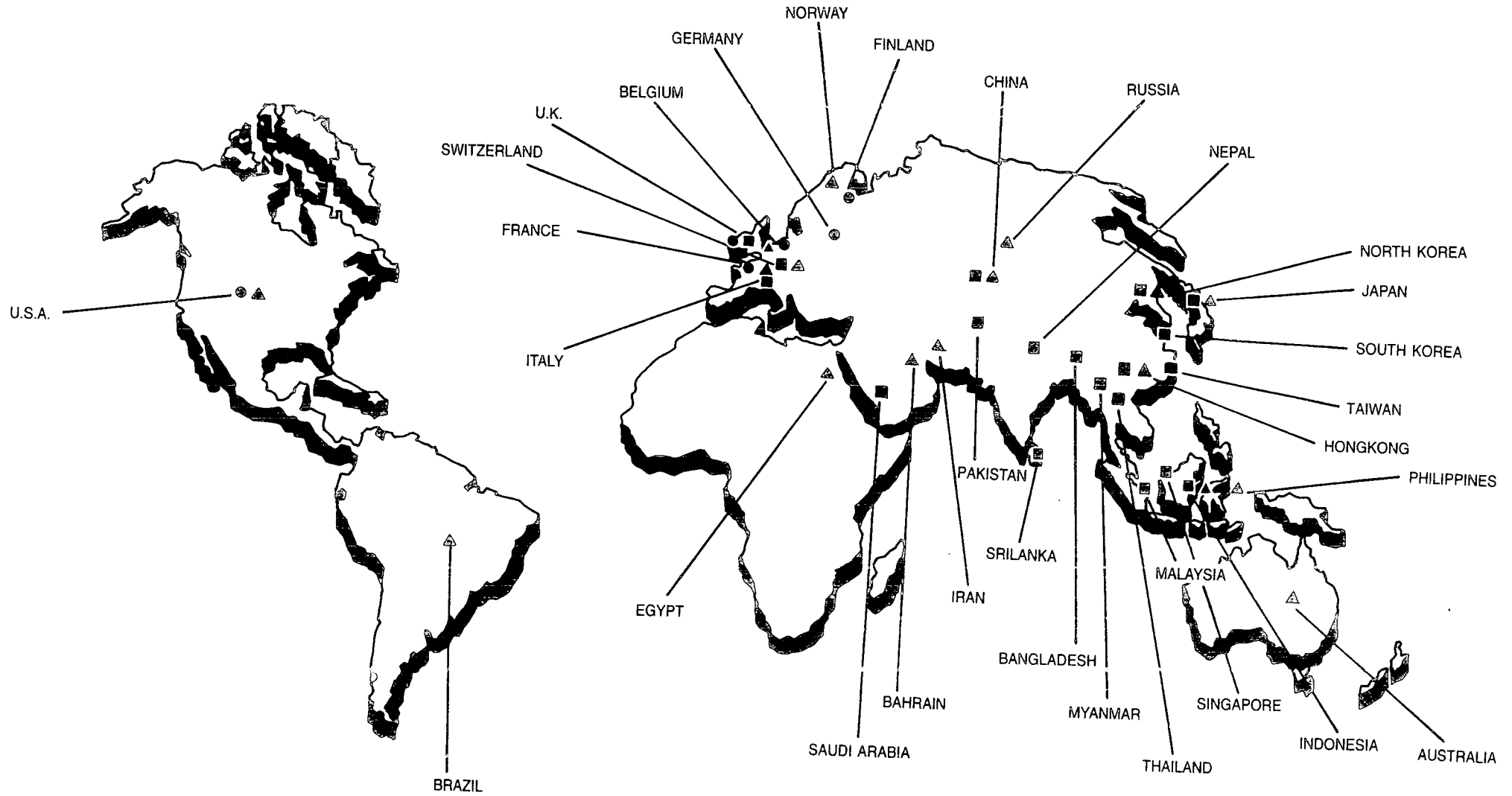
- Maintenance of investors' beneficial holdings in electronic form.
- Dematerialisation and rematerialisation of securities.
- Facilitation of settlement of trades in electronic shares.
- Electronic credit in case of public offerings and non-cash corporate actions such as rights, bonus, etc.

How do you open a Depository account ?

You can open an account with one of the participants of NSDL. A participant is a market intermediary through

P. T. O

GLOBAL PRESENCE



● Technology associates ■ Aluminium export ▲ Alumina export



National Aluminium Company Limited

ANNUAL REPORT

1 9 9 6 - 9 7

BOARD OF DIRECTORS

Shri S. N. Johri	Shri A. H. Jung
Shri B. D. Singh	Shri S. D. Sharma
Shri G. S. Panda	Shri R. K. Rath
Shri C. Venkataramana	Shri T. L. Sankar
	Shri S. K. Golcha

REGISTERED & CORPORATE OFFICE

NALCO BHAWAN,
Plot No.P/1, Nayapalli,
Bhubaneswar - 751 013, (Orissa)
Tel. : 442301/08
Telex : 0675-6431
Fax : 0674-442610/442580/442640

DIRECTOR (VIGILANCE)

Shri M. K. Mohanty

AUDITORS

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

EXECUTIVE DIRECTORS

Dr. R. C. Mohanty
Shri S. B. Nayak
Shri P. L. Sahu
Shri N. V. Badi
Maj. A. Chowdhury
Shri B. Pahadi
Shri S. K. Mishra
Shri K. N. Sinha

COMPANY SECRETARY

Shri K. N. Ravindra

BANKERS

State Bank of India

Contents

The Year at a Glance	2
Know your Company	6-11
Directors' Report	13-23
Review of Accounts by C & AG	24-26
Auditor's Report	27-28
Annual Accounts	30-49
Cash Flow Statement	50-51



THE YEAR AT A GLANCE

1996-97

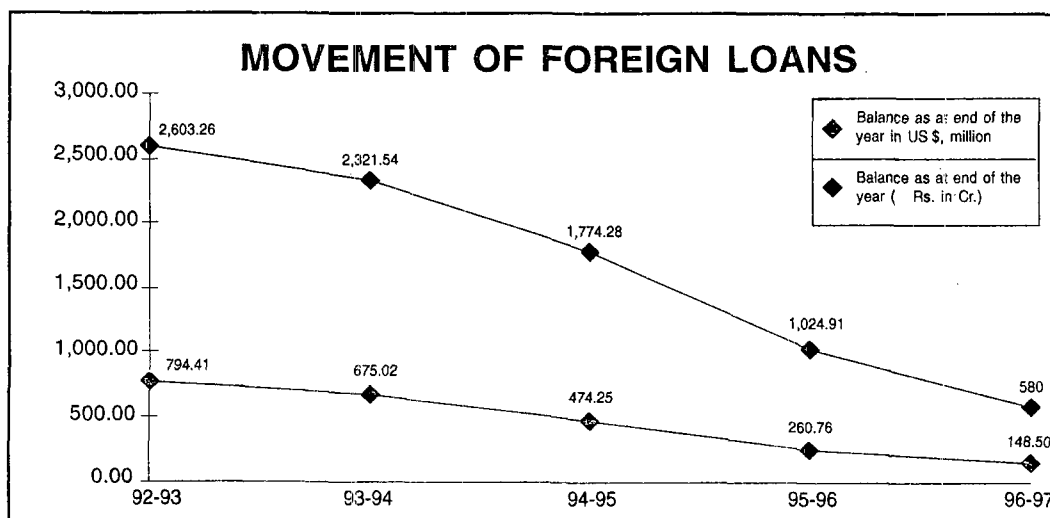
PHYSICAL

	Units	1996-97	1995-96
Bauxite mining	MT	25,58,002*	24,08,472
Alumina production	MT	8,40,062*	807,130
Aluminium production	MT	2,03,823*	1,92,288
Power Generation	MU	4,187*	4,147

FINANCIAL

	1996-97	1995-96
Sales Turnover (Rs. in Crore)	1768.86 *	1743.98
Other Incomes (Rs. in Crore)	54.94	60.72
Profit Before Tax (Rs. in Crore)	551.91 *	535.26
Overseas Loans Outstanding (Rs. in Crore)	580.00	1024.91
Export Turnover (Rs. in Crore)	637.86 *	577.58
Earnings per Share (in Rs.)	3.82	4.15
Book Value per Share (in Rs.)	23.27	20.09

* Highest ever



A HISTORICAL PERSPECTIVE - PHYSICAL

Sl. No.	Particulars	Units	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1988-89	1987-88
1.	Production :											
	Bauxite	MT	25,58,002	24,08,472	21,38,344	24,35,596	22,67,320	18,60,000	19,20,000	22,30,040	17,48,448	6,74,856
	Alumina	MT	8,40,062	8,07,130	7,70,000	7,53,021	8,03,500	7,62,200	6,52,485	7,39,000	5,62,100	1,61,407
	Aluminium	MT	2,03,823	1,92,288	1,78,072	1,94,332	1,91,069	1,92,022	1,51,330	1,35,018	78,803	25,379
	Power (net)	MU	4,187	4,147	3,979	3,741	3,690	3,531	2,654	2,533	2,156	1,624
2.	Export Sales :											
	Alumina/Hydrate	MT	4,65,139	4,15,209	4,07,405	3,71,286	4,29,428	3,78,446	3,35,401	4,48,616	3,84,161	76,840
	Aluminium	MT	60,357	49,128	65,307	60,037	85,771	61,117	27,877	27,391	14,875	—
3.	Domestic Sales :											
	Alumina	MT	3,515	4,870	4,608	428	764	3,380	7,549	24,734	8,066	7,721
	Aluminium	MT	1,45,521	1,43,092	1,36,356	1,35,490	1,04,390	1,08,302	1,28,813	98,843	63,967	24,247
	Power	MU	903	1,093	1,161	782	731	548	251	373	679	1,094



A HISTORICAL PERSPECTIVE - FINANCIAL

(Rs. in Crore)

Sl. No.	Particulars	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1988-89	1987-88
1.	Income Statement :										
	Gross Sales	1,768.86	1,743.98	1,474.96	1,195.96	1,169.11	974.03	884.04	846.01	438.74	88.76
	Export	637.86	577.58	485.64*	411.72*	538.34	385.77	277.78	416.01	211.08	15.99
	Domestic	1,131.00	1,166.40	989.32	784.24	630.77	588.26	606.26	430.00	227.66	72.77
	Earning before interest, Tax & Depreciation (EBITD)	758.12	847.99	653.63	441.08	434.72	387.23	356.76	420.49	204.82	22.88
	Depreciation & Amortisation of DRE	265.79	285.78	258.36	223.29	219.52	232.73	164.31	141.31	110.38	42.14
	Interest & Financing charges	9.08	64.83	184.02	126.90	119.84	190.44	183.50	177.80	120.17	45.40
	Pre tax Profit (PBT)	538.19	558.10	279.23	136.00	152.81	50.42	79.95	172.03	12.95	(50.29)
	Provision for Tax	64.15	0.02	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Net Profit/(Loss) for the year (PAT)	474.04	558.08	279.23	136.00	152.81	50.42	79.95	172.03	12.95	(50.29)
	Extraordinary Income	—	79.29	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Net Profit/(loss) after Extraordinary Income	491.76	614.55	300.17	156.72	134.88	59.14	71.95	156.87	18.92	(50.93)
2.	Balance Sheet :										
	Equity Capital	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	1,233.12
	Reserves & Surplus	1,710.26	1,300.67	717.05	475.42	281.33	157.51	127.05	48.56	(51.16)	(72.96)
	Networth	2,998.88	2,589.29	2,005.67	1,764.04	1,569.95	1,446.13	1,415.67	1,337.18	1,237.46	1,160.16
	Loans outstanding	580.00	1,024.91	1,774.28	2,321.54	2,630.57	2,652.06	1,835.49	1,728.64	1,695.90	1,329.43
	Net Fixed Assets	2,829.50	3,011.36	3,184.23	3,303.31	3,402.11	3,476.12	2,728.67	2,622.92	2,638.43	2,480.82
	Net Current Assets	717.88	582.34	566.45	772.49	788.64	612.26	512.63	357.27	275.14	8.69
	Capital Employed	3,547.38	3,593.70	3,658.03	3,783.80	3,938.47	3,898.84	3,107.36	2,834.18	2,450.83	1,440.67
3.	Ratios :										
	Operating Margin (OPM) (%)	27.83	32.24	26.80	18.21	18.41	15.86	21.77	33.00	21.53	—
	Return on Capital Employed (ROCE) (%)	13.86	14.89	8.21	4.14	3.42	1.52	2.32	5.53	0.77	—
	Return on Networth (RONW) (%)	16.40	20.67	14.97	8.88	8.59	4.09	5.08	11.73	1.53	—
	Debt Equity (%)	19.34	39.58	88.46	131.60	167.56	183.39	129.66	129.28	137.05	—
4.	Book value per share (in Rs.)	23.27	20.09	15.56	13.69	12.18	11.22	10.99	10.38	9.60	9.41
	Earnings per share (in Rs.)	3.82	4.15	2.33	1.22	1.05	0.46	0.56	1.22	0.15	—

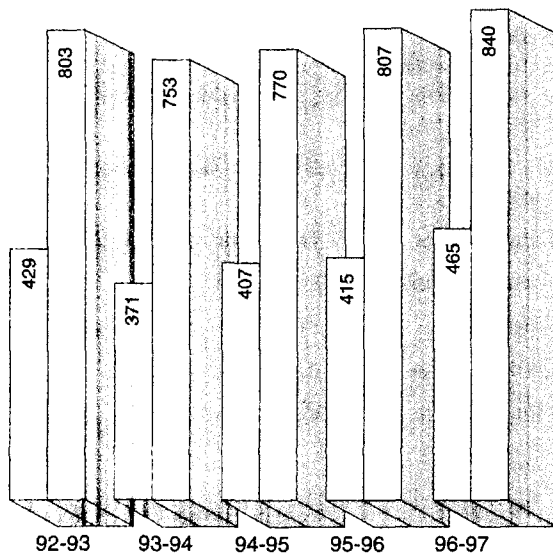
* Includes export through merchant exporters.





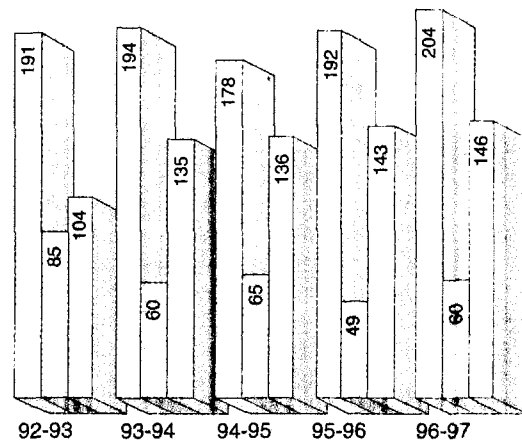
ALUMINA (In '000 MTs)

Production Export



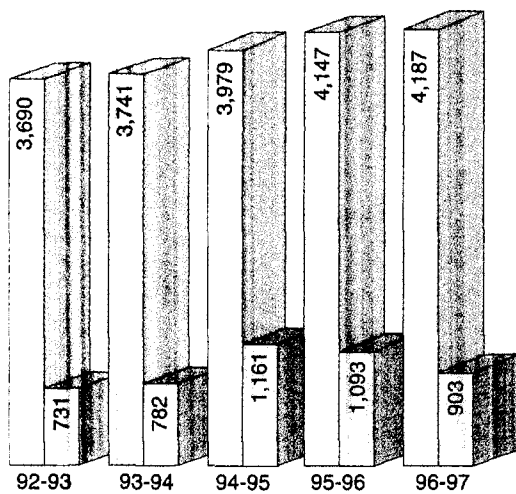
ALUMINIUM (In '000 MTs)

Production Export Sales Domestic Sales



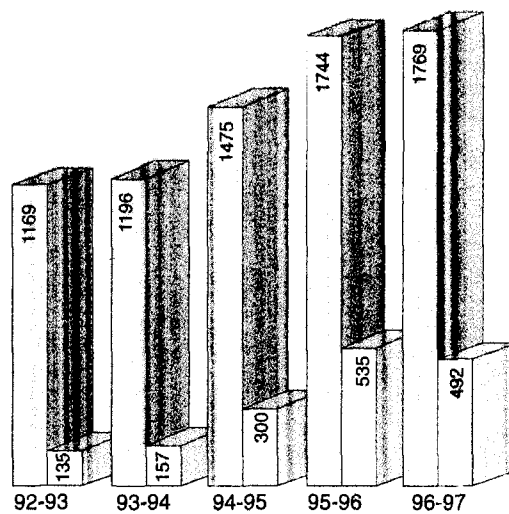
POWER (In Million Units)

Generation Sales



SALES TURNOVER & NET PROFIT (Rs. in Cr.)

Sales Turnover Net Profit





Know your Company

INDIAN ALUMINIUM INDUSTRY

India is endowed with large reserves of high quality Bauxite ore, 12% of world resources, to be precise and is the 5th largest producer of Bauxite and among top ten producers of Aluminium in the world. About 89% of 2.5 billion tonnes of recoverable Bauxite resources are of metallurgical grade, of which 60% is located in Orissa. These reserves have a low silica content which allows extraction of Aluminium at low cost.

The aluminium industry is very capital and power intensive, both of which are scarce and expensive. India's contribution in the World Aluminium production is around 3%.

NALCO IN BRIEF

National Aluminium Company Limited (NALCO) was incorporated in 1981 as a wholly owned Govt. Company to exploit a part of the large deposits of bauxite discovered in the East Coast. Aluminium Pechiney of France, a world leader in the field, provided the technology and basic engineering for bauxite mining, alumina refinery and smelter. The project cost of Rs. 2408 Cr. was partly financed by Rs.1119 Cr. equivalent of Euro-Dollar loans extended by a consortium of International banks and the balance Rs. 1289 Cr. through equity from Govt. of India.

NALCO is considered to be a turning point in the 50 years old history of Indian aluminium industry. In a major leap forward, NALCO has not only addressed itself to the country's need for self-sufficiency in aluminium, but also given the country the technology edge in making this strategic metal to the best of world standards.

Under extremely difficult logistics of implementing a multilocal greenfield project, NALCO successfully constructed and commissioned each of its units on schedule and within estimated cost, a feat which has few parallels in Indian Public Sector.

NALCO's various production units, their location & installed capacities are :

1. Bauxite Mines	Panchpatmali	2400000 TPY
2. Alumina Refinery	Damanjodi	800000 TPY
3. Smelter Plant	Angul	218000 TPY
4. Captive Power Plant	Angul	720 MW
5. Port Facilities	Vizag	375000 TPY (Alumina export) 146000 TPY (Caustic Soda Lye import)



Bauxite Mining operation

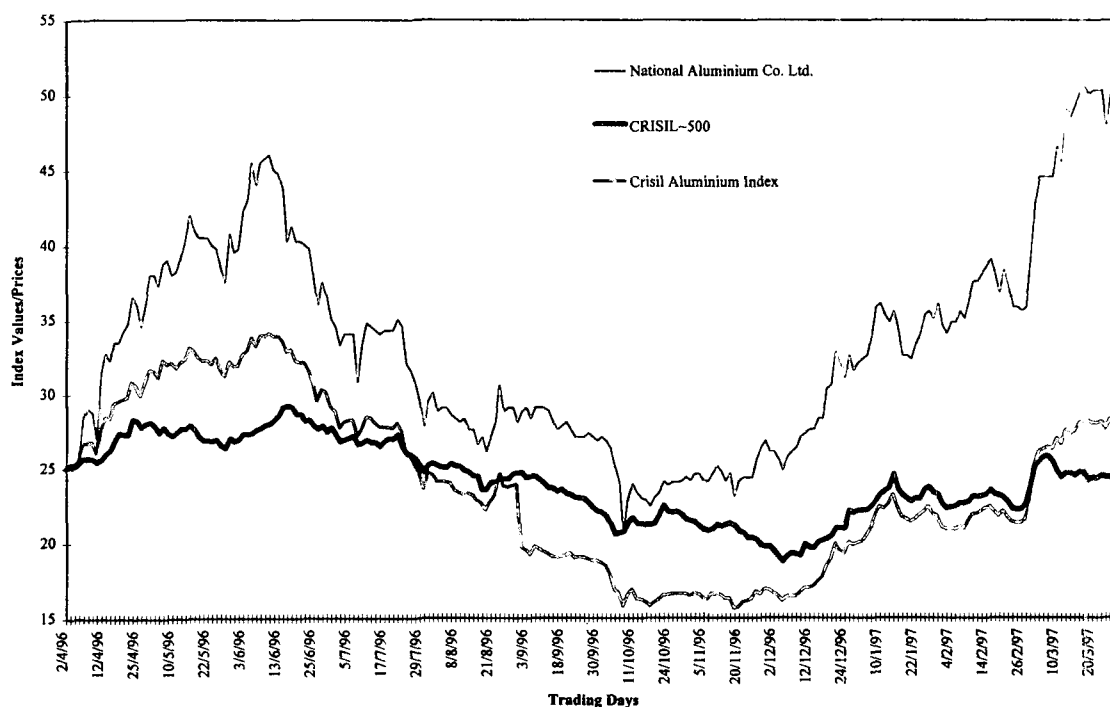


NALCO : OUT PERFORMS CRISIL-500

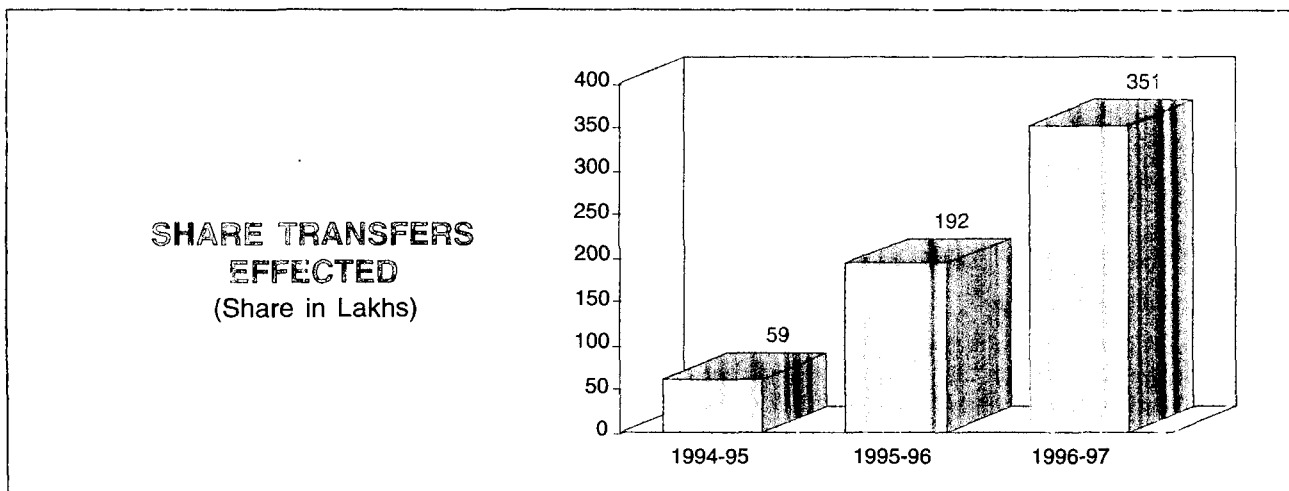
The Credit Rating Information Services of India Limited (CRISIL) has launched the country's first broad-based Equity Index called CRISIL-500. The 500 Companies constituting this Index had been selected on the basis of Market Capitalisation. NALCO Shares are one among them.

NALCO has consistently met the stringent criteria for candidacy to the Index and it has demonstrated superior stock market performance during 1996-97, as can be seen from the following graph :

**National Aluminium Co. Ltd. vs CRISIL-500 & CRISIL Aluminium Index (Rebased)
1996-97**



The volume of shares of NALCO traded in various Stock Exchanges, stands ample testimony for the confidence reposed in NALCO by the investors, as can be seen from the following graph :





STRONG FUNDAMENTALS

Metal Tapping

1. Endowed with long-lasting high-quality bauxite reserves :

NALCO's bauxite mines, spread over an area of 16 sq. km with reserves of 310 million tonnes (sufficient to last over 100 years at the current mining rate of 2.4 mtpa), are located on the Panchpatmali hills of the Koraput district of Orissa. The low silica content in the bauxite facilitates production of high-quality alumina at very low cost given the lower consumption of steam and chemicals.

2. Low cost ore transportation through conveyor :

The high-quality low-silica bauxite ore from these fully mechanised open-cast mines is transported through an unique 14.6 km single flight multi curve conveyor to the 0.8 mtpa alumina refinery located at the foothills, which is not only environment friendly but also cost effective.

3. Split Locational Advantage :

The Alumina Refinery is close to the bauxite mines at Damanjodi whereas the Smelter and Captive Power Plant at Angul are in proximity to the Talcher coal mines in Orissa. This split location gives a tremendous advantage. This ensures minimum movement of bulk materials like coal and bauxite as well as transmission of power, thereby cutting costs.

4. Rolling Stock for smooth transportation :

NALCO's rolling stock comprising of 9 locomotives and 400 wagons for movement of alumina, caustic soda and coal ensures trouble free and uninterrupted transportation of materials and it is not affected by shortage of wagons from the Railways.

5. Captive Power Plant :

Power constitutes nearly 35% of cost of production of Aluminium, NALCO has its own 720 MW Captive Power Plant connected by a Captive rail system to the Mahanandi Coalfields located just 16 Kms away. Being in proximity to coal mines results in lower landed cost and consequent direct low cost of power generation.

In addition, the power requirements of Alumina Refinery are met by Co-generation facilities (55.5MW), using process steam which ensures low alumina costs. Unlike some other smelters in the country, who do not have Captive Power Plants, NALCO does not face power shortage problem, in fact, NALCO's surplus power is sold to State grid.

6. Captive Infrastructural facilities :

The Company is placed in an enviable position because coupled



with Captive Power Plant and its own rolling stock, NALCO has its own port facilities at Visakhapatnam, around 175 Kms. from Alumina Refinery, which handles alumina & metal exports and import of raw materials like caustic soda and coal tar pitch etc.

7. Contemporary Technology :

NALCO's fully integrated state-of-the-art facilities were set up with technology from M/s Aluminium Pechiney of France, one of the world leaders in the field. Better smelting technology results in lower consumption of input materials and ultimately in lower cost of production.

8. Vertical Integration of Production facilities :

NALCO's vertically integrated operations, encompassing mining of bauxite, manufacture of alumina & Aluminium metal, power generation and port facilities for shipping of alumina & Metal and import of major raw materials like caustic soda etc. make NALCO one of the cheapest and reliable producers of alumina and aluminium metal in the world.

9. Professional Management :

NALCO is one of India's few well-managed public sector companies run by experienced professionals. The Government disinvested part of its ownership during 1991-92 to 1993-94 in line with its financial restructuring programme. While management enjoys full freedom in its day-to-day operations, Government approval is required for major capital expenditure plans.

10. Proactive Financial Management :

NALCO's project cost, estimated at Rs.1242 Cr. in 1979 when the project was conceived, had increased to around Rs.2408 Cr. by the time of its commissioning in 1987. It was funded by Euro-Dollars loan of Rs.1119 cr. with the balance in the form of Government equity. While in dollar terms the exposure was US\$ 980 m, in rupee terms it increased substantially with the 33% devaluation of the rupee in 1992 and the subsequent depreciation in the currency. This resulted in a cumulative exchange variation loss of Rs.1737 Cr. which has been capitalised in line with accounting policy. This capitalisation accounts for 37% of gross assets and has led to higher interest



Port Facilities

and depreciation provision and has been a major drag on the earnings growth.

Realising this, NALCO embarked on a pro-active servicing of the forex debt through pre-payment (US\$185.758 m up to March 1996, US\$ 88.235 m in July 1996 and US\$ 13.333m in September 1996). Total forex liability has now been reduced to just Y20 bn which would be paid in September 1998. Its cash rich status is illustrated by the fact that it does not have any domestic loans and its entire working capital needs (Rs.718 Cr.) is funded from internal accruals. This has been possible due to strong internal cash accruals over the years.

11. Expansion Plans :

Strong cash generation to support expansion :

NALCO has chalked out a two-phase expansion plan at a total cost of Rs.4384 Cr., Phase-I of which has already received Government approval and is under implementation. The expansion programme outlined below is at least 24% cheaper than a greenfield venture :

Capacity Expansion Schedule				
Product	Current Capacity	Capacity after Expansion	Likely completion Date	Estimated Cost Rs. in Crore
Phase I				
Bauxite mines	2.4 mtpa	4.8 mtpa	April 2001	1665
Alumina Refinery (Under implementation)	0.8 mtpa	1.575 mtpa		
Phase II				
Aluminium	2,18,000 tpa	3,45,000 tpa	51 months from zero date	2719
Power Plant (Awaiting Govt. approval)	720 mw	960 mw		
Total :				4384



12. De-bottlenecking to boost volumes in the near future :

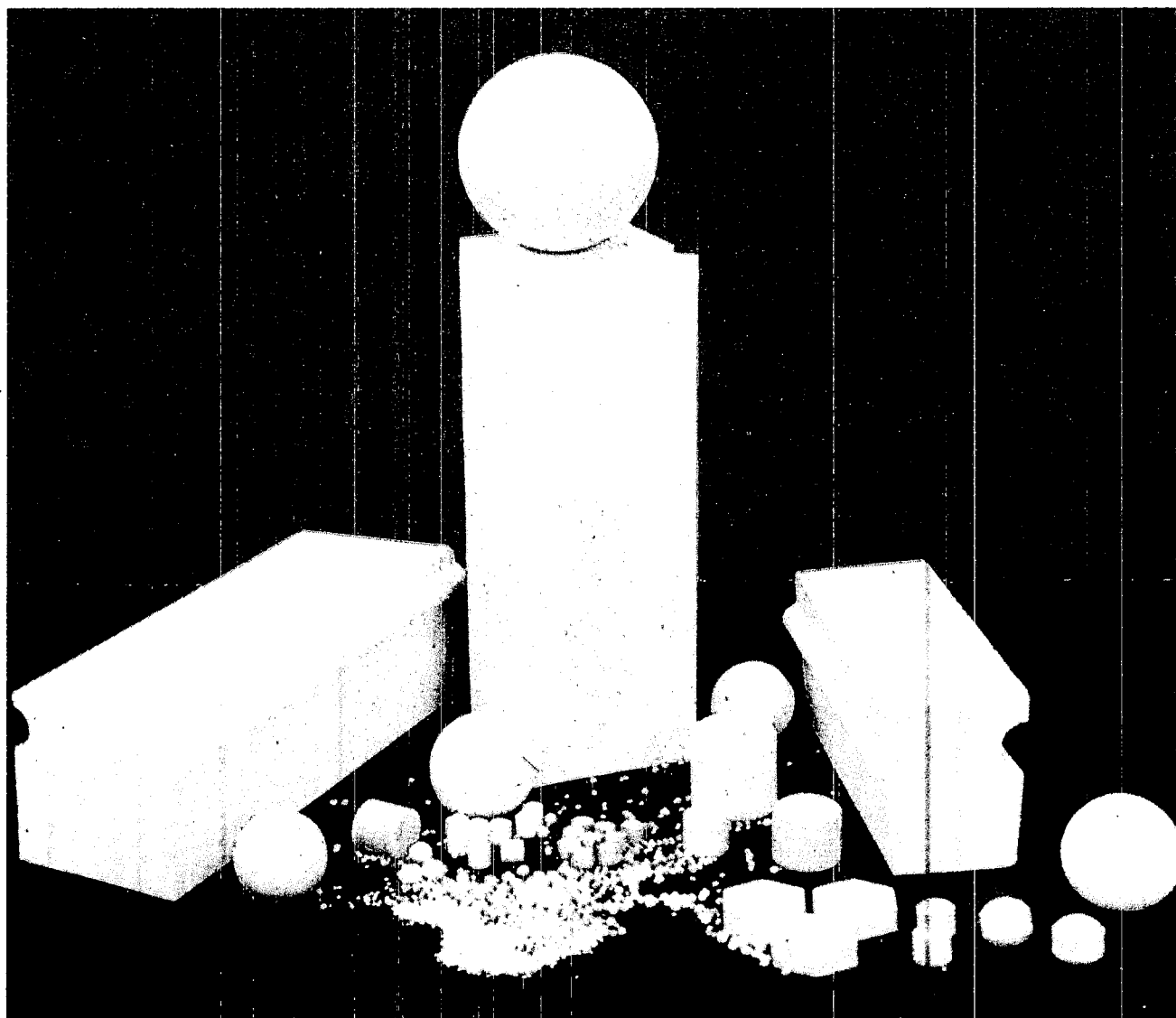
While the mega expansion plan outlined above is expected to yield benefits only from 2000 AD, earnings growth should be driven in the near future by increased metal capacity from 2,18,000 tpa to 2,30,000 tpa, over the next two years due to just completed de-bottlenecking exercise.

13. Moving towards a richer and value added product diversification :

Management was proactive in initiating other projects to enrich its product profile. The projects, which are expected to be completed by the end of December 1998, are detailed below :

Enriching the Product Portfolio :

Facility	Capacity	Location	Cost (Rs. in Crore)
Strip casting	26000 tpa	Angul	49.86
Special grade alumina	20000 tpa	Damanjodi	45.72
Zeolite-A	9000 tpa	Damonjodi	24.10
Gallium	1 tpa	Damanjodi	9.46
Total :			129.14



Special Grade Alumina



14. ISO Certification :

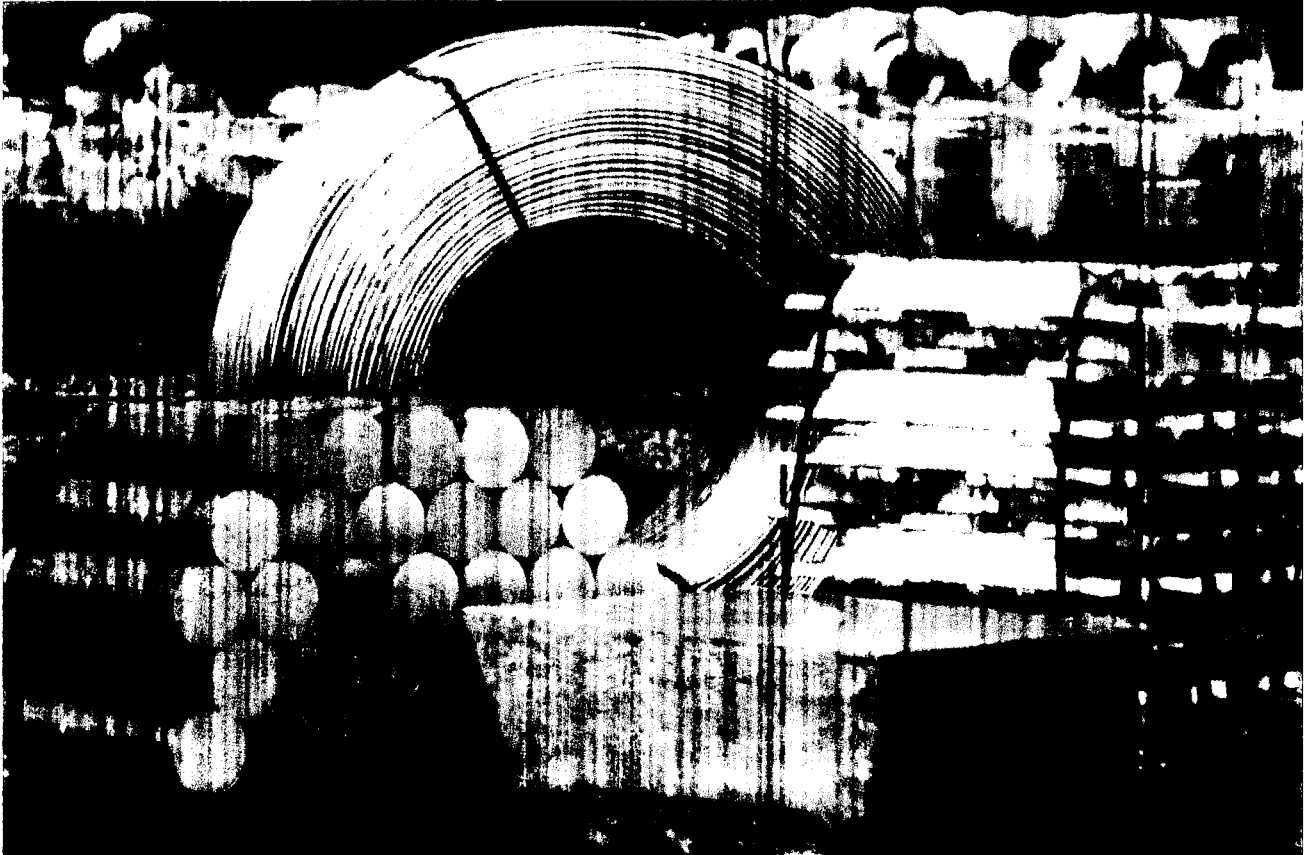
All the production units of NALCO are certified under ISO 9000.

Environment Management System of Mines & Refinery Complex at Damanjodi is certified under ISO 14001, which is

the first chemical plant in the country to get such certification.

15. Star Trading House :

Consistent export performance has helped NALCO to retain its Star Trading House status which was first conferred by the Government of India in the year 1992.



NALCO products

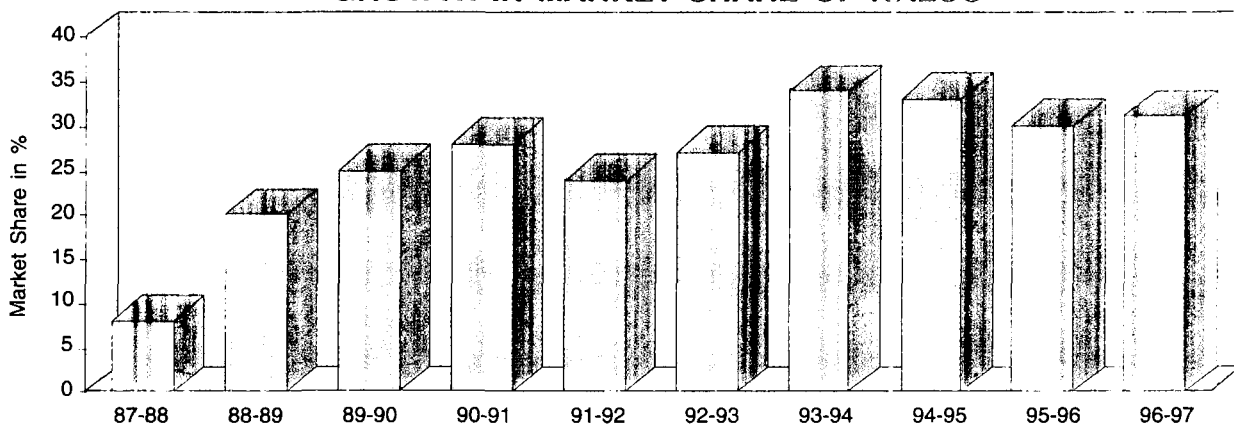
16. Business Profile :

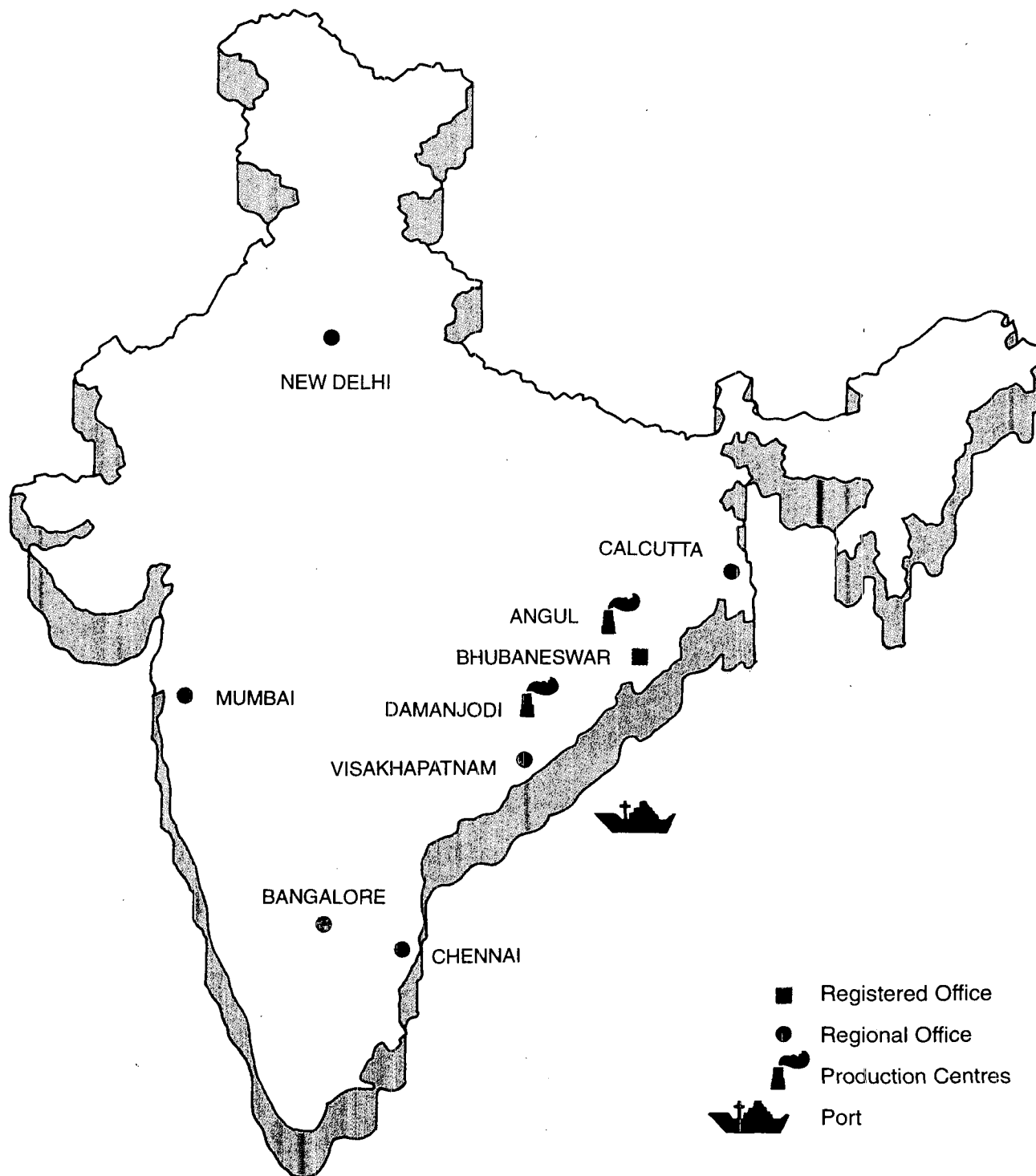
The quality assurance associated with NALCO metal received international acclaim with NALCO's admission to London Metal Exchange (LME) in 1989.

The Company exports more than 50% of Calcined Alumina and around 30% of metal produced. Export turnover accounts for more than 35% of total turnover.

NALCO is the largest primary metal producer in India and accounts for around 33% share in the domestic Market, as can be seen from the following graph :

GROWTH IN MARKET SHARE OF NALCO







Directors' Report

To
The Members

Ladies & Gentlemen,

Your Directors take pleasure in presenting the 16th Annual Report on the working of the Company, together with the Audited Accounts for the year ended 31st March, 1997.

Performance Highlights :

You will be happy to know that your Company in its 16th year of existence has surpassed the records set in the previous years in all fields i.e. operations, marketing and finance.

Operations :

As a result of a strategic thrust on higher production, the year 1996-97 witnessed quantum jumps in outputs of all production units. Bauxite production at 25.58 lakh tonnes has not only surpassed the rated capacity but also the previous best of 24.35 lakh tonnes achieved in 1993-94. The installed capacity of 8 lakh tonnes Alumina Refinery has been exceeded for the 3rd time, with the highest ever production of 8.40 lakh tonnes of calcined alumina. In metal production, it is significant to note that the production barriers, which limited the previous best achievement to 1,94,332 tonnes (in 1993-94), was crossed with a production of 2,03,823 tonnes of metal during 1996-97, against a target of 200,000 tonnes. The 720 MW Power Plant of your Company has maintained its lead with a record net generation of 4187 million units, compared to 4147 million units of 1995-96. The average Plant Load Factor of 73.8% achieved during the year puts power generation facility of your Company among one of the best in the country. The 3x18.5 MW auxiliary power generation system of Alumina Refinery has also recorded its highest at 250 million units net, against the previous best of 248 million units.

The Port Facilities of your Company at Visakhapatnam on the Bay of Bengal has set new records by efficient handling of 4.65 lakh tonnes of calcined alumina and 60,357 tonnes of metal in exports and 1,11,430 tonnes of caustic soda in imports. Also imports of certain critical input materials like coal tar pitch, baked anodes, carbon blocks and synthetic flocculants have taken place through this port facility.

One of the important operational logistics involving transport of alumina has been somewhat eased with the commissioning of Rayagada-Koraput rail link by South Eastern Railway. The turnaround time for alumina rakes between the Alumina Refinery at Damanjodi and the Smelter Plant at Angul has been reduced.

Marketing :

In the shadows of low international prices and lowered import tariff, domestic sale of metal during the year was seriously threatened by virtual dumping of imported metal. However, your Company, through improved customer service and better market co-ordination could achieve record sales of 1,45,522 tonnes of metal in the domestic market, compared to 1,43,092

tonnes in 1995-96, while export of 60,357 tonnes of metal represents 22.86% increase over the previous year. The year had a remarkable end with a closing stock of 720 tonnes of metal, a little more than one day's production.

By exporting 4.65 lakh tonnes of calcined alumina during the year under report, your Company has exceeded its previous best of 4.48 lakh tonnes achieved in 1989-90. Under dull market conditions despite lower average sales realisation, the higher volumes of transactions, could help your Company to perform better than the previous year.

The Directors would like to report a minor change in the sales network of the Company during the year. The stockyard at Jagadhri in Haryana was closed down following insufficient sales, while a new stockyard was opened in Bhiwandi near Mumbai. Also, a market development cell has been set up at the corporate level to explore and define marketing strategies for speciality products like zeolite, gallium, special aluminas etc.

Aluminium industry is recovering from the bearish market conditions prevailing during most part of 1996. Demand for aluminium has been strong in recent months and with the anticipated deficit in supply over the demand in the next two years, the prospects for the industry appear to be bright.

Finance :

Your Directors are happy to report a record sales turnover of Rs. 1768.86 crore and a profit (before tax) of Rs. 555.91 crore for the year 1996-97. This constitutes an increase of Rs.24.88 crore on sales turnover and Rs.20.63 crore on profit of 1995-96. The export income of your Company has been a record high of Rs.637.86 crore.

Your Company, enjoying 'tax holiday' so far, came under the purview of Minimum Alternate Tax (MAT) in 1996-97. The tax provision of Rs.64.15 crore in this regard has resulted in the scale down of the net profit to Rs.491.76 crore compared to Rs.535.26 crore in 1995-96. This also accounts for the lower EPS of Rs.3.82 against Rs.4.15 of 1995-96. The Government's thoughtful review of the MAT, permitting carry over of the payment for adjustment against the regular tax of the succeeding year, may do good to your Company in 1997-98.

A significant achievement in the financial management of your Company has been the pre-payment of overseas loans amounting to Rs.978 crore during March '95 to March '97 period. This proactive measure has not only brought down the interest liability from Rs.184.03 crore in 1994-95 to Rs.64.83 crore in 1995-96 to Rs.9.08 crore in 1996-97, but also helped to achieve around Rs.45 crore saving on adverse exchange rate variations as of 31st March, 1997. At this point of time, the debt liability of your Company is limited to Rs.580 crore in form of a 20 billion Japanese Yen loan repayable in full by end of September, 1998.

Your Company has been successful in recovering long pending dues from Andhra Bank Financial Services Limited, Mineral Exploration Corporation Limited (Principal amount) and Railways.



Dividend :

Your Directors recommend a dividend of 6% amounting to Rs. 77.32 crore on the paid-up Equity Capital of Rs.1288.62 crore, as compared to 3.5% declared during 1995-96. The above is subject to the approval of the Central Government (Under Section 205(1)(c) of the Companies Act, 1956) and the Members at the Annual General Meeting. The dividend recommended for the year constitutes about 16% of the net profit.

An amount of Rs.400 crore out of the profit is proposed to be transferred to General Reserve Account, which already has a corpus of Rs.1100 crore.

Shares :

Despite a large equity base of Rs.1288.62 crore (out of which 12.85% has been disinvested by the Govt.), the scrips of your Company are well traded. The share registry, operated in-house by the Company, has recorded more than 2.5 lakh transfer of share certificates involving Rs.35 crore in face value during 1996-97. In order to provide the most advanced services to the investors, your Company has in the meantime opted for the depository system. An agreement to this effect has been signed with National Securities Depository Ltd. (NSDL). This will facilitate paperless trading and faster settlements, while eliminating the problems of loss of certificates, bad delivery and forgery etc.

Restructuring :

Because of a large equity base, the performance of your Company does not get reflected in the earnings per share and also the large dividend payouts appear nominal on per share basis. The Company already listed in stock exchanges following 12.85% dilution of Government share and being due for further disinvestment, your Directors have sought Government approval to restructure the capital. This is expected to get better returns to the shareholders as well as the Government. The proposal in brief, is to convert 50% of existing equity capital of Rs.1288.62 crore into debt.

Human Resource :

The manpower strength of the Company has undergone a marginal increase during the year in the following order :

	<u>As on 31.03.97</u>	<u>As on 31.03.96</u>
Executives	1278	1243
Supervisory	901	828
Skilled/Highly-skilled	2928	3066
Unskilled/Semi-skilled	1125	983
	<u>6232</u>	<u>6120</u>

Efforts were continued to improve the representation of SC/ST communities in employment of the Company during the year. As on 31.03.97, there were 1054 employees belonging to Scheduled Castes, 1143 employees belonging to Scheduled Tribes and 462 employees belonging to OBC category on employment

out of the total strength of 6232 including the trainees. The overall representation works out to 16.91% in case of Scheduled Castes, 18.34% in case of Scheduled Tribes and 7.41% in case of OBC. In other words, every third employee of the Company either belongs to SC or ST category.

The general industrial relations scenario in all the units of the Company remained more or less peaceful in spite of multiunionism. On an average the total work force is motivated with improvement in perquisites and benefits as well as proactive steps to combat the discontentment level. The major action on hand is to improve the work culture and level of discipline. During the financial year the total man-hours lost on account of industrial unrest is about 0.14% of the total man-hours worked which is quite nominal.

For solving the employees' grievances in a prompt and efficient manner, the 'Sahayata' scheme is in operation. To harness employees' potentialities/creativity, in fostering production, productivity and savings on cost, various schemes have been introduced. Suggestion and Reward scheme known as 'Sarjana' is one of them, which is eliciting good response.

Training of the employees for skill enhancement and attitudinal changes continues to be a thrust area in the Company. During the year, 28% of the employees had exposure to training programme within and outside the Company.

Your Directors take pleasure in informing you that a Corporate Management Development Centre, built at a cost of Rs.1.5 crore at Bhubaneswar, is nearing completion. Apart from providing advanced in-house training, your Company in due course, shall use this centre to share its experience and expertise with other organisations in the country.

With a view to achieve meaningful interactions with management institute, your Company has opted for creation of a Nalco Chair in strategic Information Management at the Management Development Institute, Gurgaon. An endowment of Rs.20 lakh has been created for this purpose.

Projects :

Your Directors are happy to inform that the proposal to expand the capacities of the Bauxite Mine at Panchpatmali from 24 lakh tonnes to 48 lakh tonnes and Alumina Refinery at Damanjodi from 8 lakh tonnes to 15.75 lakh tonnes was approved by the Government on 18th December '96. This project, estimated to cost Rs.1665 crore, is scheduled for completion within 51 months from the date of approval. Your Company aims to fund the entire project cost out of reserves and internal accruals. Engineers India Ltd., an old associate of your Company in project management, has been appointed as the principal consultant for the above project. Mobilisation of resources for timely completion of the project is in full swing.

The proposal of your Company to expand its smelting capacity from 2.30 lakh tonnes to 3.45 lakh tonnes and power generation capacity from 720 MW to 960 MW at an estimated cost of Rs.2719 crore (June '97 price level) is under consideration of the PIB. As



envisaged in the Corporate Plan of your Company, a number of alumina and aluminium based downstream projects of value-addition are being taken up for evaluation and implementation.

The Projects under various stages of implementations are as under :

(A) Strip Casting Facilities :

A 26,000 TPY strip casting facility at a cost of Rs.49.86 crore in the Smelter Plant at Angul is expected to be commissioned during 2nd quarter of 1998.

(B) Special Grade Alumina

A 20,000 TPY special alumina plant at Damanjodi, at a cost of Rs.45.72 crore based on technical know-how obtained from Alumina Technology Associates, USA is expected to be commissioned during the 4th quarter of 1998.

(C) Zeolite

A 10,000 TPY Detergent Grade Zeolite (Zeolite-A) Plant at Damanjodi at a cost of Rs.24.10 crore with consultancy services rendered by Engineers India Ltd. is scheduled for completion during the 4th quarter of 1998.

(D) Gallium

A 1000 kg/annum 5 N Purity Gallium Extraction Plant at Damanjodi at a cost of Rs.9.46 crore based on indigenous technology and financial assistance to the extent of Rs.4.11 crore coming from associated Government of India agencies e.g. DSIR, DST, DRDO & NRDC, is scheduled to be completed by middle of 1999.

Joint Venture Proposal :

Your Company's proposal for equity participation in International Aluminium Products Ltd. (IAPL), jointly promoted by Mukand Ltd. FATA - Gem Ltd. and others is under the consideration of the Government. IAPL proposes to set up a 100% Export Oriented Unit for aluminium rolled products based on liquid metal supply from NALCO.

Computerisation :

Strategic planning on computerisation for the organisation in Process Automation Information Integration and Commercial Applications involving an outlay of Rs.16.44 crore is under implementation.

In Wide Area Network implementation, three High Speed VSATs at Corporate Office, Smelter and Refinery were installed and are under test operation. It is being proposed to enlarge the network to the project support activity to EIL-Delhi, CPP and Mines in the second phase.

Using Client Server architecture, application packages in Finance, Personnel etc. have been re-engineered and successfully implemented on Sybase 11/Powerbuilder. Similar exercise is in

progress in all the units. Following the recommendations of the strategic plan, procurement of necessary hardware, RDBMS and front end tools on need basis are being made to augment the available resources for all units.

Quality Movement :

The quality management systems of all the production units of your Company are ISO certified. Regular quality audits and training programmes have kept the quality movement in your Company dynamic. Employees are taking significant interest in forming Quality Circles. As of now, there are 72 Quality Circles operating in the Company compared to 50 in 1995-96. These Quality Circles have completed 32 projects during 1996-97. All Orissa Quality Circle Competition organised by your Company every year is helping in popularisation of quality movement in several industries in the State. Two Quality Circles of the Company selected by QCFL, took part in the International Quality Circle Competition at Kuala Lumpur.

Having developed a pool of competent professionals in the field, your Company is in a position to provide counselling and consultancy services to other organisations for acquiring ISO 9000 certification. A modest beginning has been made with an offer from Mahanadi Coalfields Ltd. There have also been enquiries from other organisations for similar services.

Quality improvement being a continuous process, necessary interventions have been initiated within the Company to achieve bench-markings and internal customer satisfaction in the direction of achieving TQM.

Safety & Health :

Safety and health of the employees get priority of attention in your Company. A comprehensive disaster management plan prepared by the Company and approved by the Government of Orissa is in operation since March, 1996. Apart from internal systems of conducting safety drills and safety inspection, the Disaster Management Institute, Bhopal has been engaged as an external agency to conduct annual safety audits in all the production units of the Company. Road safety, Fire safety and Mines safety weeks are observed for promotion of a safety culture in the Organisation. Your Directors are pleased to inform that the Captive Power plant of the Company has received the ITC award of Safety from CII (Eastern Region) as well as a Special Safety Award from the Government of Orissa during the year.

Your Company has set up well-equipped modern hospitals at Angul and Damanjodi, with specialists working in various disciplines. Based on the need, employees and their dependants are referred to reputed hospitals in the country for specialized treatments, the cost of which is borne by the Company.

While the employees' health profile is generally good, and no occupational health disorders have been noticed so far, yet in line with the ILO recommendations, Occupational Health Centres have been set up at Angul and Damanjodi to facilitate



effective monitoring of employees' health through regular check-ups.

Environment :

In its quest for excellence in environmental care, your Company has crossed yet another milestone with the Environment Management Systems of its Mines & Refinery Complex at Damanjodi certified under ISO-14001. You will be pleased to note that the Alumina Refinery of your Company is the first chemical plant in the country to be certified under ISO-14001. Efforts are on to get similar certifications for the Smelter and Captive Power Plant as well.

The reputation of your Company in matters of pollution control and environment care has indeed facilitated in obtaining timely environmental clearances for the expansion and downstream projects, now under implementation.

As advanced measures for pollution control, an alkaline water neutralisation plant at Alumina Refinery, Damanjodi, and a defluoridation plant at the Smelter Plant, Angul, are being set up at a total cost of Rs.12 crore.

As envisaged in the Environmental Management Plan, the biological monitoring of the peripheral zones of the Company's plants at Angul and Damanjodi has been completed by the Orissa University of Agriculture & Technology. The final reports received recently are under examination. The epidemiological survey of the human population around the smelter Plant at Angul, undertaken by the Regional Occupational Health Centre, Calcutta, spread over three years, is due for completion in September, 1997. The interim reports in this regard are encouraging to your Company.

It is a matter of great pleasure for your Directors to report that your Company has been chosen to receive the Indira Priyadarshini Vrikshamitra Award, the highest Government of India's honour in the field of afforestation. The cumulative plantation of trees in and around the plants and facilities of your Company had crossed 43.7 lakhs by 1996-97 end.

More as a matter of social obligation, your Company has recently committed to finance drinking water supply schemes for 11 villages in Angul sector at a cost of Rs.6.68 crore.

In collaboration with RRL, Bhopal, the Company has undertaken experimental projects of wasteland development through applications of fly ash in Angul and Damanjodi sectors. The results have been quite encouraging.

Technology :

Repositioning of technology is the hallmark of progress of any industrial enterprise. Your Company has been constantly exploring new frontiers in the technologies pertaining to its areas of operations. Within the broad framework of the advanced technologies adopted for Bauxite mining, Alumina refining, Aluminium smelting and castings as well as for the power generation, large scale modifications and upgradations have taken place.

The de-bottlenecking of the Smelter Plant, initiated in 1994-95, was completed during the year under report at a total cost of Rs.50 crore.

The Alumina Refinery expansion project under implementation now, envisages large scale changes in the technology to upgrade the capacity of existing production streams from 8 lakh tonnes to 10.50 lakh tonnes.

The liberalised economic climate has helped to stimulate the Research & Development environment in the Company. As reported to you earlier, the R&D Centres of the Company at Angul and Damanjodi are recognised by DSIR, Ministry of Science & Technology. A number of research institutes of national repute are joining hands with the Company for development of relevant technologies in the fields of waste utilisation, energy conservation, product development and productivity improvements. The particulars of R&D activities and technology absorption are placed as annexure to this report.

Continued Technical Assistance Agreement (CTA) with Aluminium Pechiney, France, which expired in December '95, has been revived for a period of 4 years w.e.f 16.12.96. An agreement for transfer of gallium extraction technology was signed between the Company and National Research Development Corporation, Hyderabad during the year.

Energy :

Conservation of energy is a matter of national importance. For a primary producer like your Company, which is open to international price competition, the cost of energy inputs can make critical differences to the bottom line.

It gives us some satisfaction in reporting that the various energy conservation measures taken up during 1996-97 have resulted in reduced consumption of power, fuel, oil and coal per tonne of alumina produced. In the Smelter Plant, reduced consumptions of fuel oil and CP coke are noteworthy. The particulars of energy conservation measures adopted during 1996-97 are placed as annexure to this report.

To make the energy conservation efforts more focussed, the Company had engaged Tata Energy Research Institute (TERI) to conduct an energy audit of the Smelter Plant during 1996-97. Their report is expected soon.

Your Directors wish to record their appreciation of the efforts put in by Mines & Refinery team to win the Fuel Conservation Award from the Confederation of Indian Industry for the year 1996-97.

Hindi :

Promotion of Hindi as the official language is actively pursued in your Company. Apart from regular Hindi training classes which covered 151 employees of the Company, a Hindi workshop and a meeting of the translators of eastern region was organised by the Company during 1996-97.

The Hindi editions of the Company's house magazine



'Parichaya' received the best Hindi house journal award from Bharatiya Sanskriti Sansthan at their International Hindi meet held at Mauritius.

Vigilance :

Your Company gives importance on preventive vigilance by building awareness in all quarters of the organisation. All rules and regulations, particularly the purchase and contract procedures are closely reviewed to prevent corruption and make the working of the organisation transparent.

Sports :

Your Company has been taking interest in the promotion of sports particularly in the State of Orissa. Apart from honouring young sports talents of the State with citations and cash awards every year and extending financial supports to various sports events, your Company has taken on its rolls some of the accomplished athletes of the State who have represented the country.

MoU Rating :

The Company's performance was rated "Excellent" in the evaluation of the Memorandum of Understanding signed with the Government of India for the year 1995-96. As per the provisional assessment, the Company's performance in 1996-97 in terms of MoU has also been "Excellent".

Shifting of Registered office :

Registered Office of your Company has been shifted from IDCO Tower (8th Floor), Janpath, Bhubaneswar-751 007 to its own NALCO BHAWAN, Plot No.P/1, Nayapalli, Bhubaneswar-751 013 on 22.07.97.

Statutory Disclosures :

Particulars of employees in receipt of remuneration in excess of the limits prescribed under the provisions of Section-217(2A) of the Companies Act, 1956 and the rules framed thereunder, is attached at Annexure-I.

Particulars with respect to Energy Conservation, Research and Development, Technology Absorption etc. are submitted in Annexure-II forming part of this report.

Foreign Exchange Earning and outgo :

The Foreign Exchange earnings (on receipt basis) during the year 1996-97 was Rs.627.80 crore as against Rs.418.72 crore during the previous year.

The foreign exchange outgo (on cash basis) during the year was Rs.175.29 crore against Rs.207.38 crore during the previous year.

Review of Accounts by C & AG :

The review of accounts prepared by C&AG for the year 1996-97 is annexed to this report.

Auditors :

M/s Bhrahmayya & Co., Chartered Accountants, Vijayawada, have been appointed as Statutory Auditors of the Company for the year 1996-97 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 1996-97 by the Company Law Board.

Directors :

The tenure of Shri R. B. Rao, Ex-Director (Finance) has been extended by the President of India up to 30.04.97.

The resignation submitted by Dr. S. K. Tamotia has been accepted by the President of India with effect from 20.01.97.

Shri A. H. Jung, Additional Secretary and Financial Adviser in the Ministries of Steel & Mines is appointed as an Additional Director w.e.f. 26.08.97 vice Shri A. Prasad, Director. Shri Jung holds office upto 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 Jung for the office of a Director.

S/Shri R. K. Rath, T. L. Sankar & S. K. Golcha would retire by rotation in the present Annual General Meeting. The Company is awaiting appointment of part-time non-official Directors in place of the above Directors, from the Government.

Directors wish to place on record their deep appreciation for the valuable services and guidance received from Directors Dr. S. K. Tamotia, Shri A. Prasad, Shri R. K. Rath, Shri T. L. Sankar & Shri S. K. Golcha.

Acknowledgment :

The Directors gratefully acknowledge the co-operation, assistance and support extended to the Company by various Ministries of the Government of India in general and the Ministry of Mines in particular, the Government of Orissa, S.E. Railway, Mahanadi Coalfields Ltd., State Bank of India, Grid Corporation of Orissa and other organisations.

The Directors also thank the valued customers of the Company for their continued patronage.

Your Directors take this opportunity to place on record their appreciation of innovativeness, initiative and enterprise of the employees which enabled the Company to achieve yet another year of excellent performance.

For and on behalf of the Board of Directors

Place : Bhubaneswar
Date : 04.09.1997

(S. N. Johri)
Chairman-cum-Managing Director



Annexure I

INFORMATION AS PER SECTION 217(2A) OF THE COMPANIES ACT, 1956 FORMING PART OF DIRECTORS' REPORT FOR THE YEAR ENDED 31.03.1997.

Sl. No.	Name S/Shri	Designation of employee	Remuneration received(Rs.)	Qualification & experience (Years)	Date of Commencement of employment	Age as on 31.03.1997 (Years)	Last employment held before joining the Company
1	2	3	4	5	6	7	8
Employed throughout the Financial Year and in receipt of remuneration of not less than Rs.3,00,000 in the aggregate for the year.							
1.	Johri S. N.	CMD	4,21,323	M.Sc. (Math), M.Sc. (Stat), LL.B.,FCS (32 years)	04.06.84	55	G.M.(Pers) & Secretary, KIOCL
2.	Singh B.D.	D(P&A)	4,73,332	M.A., M.A. (LSW), JEDP,B.L. (32 years)	17.02.93	57	G.M. (Pers), VSP
3.	Badi N. V.	ED(CP&BD)	4,28,570	B.A., B.E. (Mech)(H), FIE,DMA,CE, AMIE, (34 years)	07.01.82	55	Manager (Matls), MECL
4.	Mishra S. K.	ED(M&R)	3,18,173	B.Sc. Engg. (Mining) M.Tech (ME) 1st MMCC (26 years)	08.02.82	49	Sr. Design Engr. (Mining), Bokaro Steel Plant
5.	Seth M.M.	DGM (R&D)	3,15,557	B.E. (Metlgy), (30 years)	12.03.82	55	Asstt. Supdt., BALCO
6.	Pani B.S.	DGM (Technology)	3,42,462	B.E. (Metlgy), MBA, (24 years)	22.03.82	47	Asstt. Supdt., BALCO
7.	Das S. N.	CM (Env. & Safety)	4,35,986	B.Sc. Engg. (Mech), (23 years)	27.12.85	50	Dy. Chief Engineer, FCI Ltd.
8.	Harry B. W.	Sr. Manager (Chemical)	3,09,929	B.Sc. Engg. (Chem), (20 years)	06.09.85	45	Asstt. Mgr., Bokaro Steel Plant
9.	Dash R. N.	Dy. Med. Supdt.	3,17,599	MBBS, M.D. (12 years)	18.07.88	44	Asstt. Surgeon, Govt. of Orissa

Employed for Part of the Financial Year and in receipt of remuneration of not less than Rs.25,000 per month.

10.	Tamotia Dr. S. K.	D (P&T)	4,85,118	B.E. (Hons) (Civil), M.E. (Soil & Foundation Engg.) Ph.D., (33 years)	24.02.84	57	Chief-Design, Plng. & Contracts, KIOCL
-----	-------------------	---------	----------	--	----------	----	--

Notes :

- Salary includes Basic Pay, D.A., Incentives, Leave Encashment, arrears salary and other benefits paid through salary.
- All appointments are on regular basis.
- Terms and conditions are as per Rules of the Company.
- Chairman-cum-Managing Director and Functional Directors are appointed by the President of India and are on tenure contract.
- None of the above employee is related to any of the Directors of the Company.



Annexure II

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

A. CONSERVATION OF ENERGY :

Modern technologies have been adopted in all the units of NALCO leading to optimal consumption of energy. In addition to that it is our continuous endeavour to conserve energy to the maximum extent by constant monitoring of energy conservation activities and specific consumption figures, by getting energy audit by external professional agencies and adopting different other useful measures in this direction.

Furthermore keeping pace with demand of present age, efforts are on towards exploitation of various Non-conventional Energy Sources. Major highlights of energy conservation measures taken by the Company are as follows :

a) Energy Conservation measures taken :

(i) Mines & Refinery :

1. Operation of single mill instead of 2 mills in each running boiler was adopted.
2. Island operation of Turbo generators and load shedding scheme was consistently practised to ensure continued production and avoid effects of grid fluctuation.
3. Increased coal mill availability and optimisation of coal mill operation was achieved by the use of quality grinding media and mill liners.
4. Direct feeding of coal from wagon tippler through reclaim hopper avoided operation of heavy earth moving equipment for storage yard resulting energy saving.
5. Auto switching on/off of lighting circuit at CDS and loop substation by incorporating electro mechanical timer led to reduced power consumption.
6. Use of synthetic flocculant (cytech-401) in place of conventional wheat bran has reduced considerable electrical energy and steam energy along with reduction of lime.

(ii) Smelter Plant :

- The average number of shunted pots reduced to 45 compared to 71 during the previous year. Thus the unproductive energy consumption due to wedge drop was reduced. Operating more pots also increased production of metal.

- Cathode lining of 52 pots with Anthracite were replaced with semigraphite this year. This lining effected reduction of cathode voltage drop and hence resulted in energy saving.

(iii) Captive Power Plant :

- Saving in fuel oil by better operational strategy and process optimisation.
- Chemical cleaning of the condenser carried out in Unit-1 & Unit-3 to improve turbo-generator performance.
- Replacement of hot end baskets of air-preheaters along with high pressure steam soot blowing to reduce exit flue gas temperature to optimise boiler efficiency.
- Operation of long retracting soot blowers has been started in unit-5 and unit-6 to reduce exit flue gas temperature and optimise boiler efficiency.
- High pressure heater utilisation factor has increased to 93.22%, this is 4% increase over the previous year, which has helped in saving of fuel.
- No. of unit trip outs per thousand running hours has been reduced from 2.59 in 1995-96 to 1.83 in 1996-97. This has contributed in saving of fuel oil, coal and auxiliary power.
- Installation of water sprinkler system in coal yard to reduce spontaneous combustion of coal.

b) Additional investment and proposals being implemented :

1. Use of variable speed A.C. drives in place of control valves have been proposed for desilicated pumps.
2. Solar Water Heating Systems are being installed at NALCO Athithi Niwas at Angul, NALCO Hospital, Damanjodi, Guest House at Nalco Nagar, Bhubaneswar and New Corporate Office canteen, Bhubaneswar.
3. Installation of fixed VAR compensator at 11 KV level is in progress in 220 KV substation of Smelter Plant. This is to reduce MVAR requirement and also MVA requirement and hence will lead to conservation of energy.
4. Recycling of ash pond overflow water project is being carried out in CPP to reduce off take of water from river.



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 (1996-97)	PREVIOUS YEAR (1995-96)	CURRENT YEAR (1996-97)	PREVIOUS YEAR (1995-96)
1. Electricity				
a) Purchased from GRIDCO (Million KWH)	18.027	10.625	—	—
Total amount (Rs. in lakh)	523.03	252.78	—	—
Average Rate (Rs./KWH)	2.90	2.37	—	—
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)	4654.398	4620.77	250.075	248.007
Energy cost per unit (Rs./KWH)	0.3315	0.3189	—	—
2. Coal (specify quality & where used) (Quality F&G grades)				
Quantity (Tonnes)	3558801	3561106	580351	584785
Total cost (Rs. in lakh)	13221.69	12734.80	4978.82	4796.76
Average rate (Rs./ Tonnes)	372	358	858	820

3. Fuel Oil & LDO

	CAPTIVE POWER PLANT ANGUL		ALUMINA REFINERY DAMANJODI		SMELTER ANGUL	
	1996-97	1995-96	1996-97	1995-96	1996-97	1995-96
Quantity (KL)	8625	7803	71275	69957	21020	19208
Total amount (Rs. in lakh)	576.91	489.03	4399.89	3562.99	1349.01	1043.32
Average (Rs./KL)	6689	6267	6173	5093	6418	5432

B. Consumption per unit of production

Products (with details)	Unit	Standards (If any)	Current Year (1996-97)	Previous Year (1995-96)
1. Alumina Refinery, Damanjodi				
(a) Power	(KWH/Ton)	380	346.68	354.46
(b) Fuel oil for calcination	(Kg/Ton)	85.3	77.49	86.67
(c) Coal for steam	(Kg/Ton)	750	688	724.52
(d) Oil for steam	(Kg/Ton)	10	3.69	4.10
2. Smelter, Angul				
(a) A. C. Energy	(KWH/Ton)	14,600	15,804	15,639
(b) Fuel Oil	(Kg/Ton)	95	96.47	99.89
(c) Others				
i) C.P. Coke	(Kg/Ton)	408	415.76	436.95
ii) C.T. Pitch	(Kg/Ton)	106.5	104.76	103.49



FORM - B

B. TECHNOLOGY ABSORPTION :

Efforts made in technology absorption

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 :

- The perspective plan prepared for revamping of R&D Centre at Alumina Refinery is under implementation. Equipment such as Capillary Ion Chromatograph and Whiteness Index Meter have been procured and several additional equipment like TG/DTA, XRD, SEM, etc. are also under procurement for installation in the R&D Centre.
- Renewal for recognition of R&D Centre has also been applied to DSIR, Ministry of Science & Technology for the year 1997-98 and 1998-99.

(ii) Development of Special Grade Alumina & Hydrate :

A 600 TPY capacity Pilot Plant based on in-house expertise is under commissioning for development and production of Speciality products of Hydrate and Alumina. The 1st trial run has been successfully carried out during Oct. '96 and one of the products namely Dry Hydrate has been produced and samples were sent to end users for field trials.

(iii) Speciality Products Marketing :

For Market Survey, Market Development and Promotion of sales of Speciality Products, a Speciality Products Marketing Group has been created at the corporate level. Market Development activities have already been initiated and an exclusive Market Survey Report has been prepared for Special Grade Alumina and Hydrates with the help of an independent agency.

(iv) Settling Test using Synthetic Flocculant :

After establishing settling behaviour of mud using synthetic flocculant of M/s. Cytec at the lab scale, the same has been successfully used in the plant as a substitute of wheat bran. This has helped in achieving higher production to the tune of 25000 TPY and also reduced the consumption of bran and lime.

(v) On-line RP Analyser :

On-line RP analyser system has been put to trial operation since March '97 and results obtained are found to be encouraging.

(vi) Cooling Water Treatment :

Cooling water treatment using new chemicals from

M/s. Thermax, has been continuing successfully. The trial will be over in a couple of months.

(b) Smelter Plant :

(i) Assessment of Electrolytic Cell life :

The software prepared through JNARDDC, Nagpur for prediction of Pot life and failure probability has been successfully implemented in the smelter plant through which Electrolytic Cell life can very well be predicted at any instant of time.

(ii) Use of Graphitised & Semi-Graphitised Carbon Cathode blocks :

Monitoring of Graphitised & Semi-Graphitised Carbon Cathode block lined pots in comparison with the Anthracitic carbon cathode blocks continued satisfactorily throughout the year. To ascertain improvements in energy consumption more data is being generated.

(iii) Studies on Anode Bake Oven Flue Wall Refractory :

Sampling and analysis of Anode Bake Oven Flue Wall Refractory were carried out and detailed investigation is underway.

(iv) Revamping of R&D Centre :

Under the scheme of Revamping of R&D Centre at Smelter Plant, Angul, civil construction activities of the Centre is under full swing and equipment ordered on M/s. R&D Carbon, Switzerland have been received at site and is awaiting installation.

(B) Collaborative R&D Projects in hand :

(i) Gallium Project

The project for setting up of a 950 kg/year (5N Grade) Gallium Plant at M&R Complex, Damanjodi based on the indigenously developed technologies of CECRI, Karaikudi and NFC, Hyderabad at a total project cost of Rs.9.46 crore, out of which Rs.5.35 crore being funded by NALCO & balance of Rs.4.11 crore by different Central Govt. Agencies viz DST, DSIR, DRDO & NRDC is under implementation after obtaining approval from Expenditure Finance Committee of Govt of India, Ministry of Mines. Licence Agreement for transfer of technology has been signed with NRDC. A Project review Committee has also been constituted for the purpose under the Chairmanship of CMD, NALCO and members drawn from DSIR, DST, DRDO, NRDC & NALCO.

(ii) Red Mud based Synthetic Wood :

Red Mud Fibre Reinforced Polymer Composites for Building components as Wood Substitute has been



successfully developed in the laboratory scale from NALCO's Red Mud in collaboration with RRL, Bhopal. All the properties have been suitably evaluated and the findings shows that the product can very well be used as a wood substitute material. A Pilot scale project for production of large scale Doors & Window shutters is under active pursuit.

(iii) Wasteland Development by Application of Fly Ash :

A collaborative R&D Project both in the laboratory as well as in the pilot plant scale has been taken up with RRL, Bhopal for development of Wastelands by application of Fly ash in both Angul and Damanjodi sectors covering an area of around 5 acres each for a duration of 18 months. The project is aimed at bringing in an awareness amongst the local farmers about application of fly ash as a soil modifier and micro fertiliser in agriculture. Vegetables like Tomato, Cabbage, Potato; cereals like Wheat and Paddy; oil bearing species like Sunflower and fruit bearing plants like Mango have been successfully cultivated. Training programmes have been conducted amongst the local farmers & villagers.

(iv) Development of Fly Ash based Granite Tiles :

A collaborative R&D Project has been successfully completed in the laboratory scale in collaboration with BHEL(CTI), Bangalore for development of Granite Tiles from NALCO's Fly Ash of CPP origin. 25 numbers of such tiles have been prepared under the project for further field trials.

(v) Development of Fly Ash based Wear Resistant Ceramic Products :

Under a collaborative R&D programme, a lab scale project for development of process technology for production of Wear Resistant Ceramic products from NALCO's fly ash of CPP origin has been taken up with NML, Jamshedpur. Results of initial exploratory studies are found to be satisfactory.

(vi) Development of Zeolite-P :

A collaborative R&D project both in the lab as well as in pilot plant scale has been taken up with NCL, Pune for development of Zeolite-P from NALCO's Sodium Aluminate Liquor & Alumina Tri-Hydrate for use as a builder material in Detergent formulations. The project is under progress.

(vii) Technology/Process Development for Production of Low density White Alumina Hydrate (Light Hydrate) :

A collaborative R&D Project has been successfully completed with RRL, Bhubaneswar in laboratory and pilot plant scale for development and production of white and light hydrate of finer particle size. The

product obtained is being further tested for spray drying for quality improvement.

(viii) Development of Rare Earth added Aluminium alloys for Conductor Applications :

A collaborative R&D project in the lab scale has been taken up with RRL, Trivandrum for development of Rare Earth added Aluminium Alloys for conductor applications based on NALCO's Aluminium metal. The work is under active progress.

(ix) Characterisation of Spent Pot Lining & Development of Process Flow-sheet for Extraction of Valuables :

NALCO in collaboration with JNARDDC, Nagpur has taken up a lab scale R&D project for characterisation of spent pot lining materials towards development of a process flow-sheet for extraction of valuables out of the same. The project activities are under progress.

2. Benefits Derived :

- (i) Based on indigenously developed technologies provided by CECRI, Karaikudi and NFC, Hyderabad, production facilities for 950 kg (5N Grade) per annum of Gallium Metal, considered as a "Strategic Metal", is under implementation at NALCO's Alumina Refinery Complex, Damanjodi. This project being of National importance, has attracted grant-in-aids of Rs.4.11 crore from different Central Govt. Agencies like DRDO (Rs. 1 crore), DST (Rs.1 crore), DSIR (Rs.1.61 crore) and NRDC (Rs.0.5 crore) involving a total project cost of Rs.9.46 crore.
- (ii) The Zeolite-A project under implementation at NALCO's Alumina Refinery, Damanjodi is one of the large "Industry - R&D Institute" link realised in the country from concept to commercialisation. Further, "Technological Consortium" formed jointly by "Industry-Institution-Technology Licensor - Consultant" to steer implementation of the project is the first experiment of its kind in the country. Enquiries received from Middle East countries for providing the technology are under discussions.
- (iii) Regular addition of Synthetic flocculant from CYTEC has helped in achieving higher production to the tune of 25,000 TPY approximately. This has also reduced lime consumption by about 50% and bran consumption to 1 kg/tonnes.
- (iv) Continuous dosing of Crystal Growth Modifier (CGM) into the precipitation circuit has benefited achieving Alumina quality (Grain size) matching to international standards.
- (v) The software prepared through JNARDDC, Nagpur and implemented in pot-line for prediction of pot



life and failure probability has enabled in averting Premature Pot failure and disasters, if any, in future.

3. Future Plan of Action :

- (i) Upgradation of R&D Centres at both Damanjodi and Angul sectors with additional equipmental facilities.
- (ii) Development and trial production of different grades of speciality alumina and hydrates at Pilot Plant scale.
- (iii) Continuous treatment of cooling water using Chemicals after successful trials.
- (iv) Exploring possibilities for setting up of a suitable size Tabular alumina unit with overseas technological assistances.
- (v) Implementation of an optimum size Gallium Plant (5N grade) with purification facilities up to 7N grade backed by imported state-of-the-art technological supports.
- (vi) Market tie-ups for speciality products with Domestic/International Customers.
- (vii) Manufacture of Aluminium Powder & Flakes for commercial and high technology applications.
- (viii) Development of cast and master alloys for use in aluminium foundry industry.
- (ix) Removal of Oxalic Carbon from Bayer liquor through Membrane Filter Process.
- (x) Medium Pressure Digestion studies on NALCO Bauxite.
- (xi) Dewatering studies on hydrate Cake using Synthetic reagents.

4. Expenditure on R&D

	(Rs. in lakhs)	
	1996-97	1995-96
a) Capital	14.38	32.84
b) Recurring	37.25	45.52
c) Total	<u>51.63</u>	<u>78.36</u>
d) Total R&D expenditure as % of turnover	0.029	0.045

II. Technology Absorption, Adaptation & Innovation

Technology has become the hallmark of progress and prosperity of any Industrial Enterprise. NALCO has been constantly absorbing and innovating new technological path-ways through opening up novel frontiers of

technological paradigms both in the domestic and international arenas thereby strongly repositioning itself in the global technological map. A comfortable and sound technological footing that NALCO has achieved over the years through its continued journey on the uneven technological high-ways has culminated in bringing in a novel order and fame of excellence for the organisation.

All along NALCO has been working for the growth of development of indigenous technologies in the country by joining hands with the Associated R&D institutions, Licencing Agencies, Consulting Engineering Firms for upgradation of the domestic technological base and commercialising the Know-hows jointly developed wherever so required. This sustained spirit has enriched NALCO's technological climate which has resulted in reducing the dependence on import of technologies.

In addition, NALCO's Business Development Department has opened up new opportunities and business climate in the company for tapping the right source of technology for the right type of product aimed at putting up commercial units in the company in different diversified areas matching with the business ethos of the organisation. Furthermore, newly formed Special Products Marketing Group has given an impetus in the direction of Market Survey and Market Research & Development and marketing of speciality products.

Advent of liberalised economic climate in the National Horizon has helped in the growth and prospects of Research & Development environments in the Company which has resulted in focussing the attention of a host of National Research Institutes of repute for joining hands with NALCO for development of relevant technologies in the fields of Alumina & Aluminium Research, Waste utilisation, Energy Conservation, Development of Non-Conventional Energy Sources, Production of different value added items etc. Technology Absorption, Assimilation, Upgradation, Innovation and Indigenisation of imported technologies and its adaptability into the domestic environment, Import substitution of spare parts in a phased manner under a time bound programme, have been amongst the thrust areas of the Company.

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

- | | |
|--|---|
| a) Technology Imported | Technology for production of special Grade Alumina & Hydrates from M/s ATA, USA. |
| b) Year of Import | 1995 |
| c) Has technology been fully absorbed | Not applicable |
| d) If not fully absorbed, reason thereof & future plan of action | Project is under implementation with a time period of 24 months with effect from 15.02.96.. |



**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, BHUBANESWAR FOR THE
YEAR ENDED 31ST MARCH, 1997.**

I have to state that the Comptroller & Auditor General of India has no comments upon or supplement to the Auditors' Report under Section 619(4) of the Companies Act 1956 on the accounts of the National Aluminium Company Limited for the year ended 31st March 1997.

Dated, Calcutta
The 4th September, 1997.

Sd/-
(J. Chatterjee)
Principal Director of Commercial Audit &
Ex-officio Member, Audit Board-I
Calcutta



**REVIEW OF ACCOUNTS OF NATIONAL ALUMINIUM COMPANY LIMITED
FOR THE YEAR ENDED 31ST MARCH 1997 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 the 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 lakhs)	
	1994-95	1995-96	1996-97
LIABILITIES			
a) Paid-up capital			
i) Government	112299.93	112299.93	112299.93
ii) Others	16561.99	16561.99	16561.99
b) Reserves & Surplus			
i) Free Reserves & Surplus	54040.36	110985.76	151656.56
ii) Investment Allowance Utilisation Reserve	19846.18	19846.18	19846.18
iii) Capital Reserve	—	—	60.00
c) Borrowings from Consortium of International Banks	177428.17	102491.18	58000.00
d) Current Liabilities & Provisions	30265.48	22848.26	29205.60
TOTAL	410442.11	385033.30	387630.26
ASSETS			
e) Gross Block	452531.67	464904.37	468848.35
f) Less : Cumulative Depreciation	143374.08	170084.43	195793.41
g) Net Block	309157.59	294819.94	273054.94
h) Capital Work-in-Progress	9265.12	6315.75	9894.75
i) Misc. Expenditure to the extent not written off	2181.13	764.93	536.58
j) Investments	2927.56	2050.01	3150.00
k) Current Assets, Loans & Advances	86910.71	81082.67	100993.99
TOTAL	410442.11	385033.30	387630.26
l) Working Capital (k-d)	56645.23	58234.41	71788.39
m) Capital Employed (g+l)	365802.82	353054.35	344843.33
n) Net Worth [a+b(i)-i]	180721.15	239082.75	279981.90
o) Net Worth per rupee of paid up capital (in Rs.)	1.40	1.86	2.17

2. RATIO ANALYSIS

Some important financial ratios on the financial health and working of the Company at the end of last 3 years are as under :

	1994-95	1995-96	1996-97
A. Liquidity Ratio		(in percentage)	
Current Ratio	287%	355%	346%
B. Debt Equity Ratio			
Long term debt to Equity	97%	43%	21%
C. Profitability Ratio			
a) Profit before Tax to -			
i) Capital Employed	8.21%	17.41%	16.12%
ii) Networth	16.61%	25.70%	19.86%
iii) Sales	20.30%	35.18%	31.20%
b) Profit after tax to Equity Capital	23.29%	47.69%	38.16%
c) Earning per share (in Rupees)	2.33	4.77	3.82

Due to imbalance between debt and equity the earning per share is low though the Company earned substantial profit in all the three years.



3. SOURCES AND USES OF FUNDS

Funds amounting to Rs.75173.02 lakhs from internal and external sources were generated and utilised during the year as shown below :

SOURCES OF FUNDS :		(Rs. in lakhs)
a) Funds from operation		
Net Profit for the year	49175.69	
Add : Depreciation	<u>25708.98</u>	
		74884.67
b) Misc. expenditure written off/adjusted during the year		228.35
c) Grants in Aid		<u>60.00</u>
Total		<u>75173.02</u>

UTILISATION OF FUNDS :		(Rs. in lakhs)
a) Increase in Gross Fixed Assets		3943.98
b) Increase in Capital Work-in-Progress		3579.00
c) Increase in Working Capital		17548.69
d) Repayment of Loans		44491.18
e) Dividend paid		4510.17
f) Increase in Investment		<u>1100.00</u>
Total		<u>75173.02</u>

4. INVENTORY LEVELS

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

	1994-95	1995-96	1996-97
i) Raw materials	3924.20	5209.96	3321.83
ii) Stores and spares	19578.98	21910.67	23680.52
iii) Finished goods	6057.41	6891.77	8927.09
iv) Percentage of Finished goods to sales	4.10%	3.95%	5.01%

5. SUNDRY DEBTORS

The Sundry Debtors vis-a-vis Sales in the last three years are given below :

Year ended As on	Sundry Debtors			Total Sales during the year	Percentage of Sundry Debtors to Sales
	Considered Good	Considered Doubtful	Total		
31.3.1995	19109.30	136.30	19245.60	147898.16	13%
31.3.1996	29936.53	388.24	30324.77	174559.08	17%
31.3.1997	34018.32	345.46	34363.78	178183.99	19%

Dated, Calcutta
The 4th September, 1997.

Sd/-
(J. Chatterjee)
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, 1997 and the Profit and Loss Account for the year ended on that date annexed thereto and report that :

1. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;
 2. 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;
 3. The Balance Sheet and Profit and Loss Account referred to in this report are in agreement with the books of account;
 4. i) As stated in Note No.2.1 of the Schedule 3 to the Accounts, depreciation charged for the year is higher by Rs.55.30 Crores and the accumulated depreciation charged upto 31.3.1997 is lower by Rs.826.31 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 3 to the Accounts, there have been changes in the accounting policies relating to accounting for grants-in-aid, accounting for MODVAT credit valuation of inventory of work-in-process and accounting for liability towards leave encashment and post retirement medical facilities, which together have the effect of increasing the profit by Rs.2,541.42 Lakhs (including Rs.1,698.80 lakhs for Prior period), increasing the inventory by Rs.1,882.31 Lakhs, increasing claims Recoverable by Rs.2,296.77 Lakhs, reducing the net fixed assets by Rs.1,196.38 Lakhs increasing the Provisions by Rs.441.28 Lakhs increasing the Capital Reserve by Rs. 60.00 Lakhs and reducing current liabilities by Rs.60.00 Lakhs.

iii) As stated in Accounting Policy No. 5.1 scrap is not accounted for on accrual basis.

iv) 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 the state of affairs of the Company as at 31st March, 1997.

and

b) in the case of the Profit and Loss Account, of the Profit of the Company for the year ended on that date.
5. 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 and on the basis of such checks of the books and records as we considered appropriate and as per the information and explanations given to us in the course of our audit and to the best of our knowledge and belief, we further report that :
 - 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 and have been properly dealt with in the books of account, except in the case of coal the excess quantity found has not been adjusted.
 - VI. In our opinion and on the basis of our examination of the valuation of stocks, such valuation is fair and proper in accordance with the normally accepted accounting principles and is on the same basis as in the preceding year subject to the following :
 - i) Excise Duty payable on stock of finished goods as on 31.3.1997 is not included in the value of such stock as stated in Note No. 1.5 of Schedule 3 to the Accounts, which has no effect on the profit; and
 - ii) Work-in-Process as on 31.3.1997 is valued and accounted for, while in the preceding year the same has not been valued as stated in Note No. 3C of Schedule 3 to the accounts, and eligible MODVAT on stocks held as on 31.3.1997 is accounted for on



accrual basis, as against accounting for the same on the basis of certainty of realisation in the preceding year as stated in Note No.3(b) of Schedule 3 to Accounts.

- VII. The Company has not taken any loans, secured or unsecured, from 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(IB) 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(IB) 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 and Mineral Exploration Corporation Limited as stated in Note Nos. 1.6 and 1.7 respectively of Schedule 3 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. According to the information and explanations given to us, there are no transactions of purchase of goods and materials and services made in pursuance of contracts or arrangements entered in the register maintained under section 301 of the Companies Act, 1956 and aggregating during the year to Rs.50,000/- or more in value from/to any party.
- XII. As explained to us, the Company has a regular procedure for determination of unservicable or damaged stores, raw materials and 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 have 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 directives 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.320.12 Lakhs, 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.2.2 of Schedule 3 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 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

Place : Visakhapatnam
Date : 02.07.1997

V. SEETARAMAIAH
Partner



Annual Accounts 1996-97



Statement on Significant Accounting Policies

A. BALANCE SHEET :

1. GRANTS-IN-AID :

Grants-in-aid received from Government for financing capital assets are credited 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. FIXED ASSETS :

- 2.1 All fixed assets are stated at historical cost less depreciation. Cost of acquisition is inclusive of freight, duties, taxes allocated incidental expenditure during construction and net of MODVAT credit wherever eligible.
- 2.2 Expenses on development of land including leasehold land is capitalised forming part of cost of land.
- 2.3 Expenses of capital nature incurred on assets laid on land not belonging to the Company are capitalised under appropriate asset heads.
- 2.4 Where final bills/statements of account are not received, capitalisation of assets has been done provisionally on the basis of technical assessments which may undergo change on settlement of final bills/ receipt of statements of account.
- 2.5 Fixed assets acquired out of financial grant from Government are shown at gross cost.

3. INCIDENTAL EXPENDITURE DURING CONSTRUCTION :

Direct revenue expenditure including financing cost incurred during construction period on New/Expansion projects is treated as incidental expenditure during construction and is allocated to relevant Fixed assets.

4. INVESTMENTS :

Long-term investments are carried at cost. Current investments are carried at lower of cost or fair value on individual assessment basis. Provision for diminution in the value of long term investments, other than temporary in nature, is accounted for.

5. INVENTORIES :

- 5.1 Raw materials, stores, spare parts and loose tools are valued, at weighted average cost subject to Accounting Policy No.5.5 below. Finished goods including Aluminium scrap are valued at lower of cost or net realisable value.
- 5.2 The cost is determined on the basis of annual average cost of production. The cost excludes administrative overheads, selling and distribution overheads, interest, exchange variation, depreciation on exchange variation capitalised and is net of eligible MODVAT credit.
- 5.3 Intermediary product, viz. Anodes are valued at direct material cost. Anode butts and anode rejects are valued at lower of direct material cost or net realisable value.
- 5.4 Scrap other than aluminium scrap is recognised in the accounts as and when sold.

- 5.5 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.
- 5.6 Inventory of Stores and Spares not moved for 5 years and above have been valued at cost less 20%.

6. MISCELLANEOUS EXPENDITURE (TO THE EXTENT NOT WRITTEN OFF) :

Expenditure on feasibility studies, preparation of project reports, documentations and other related matters on new / expansion projects and unsuccessful projects, capital contribution to external Research & Development Institutions and disputed sales tax liabilities pertaining to original project, to the extent not adjusted, are grouped under this head pending capitalisation/write off.

7. CONVERSION OF FOREIGN CURRENCY :

- 7.1 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.
- 7.2 Foreign currency transactions settled during the year through Bank Accounts in India are recorded in Indian rupees by applying actual exchange rates prevailing on respective dates of transaction. Foreign currency transactions settled during the year through foreign currency bank account are recorded by applying average mean rate of bill buying and bill selling during the respective month of transaction. The interest income during the year in foreign currency is recorded in Indian rupees at the average exchange rates for each month.
- 7.3 All outstanding long-term loans, unrealised export invoices, bank balances and other current assets/liabilities are recorded in Indian rupees by applying appropriate exchange rates prevailing on the date of the Balance Sheet.
- 7.4 In case of long term liabilities incurred for acquisition of fixed assets and not settled within the accounting period, the net conversion loss/gain and in case of liabilities settled during the accounting period, the net transaction loss/gain are perceived and appropriate amount relating to the capitalised value of Plant & Machinery is adjusted in the carrying amount of Plant & Machinery and balance adjusted in Capital Work-in-Progress.

8. CONTINGENT LIABILITIES :

Contingent liabilities, to the extent not provided for, are shown under notes forming part of accounts.

B. 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 without retention of 5 per cent residual value. The useful life of



these assets have been revised from 20 years 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 is 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 rate on such assets has been recomputed based on guidelines issued under Circular No.1/85 dated, 10.1.85 by Department of Company Affairs, by allocating the unamortised 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.

<i>Assets</i>	<i>Rate of Depreciation</i>
Red mud pond (Earth work portion)	14.29%
Ash pond at Alumina Refinery (Earth work portion)	13.34%
Ash pond at CPP	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 or Plant & 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 on straight line method over a period of 25 years in the case of Mines and 20 years in other cases or the period of lease whichever is less.

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

Expenditure/Income relating to prior periods arising in current year as a result of errors or omissions as well as prepaid expenses, not exceeding Rs.1 lakh in each case are treated as expenditure/income of the current year.

3. RECOGNITION OF REVENUE :

- 3.1 The export sale is recognised based on the date of Bill of Lading irrespective of terms of sale viz. FOB, C&F and CIF etc. The indigenous sale is 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 Consumption of raw materials and stores & spares are accounted for at net of MODVAT credit wherever eligible.

4. EXCISE DUTY :

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

5. EXCHANGE VARIATIONS :

The net exchange variation loss/gain in case of unsettled long-term liabilities other than those incurred for acquisition of fixed assets on the date of the Balance Sheet is recognised in the Profit and Loss Account.

6. RELINING EXPENSES :

Pot relining expenses are charged to Profit and Loss Account in the year of occurrence.

7. RETIREMENT BENEFITS :

- 7.1 Contributions to Provident Fund is recognised in Profit & Loss Account on the basis of actual liability.

- 7.2 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.

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

8. MISCELLANEOUS EXPENDITURE :

- 8.1 Expenditure on Unsuccessful Projects and capital contribution to external Research & Development Institutions are written off over a period of three years.

- 8.2 Mines development expenditure is charged to Profit & Loss Account in the year of occurrence.

9. RESEARCH & DEVELOPMENT EXPENDITURE :

Research and Development expenditure except for capital nature, is charged to Profit & Loss Account in the year of occurrence.

10. 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.

In terms of our attached report.

For and on behalf of

Brahmayya & Co.

Chartered Accountants

V. SEETARAMAIAH

Partner

Visakhapatnam

2nd July, 1997

Bhubaneswar

2nd July, 1997

K. N. RAVINDRA

Company Secretary

C. VENKATARAMANA

Director (Finance)

S. N. JOHRI

Chairman-cum-
Managing Director



Balance Sheet as at March 31, 1997

(In Thousand Rupees)

	Schedule	As at March 31, 1997	As at March 31, 1996
SOURCES OF FUNDS			
Shareholders' Funds :			
Share capital	1.1	1288,61,92	1288,61,92
Reserves and Surplus	1.2	1715,62,74	1308,31,94
Loan Funds :			
Secured loans	1.3	—	—
Unsecured loans		580,00,00	1024,91,18
TOTAL		3584,24,66	3621,85,04
APPLICATION OF FUNDS			
Fixed Assets :			
Gross Block	1.4	4688,48,35	4649,04,37
Less : Depreciation		1957,93,41	1700,84,43
Net Block		2730,54,94	2948,19,94
Capital Work-in-Progress	1.5	98,94,75	63,15,75
		2829,49,69	3011,35,69
Investments	1.6	31,50,00	20,50,00
Current Assets, Loans and Advances :			
Inventories	1.7	359,29,42	340,12,40
Sundry Debtors		340,18,32	299,36,53
Cash and Bank Balances		138,67,82	27,97,84
Other Current Assets		13,16,37	15,50,88
Loans and Advances		158,62,06	127,85,03
		1009,93,99	810,82,68
Less : Current Liabilities & Provisions :			
Liabilities	1.8	195,15,87	182,98,11
Provisions		96,89,73	45,50,15
		292,05,60	228,48,26
Net Current Assets		717,88,39	582,34,42
Miscellaneous Expenditure			
(To the extent not written off or adjusted)	1.9	5,36,58	7,64,93
TOTAL		3584,24,66	3621,85,04
Notes on Accounts	3		
Additional information	4		

Statement of Significant Accounting Policies and Schedules form part of Accounts.

In terms of our attached
report of even date

For and on behalf of Board of Directors

For and on behalf of
Brahmayya & Co.
Chartered Accountants
V. SEETARAMAIAH
Partner
Visakhapatnam
2nd July, 1997

Bhubaneswar
2nd July, 1997

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, 1997

(In Thousand Rupees)

	Schedule	Year ended March 31, 1997	Year ended March 31, 1996
INCOME :			
Sales	2.1	1768,86,18	1743,97,92
Finished goods internally consumed		—	1,61,16
Accretion/(Depletion) to stock of finished/ intermediary products/work-in-process	2.2	(5,09,94)	8,34,37
Other income	2.3	54,93,58	59,11,21
		<u>1818,69,82</u>	<u>1813,04,66</u>
EXPENDITURE :			
Raw materials consumed	2.4	227,24,86	192,06,18
Power & Fuel	2.5	297,71,57	260,98,22
Repairs & Maintenance	2.6	120,59,20	98,55,97
Other Manufacturing Expenses	2.7	45,15,03	41,94,45
Excise Duty		140,19,68	141,73,48
Employees' Remuneration & Benefits	2.8	89,12,12	85,66,01
Administrative Expenses	2.9	49,59,77	54,41,72
Selling and Distribution Expenses	2.10	36,01,80	28,96,76
Interest & Financing Charges	2.11	9,08,19	64,83,30
Provisions	2.12	(49,57)	3,61,40
Depreciation		265,81,54	267,19,29
Miscellaneous Expenditure written off		46,98	14,97,59
		<u>1280,51,17</u>	<u>1254,94,37</u>
PROFIT FOR THE YEAR		538,18,65	558,10,29
Add/(Deduct) : Prior Period Adjustments (Net)	2.13	17,72,50	(22,82,33)
PROFIT AFTER PRIOR PERIOD ADJUSTMENTS		555,91,15	535,27,96
Add : Extraordinary Income : Write back of Provisions for pot relining no longer required		—	79,29,20
PROFIT BEFORE TAX		555,91,15	614,57,16
Less : Provision for taxation		64,15,46	1,59
PROFIT AFTER TAX		491,75,69	614,55,57
Balance of profit brought forward from previous year		9,85,76	40,40,36
Amount available for appropriation		<u>501,61,45</u>	<u>654,95,93</u>
APPROPRIATION :			
Proposed dividend for current year (subject to deduction of tax)		77,31,72	45,10,17
Tax on proposed dividend		7,73,17	—
Transferred to General Reserve		400,00,00	600,00,00
Balance of profit carried forward to Balance Sheet		16,56,56	9,85,76
		<u>501,61,45</u>	<u>654,95,93</u>

Notes on Accounts 3

Additional information 4

Statement of Significant Accounting Policies and Schedules form part of Accounts.

In terms of our attached
report of even date

For and on behalf of Board of Directors

For and on behalf of
Brahmayya & Co.
Chartered Accountants

V. SEETARAMAIAH
Partner
Visakhapatnam
2nd July, 1997

Bhubaneswar
2nd July, 1997

K. N. RAVINDRA
Company Secretary

C. VENKATARAMANA
Director (Finance)

S. N. JOHRI
Chairman-cum-
Managing Director



Schedules forming part of the Balance Sheet

(In Thousand Rupees)

	As at March 31, 1997	As at March 31, 1996
Schedule 1.1		
SHARE CAPITAL		
Authorised		
130,00,00,000 Equity Shares of Rs.10 each (Previous year 130,00,00,000 Equity Shares of Rs.10 each)	1300,00,00	1300,00,00
Issued, Subscribed and Paid up :		
128,86,19,200 Equity Shares of Rs.10 each fully paid up (Previous year 128,86,19,200 Equity Shares of Rs.10 each) Out of these Shares, Government of India holds 112,29,99,270 (Previous year 112,29,99,270) shares	1288,61,92	1288,61,92
TOTAL	1288,61,92	1288,61,92
Schedule 1.2		
RESERVES & SURPLUS		
Capital Reserve		
Grant-in-aid received from Government of India	60,00	—
General Reserve :		
Balance as per Last Balance Sheet	1100,00,00	500,00,00
Transferred from Profit & Loss Account	400,00,00	600,00,00
	1500,00,00	1100,00,00
Utilised Investment Allowance Reserve	198,46,18	198,46,18
Balance in Profit & Loss Account	16,56,56	9,85,76
TOTAL	1715,62,74	1308,31,94
Schedule 1.3		
LOAN FUNDS		
Secured Loans	—	—
Unsecured Loans :		
Medium term loans from Consortium of International Banks (Guaranteed by Government of India)		
Eurodollar loans (Previous year US \$112.255 million)	—	383,91,18
Japanese yen 20 billion (Previous year 20 billion)	580,00,00	641,00,00
TOTAL	580,00,00	1024,91,18

Note : Repayable within one year : — Nil

Repaid during the year US \$ 112.255 million (Rs.397,04,41) including prepayment of US \$ 101.568 million (Rs.359,19,00)

Repaid during previous year US \$ 213.495 million (Rs.724,17,92) including prepayment of US \$ 119.091 million (Rs.407,09,83)

Schedules forming part of the Balance Sheet

Schedule 1.4

FIXED ASSETS

(in Thousand Rupees)

Particulars of Assets	Gross Block				Depreciation				Net Block	
	As on 1.4.96	Additions	Sales/ Adjustments	As on 31.3.97	As on 1.4.96	For the Year	On sales/ adjustments	Upto 31.3.97	As on 31.3.97	As on 31.3.96
A. PLANT, MINES AND OTHERS										
Freehold land including development costs	29,99,06	4,73	—	30,03,79	—	—	—	—	30,03,79	29,99,06
Leasehold land including development costs	2,10,03	—	—	2,10,03	86,73	10,03	—	96,76	1,13,27	1,23,30
Buildings	149,70,32	4,21,27	(-)23,81	153,67,78	54,23,72	7,48,68	(-)1,02	61,71,38	91,96,40	95,46,60
Roads, bridges and culverts	24,62,32	59,96	(-)6,32	25,15,96	6,44,60	36,40	—	6,81,00	18,34,96	18,17,72
Railway sidings	49,57,43	45,34	(-)1,02	50,01,75	24,28,08	2,83,63	—	27,11,71	22,90,04	25,29,35
Water supply, drainage and sewerage	42,79,86	39,48	—	43,19,34	18,60,30	2,04,89	—	20,65,19	22,54,15	24,19,56
Power supply, distribution and lighting	157,32,35	—	5	1,57,32,40	69,74,46	8,21,73	—	77,96,19	79,36,21	87,57,89
Plant and machinery	4026,78,61	33,93,71	(-)23,10,96	4037,61,36	1475,68,16	238,87,43	(-)9,07,25	1705,48,34	2332,13,02	2551,10,45
Office equipments	6,27,97	2,02,36	(-)27,25	8,03,08	3,11,36	75,24	(-)12,81	3,73,79	4,29,29	3,16,61
Furniture and fittings	6,36,93	57,54	(-)14,45	6,80,02	2,81,96	54,64	(-)11,55	3,25,05	3,54,97	3,54,97
Vehicles	17,23,76	61,60	(-)11,06	17,74,30	14,37,26	85,94	(-)9,08	15,14,12	2,60,18	2,86,50
Miscellaneous equipments	15,46,99	4,17,86	1,31,71	20,96,56	6,24,32	1,00,47	57,99	7,82,78	13,13,78	9,22,67
TOTAL	4528,25,63	47,03,85	(-)22,63,11	4552,66,37	1676,40,95	2,63,09,08	(-)8,83,72	19,30,66,31	2622,00,06	2851,84,68
B. SOCIAL FACILITIES										
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	14,31	1,76	—	16,07	19,05	20,81
Buildings	84,37,27	11,30,21	(-)1,18	95,66,30	12,90,97	1,41,81	1,02	14,33,80	81,32,50	71,46,30
Roads, bridges and culverts	11,57,26	84,40	—	12,41,66	1,99,38	18,98	—	2,18,36	10,23,30	9,57,88
Water supply, drainage and sewerage	9,12,77	94,73	19	10,07,69	3,81,73	36,28	—	4,18,01	5,89,68	5,31,04
Power supply, distribution and lighting	8,39,35	1,03,86	1,64	9,44,85	3,66,68	40,02	—	4,06,70	5,38,15	4,72,67
Office equipments	7,48	—	66	8,14	4,69	92	34	5,95	2,19	2,79
Furniture and fittings	84,75	7,62	10,77	1,03,14	50,81	13,65	8,97	73,43	29,71	33,94
Vehicles	61,13	—	2	61,15	43,75	4,66	2	48,43	12,72	17,38
Miscellaneous equipments	2,43,99	67,47	2,85	3,14,31	91,16	14,38	81	1,06,35	2,07,96	1,52,83
TOTAL	120,78,74	14,88,29	14,95	135,81,98	24,43,48	2,72,46	11,16	27,27,10	108,54,88	96,35,26
Total for current year	4649,04,37	61,92,14	(-)22,48,16	4688,48,35	1700,84,43	265,81,54	(-)8,72,56	1957,93,41	2730,54,94	2948,19,94
Total for previous year	4525,31,67	124,61,58	(-)88,88	4649,04,37	1433,74,08	267,19,29	(-)8,94	1700,84,43	2948,19,94	3091,57,59

Notes :

- Plant and machinery includes capitalisation of Rs.1736,78,65 (Previous year Rs.1757,25,96) (including Rs.(-)20,47,31 during the year, Rs.57,48,23 previous year) towards net exchange variation loss in accordance with Accounting Policy No. A.7(4)
- Included in Gross Block above are the following assets laid on land not belonging to the Company :
 - Buildings — Rs.95,96 (Previous year Rs.95,96)
 - Roads, bridges and culverts — Rs.295,32 (Previous year Rs.295,32)
 - Water supply, drainage and sewerage — Rs.12,71 (Previous year Rs.12,71)
 - Power supply, distribution and lighting — Rs.461,47 (Previous year Rs.461,42)
 - Railway sidings — Rs.491,81 (Previous year Rs.452,05)





Schedules forming part of the Balance Sheet

(In Thousand Rupees)

	As at March 31, 1997	As at March 31, 1996
Schedule 1.5		
CAPITAL WORK-IN-PROGRESS		
Construction and work-in-progress at cost	57,80,18	39,23,18
Advances to Government Departments & contractors (Unsecured, considered good)	12,40,25	11,04,61
Advances to suppliers for capital goods (Unsecured, considered good)	7,10,22	5,61,34
Stock of construction materials (at cost) (Including materials with contractors Rs. 75,40 Previous year Rs. 74,95)	12,16,36	7,26,06
Construction materials-in-transit (at cost)	—	56
Plant and machinery-in-transit (at cost)	3,41,09	—
Incidental expenditure during construction		
Feasibility study expenses	72,34	—
Technical consultancy fees	5,25,46	—
Other expenses	8,85	—
	6,06,65	—
TOTAL	98,94,75	63,15,75

	Face value per unit (Rs.)	As at March 31, 1997 Number	Book Value	As at March 31, 1996 Number	Book Value
Schedule 1.6					
INVESTMENTS (Non trade) (Unquoted unless otherwise stated)					
Long term Investments :					
9% (Tax free) Power Finance Corporation Bonds, 1988	1,000	125,000	12,50,00	125,000	12,50,00
9% (Tax free) Power Finance Corporation Bonds, 1990	1,000	70,000	7,00,00	70,000	7,00,00
9% (Tax free) Indian Railway Finance Corporation Bonds, 1990	1,000	120,000	12,00,00	—	—
(Acquired during the year Rs.12,00,00)			31,50,00		19,50,00
Current Investments :					
15.75% Tourism Finance Corporation Bonds, 1995	1,00,000	—	—	100	1,00,00
(Realised during the year Rs.1,00,00)			31,50,00		20,50,00



Schedules forming part of the Balance Sheet

(In Thousand Rupees)

	As at March 31, 1997	As at March 31, 1996
Schedule 1.7		
CURRENT ASSETS, LOANS & ADVANCES		
Current Assets :		
Inventories :		
Raw materials at cost (Including in transit Rs. 708,22, Previous year Rs.1737,32)	33,21,83	52,09,96
Stock in trade/intermediary products/work-in-process at lower of cost or net realisable value	89,27,09	68,91,77
Coal and fuel oil (including in transit Rs.23.29, Previous year nil)	20,14,44	16,41,96
Stores, spares and others at cost (Including in transit Rs.1392,96, Previous year Rs.1996,72)	224,92,87	209,19,30
Less : Provision for non moving and unserviceable materials	8,26,81	6,50,59
	<u>216,66,06</u>	<u>202,68,71</u>
	359,29,42	340,12,40
Sundry Debtors : (Unsecured)		
Debts over six months		
Considered good	61,97,97	49,92,95
Considered doubtful	3,45,46	3,88,24
	65,43,43	53,81,19
Less : Provision for doubtful debts	3,45,46	3,88,24
	<u>61,97,97</u>	<u>49,92,95</u>
Other debts considered good	278,20,35	249,43,58
	340,18,32	299,36,53
Cash and Bank Balances :		
Cash on hand including imprest & Stamps	7,96	6,14
Cheques and postal orders on hand	1,85,26	3,68,37
Balances with Scheduled Banks :		
In Current Accounts	131,92,91	24,23,18
In Post Office Savings Accounts	16	15
Remittances in transit	4,81,53	—
	138,67,82	27,97,84
Other Current Assets :		
Interest accrued on :		
Investments	83,28	38,28
Debtors	1,63,68	3,50,76
Bank deposits and others	5,29,93	9,41
Inter Corporate deposits	1,19	7,13,32
Loans to Employees	5,38,29	4,16,15
Loans to Public Sector Companies	—	22,96
	<u>13,16,37</u>	<u>15,50,88</u>
Sub total of Current Assets :	<u>851,31,93</u>	<u>682,97,65</u>



Schedules forming part of the Balance Sheet

(In Thousand Rupees)

	As at March 31, 1997	As at March 31, 1996
Schedule 1.7 (Contd.)		
Loans and Advances :		
(Unsecured, considered good unless otherwise stated)		
Loans :		
Employees (Secured Rs.20,00,01		
Previous Year Rs.14,78,90)	25,77,43	19,26,98
Stores on loan basis	58,84	61,80
Loans to Public Sector Companies (Including interest		
accrued and due Rs.132,49 Previous year Rs.36,01)	6,32,49	6,51,01
	32,68,76	26,39,79
Advances/Recoverables :		
Advances to Employees	1,28,14	1,43,57
Income Tax deducted at source	1,75,04	1,88,88
Advances to others :		
Considered good	7,07,55	17,95,12
Considered doubtful	2,74,31	2,49,14
	9,81,86	20,44,26
Less : Provision for doubtful advances	2,74,31	2,49,14
	7,07,55	17,95,12
Inter-Corporate Deposits	30,00,00	5,00,00
Prepaid Expenses	2,35,64	2,04,22
Claims Recoverable : Considered good	61,25,65	62,34,45
Considered doubtful	6,17,23	7,85,43
	67,42,88	70,19,88
Less : Provision for doubtful claims	6,17,23	7,85,43
	61,25,65	62,34,45
	103,72,02	90,66,24
Deposits with :		
Government Departments	68,31	71,05
Customs Authorities	80,68	60,43
Port Authorities	27,36	27,21
Sales Tax Authorities	18,58,65	6,33,11
Excise Authorities	1,37,42	2,36,88
Others	48,86	50,32
	22,21,28	10,79,00
Sub total of Loans and Advances :	158,62,06	127,85,03
TOTAL	1009,93,99	810,82,68

Note : Loans due from Directors as on 31.3.97-Rs. 1,70, maximum amount due during the year Rs.2,16 (Previous year - Rs.2,12, maximum amount due Rs.2,62)



Schedules forming part of the Balance Sheet

		(In Thousand Rupees)	
	As at March 31, 1997	As at March 31, 1996	
Schedule 1.8			
CURRENT LIABILITIES & PROVISIONS			
Current Liabilities :			
Sundry creditors	84,71,32	75,21,81	
Other liabilities (Including advances from customers of Rs.15,47,96, Previous year Rs.12,13,06)	86,13,14	79,89,37	
Security deposits	24,03,46	23,01,92	
Interest accrued but not due on loans	27,95	4,85,01	
	195,15,87		182,98,11
Provisions :			
For taxation (net of advance payment of Rs.58,51,84)	7,43,56	—	
For proposed dividend	77,31,72	45,10,17	
For tax on proposed dividend	7,73,17	—	
For leave encashment and post retirement medical benefits	4,41,28	—	
For Sundry claims	—	39,98	
	96,89,73		45,50,15
TOTAL	292,05,60		228,48,26

Schedule 1.9

MISCELLANEOUS EXPENDITURE (to the extent not written off or adjusted)

Particulars	Balance as at April 1, 1996	Additions/ Adjustments during the year	Written off during the year	Balance as at March 31, 1997
Interest and Penalties on Sales Tax	4,26,73	—	—	4,26,73
Expenditure on un-successful projects	—	54,98	46,98	8,00
Expenditure on new projects	1,40,42	(1,21,02)	—	19,40
Expenditure on Expansion Projects	1,97,78	(1,15,33)	—	82,45
Total for current year	7,64,93	(1,81,37)	46,98	5,36,58
Total for previous year	21,81,13	81,39	14,97,59	7,64,93



Schedules forming part of the Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1997	Year ended March 31, 1996
Schedule 2.1		
SALES		
Exports :		
Calcined Alumina	304,29,08	306,58,89
Aluminium Standard and Sow Ingots	316,84,22	269,25,60
Aluminium Wire rods	—	94,96
Aluminium Billets	16,72,29	78,67
	<u>637,85,59</u>	<u>577,58,12</u>
Domestic :		
Alumina Hydrate	3,16,04	1,36,01
Calcined Alumina	3,90,17	5,40,28
Aluminium Standard and Sow Ingots	561,61,94	617,98,26
Aluminium Wire rods	411,89,54	388,13,67
Aluminium Billets	74,68,88	63,89,83
Electricity	75,74,02	89,61,75
	<u>1131,00,59</u>	<u>1166,39,80</u>
TOTAL	<u>1768,86,18</u>	<u>1743,97,92</u>

Schedule 2.2

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

	Opening stock	Closing stock	Accretion/ (-)Depletion
Bauxite	3,62,47 (3,57,27)	6,15,48 (3,62,47)	2,53,01 (5,20)
Alumina Hydrate	6,00 (86,78)	31 (6,00)	(-) 5,69 (-80,78)
Calcined Alumina	32,39,61 (25,25,98)	21,09,94 (32,39,61)	(-)11,29,67 (7,13,63)
Aluminium Standard and Sow Ingots	6,41,50 (5,64,67)	1,27,14 (6,41,50)	(-)5,14,36 (76,83)
Aluminium Wire rods	19,32 (26,87)	1,12,89 (19,32)	93,57 (-7,55)
Aluminium Billets	2,01,38 (2,15,98)	18,25 (2,01,38)	(-)1,83,13 (-14,60)
Anodes	7,76,75 (7,68,74)	9,15,22 (7,76,75)	1,38,47 (8,01)
Anode Butts	15,91,63 (14,18,08)	21,60,05 (15,91,63)	5,68,42 (1,73,55)
Aluminium Scrap	53,11 (93,03)	2,33,20 (53,11)	1,80,09 (-39,92)
Work-in-Process*	25,45,26	26,34,61	89,35
TOTAL	94,37,03 (60,57,40)	89,27,09 (68,91,77)	(-)5,09,94 (8,34,37)

* Refer note no.3(c) of Notes forming part of accounts (Schedule 3). Figures in brackets represent those for previous year.



Schedules forming part of the Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1997	Year ended March 31, 1996
Schedule 2.3		
OTHER INCOME		
Interest from Investments	2,36,43	2,64,01
Interest from debtors	13,13,93	10,55,38
Interest from Bank deposits and others	2,70,44	10,28,02
Discount on Certificates of Deposit	—	11,44,80
Interest from Inter-Corporate deposits	2,65,76	5,15,14
Interest from loans to employees	1,46,44	99,79
Interest from loans to Public Sector companies	85,52	91,85
Tax deducted at source on interest from debtors (Rs.51,84, Previous year Nil)	—	—
Exchange Variation Gain	8,25,13	7,11,27
Premium on sale of Special Import licences	10,47,79	—
Receipt for freight, handling etc. from customers	4,20,09	4,58,43
Sale of scrap	2,50,02	1,75,09
Profit on sale of fixed assets	2,85	19,81
Receipt for rent, electricity & water charges	1,08,81	88,71
Miscellaneous Income (including write back of excess provision of Rs.252,27)	5,20,37	2,58,91
TOTAL	54,93,58	59,11,21

Schedule 2.4

RAW MATERIALS CONSUMED

	Year ended March 31, 1997		Year ended March 31, 1996	
	Quantity (MT)	Value	Quantity(MT)	Value
Caustic soda	58,205	66,01,09	63,557	71,38,69
C. P. Coke	86,465	62,90,06	83,856	52,16,25
C. T. Pitch	19,812	18,30,91	19,862	17,77,32
Aluminium fluoride	6,107	21,00,09	5,909	21,44,33
Lime	27,493	4,63,91	37,872	5,93,24
Crystal growth modifier	148	1,59,96	300	3,81,26
Purchased anodes	(Nos) 12,523	43,87,83	3,835	13,11,08
Others	—	8,89,81	—	6,44,01
TOTAL		227,24,86		192,06,18



Schedules forming part of the Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1997	Year ended March 31, 1996
Schedule 2.5		
POWER & FUEL		
Coal consumed	182,00,52	175,31,56
Fuel oil consumed	66,03,52	53,26,16
Duty on self generation	44,44,50	29,87,72
Purchased power	5,23,03	2,52,78
TOTAL	297,71,57	260,98,22

Schedule 2.6		
REPAIRS & MAINTENANCE		
Buildings	4,69,36	2,74,81
Machinery	111,62,12	92,02,43
Others	4,27,72	3,78,73
TOTAL	120,59,20	98,55,97

Schedule 2.7		
OTHER MANUFACTURING EXPENSES		
Royalty & Cess	8,69,72	8,18,88
Freight inwards	18,54,76	18,85,44
Consumption of stores	17,90,55	14,90,13
TOTAL	45,15,03	41,94,45

Schedule 2.8		
EMPLOYEES' REMUNERATION AND BENEFITS		
Salaries, Wages & Bonus	66,70,18	65,73,43
Contribution to Provident fund	4,44,41	4,47,69
Provision for leave encashment and post retirement medical benefits	83,51	—
Staff welfare expenses	16,42,07	14,91,30
Gratuity	71,95	53,59
TOTAL	89,12,12	85,66,01



Schedules forming part of the Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1997	Year ended March 31, 1996
Schedule 2.9		
ADMINISTRATIVE EXPENSES		
Rent for office and guest house	1,26,18	1,03,57
Rent for leased accommodation for employees	40,75	37,33
Rates and taxes	78,23	79,51
Insurance	2,40,79	1,93,31
Auditors' Remuneration :*		
Statutory Audit fee	3,75	1,50
Statutory Audit expenses	10,09	3,83
Tax audit fees, expenses and certification charges	1,41	1,05
Cost audit Fee & Expenses **	51	1,20
Repairs & Maintenance - Buildings (Township)	2,00,73	1,26,70
Repairs & Maintenance - others	2,77,80	2,94,81
Vehicle operating expenses	1,68,32	81,09
Consumption of stores	87,28	59,92
Recruitment expenses	50,06	13,68
Bank charges	1,37,12	1,35,15
Legal expenses	37,41	28,93
Printing & Stationery	1,30,88	1,05,62
EDP expenses	80,77	69,25
Postage, telegram, telex & telephone	3,10,19	2,54,34
Advertisement & publicity	1,61,14	2,35,64
Entertainment	12,38	11,63
Electricity & water charges	3,51,21	289,65
Travelling Expenses	4,36,36	4,17,55
Demurrage	10,55	13,37
Directors' sitting fees	21	25
Hire charges for machinery and vehicles	1,94,61	1,64,54
Donations	2,36	9,32
Management development & training	1,86,29	1,51,78
Plantation and Horticulture	63,57	51,07
Environment and Pollution Control	46,72	1,30
Peripheral development expenses	62,58	52,61
Maintenance of guest houses	18,53	21,20
Technical assistance fees and expenses	1,44,78	7,56,46
Miscellaneous consultancy	54,41	39,08
CISF and other security expenses	6,61,83	5,79,32
Fire fighting services	88,89	84,10
Loss on sale of assets	7,95	71
Claims, receivables and debts written off	2,11,69	1,14,51
Research & Development expenses	21,84	6,31
Contribution to Mineral Exploration Fund	—	6,20,00
Loss on maturity of Investment	—	27,55
Other miscellaneous expenses	2,24,50	2,02,98
TOTAL	49,59,77	54,41,72

* Includes Statutory audit fees of Rs.1,50, expenses Rs.2,59 and other remuneration of Rs.35 for previous year.

** Net of excess provision for previous year of Rs.39.



Schedules forming part of the Profit & Loss Account

(In Thousand Rupees)

	Year ended March 31, 1997	Year ended March 31, 1996
Schedule 2.10		
SELLING AND DISTRIBUTION EXPENSES		
Packing and forwarding	1,07,14	1,13,34
Freight outwards and handling	25,04,87	21,28,03
Cash discount	4,52,45	1,56,64
Commission to selling agents	4,02	3,84
Demurrage	12,65	58,90
Bank charges	1,67,93	1,59,45
Others	3,52,74	2,76,56
TOTAL	36,01,80	28,96,76
Schedule 2.11		
INTEREST AND FINANCING CHARGES		
Interest on medium term foreign loans	26,02,67	76,17,73
Agency fees including upfront charges	—	3,24,73
Exchange variation	(27,24,24)	(27,79,28)
Guarantee fee on foreign loans	10,29,76	13,20,12
TOTAL	9,08,19	64,83,30
Schedule 2.12		
PROVISIONS		
Non moving stores & spares	1,66,18	1,67,92
Unserviceable Materials	10,04	1,65
Doubtful debts	(42,78)	2,46,03
Doubtful advances	25,17	28,38
Doubtful insurance claims	(1,68,20)	(42,65)
Sundry claims	(39,98)	(39,93)
TOTAL	(49,57)	3,61,40
Schedule 2.13		
PRIOR PERIOD ADJUSTMENTS (NET)		
Sales	1,79	(19,54)
Other Income	(5,36,63)	(92,17)
Accretion to work-in-process	(7,00,12)	—
Raw materials consumed	70,57	(99,37)
Power & fuel	2,15,53	30,46
Repairs & maintenance	(8,73,79)	(95,88)
Other Manufacturing expenses	(11,35)	(2,21)
Employees' Remuneration & Benefits	3,85,69	1,68,76
Administrative Expenses	23,24	1,47,80
Selling & distribution expenses	3,40,13	17,39
Guarantee fee on Foreign Loans	—	21,54,42
Provisions written back	—	(21,63)
Depreciation	(6,87,56)	94,30
TOTAL	(17,72,50)	22,82,33

Figures in brackets represent credits.



Schedules forming part of the Accounts

Schedule - 3

NOTES FORMING PART OF THE ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 1997.

1. Balance Sheet :

1.1 Land :

- a) Value of Freehold land includes advance payments made so far 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) Value of Leasehold land includes land on mining lease for which lease documents have been executed and possession taken.
- c) Land taken by the Company includes Government land given on lease basis. Though the Company has been permitted by the Government to use such land, the formalities for legal transfer are yet to be completed. The value of leasehold land represents amount deposited with the State Government and estimated liabilities provided for.

1.2 The estimated amount of contracts to be executed on capital account and not provided for is Rs.75.27 crore (Previous year Rs.47.69 crore)

1.3 Liabilities towards Sales Tax on works contracts amounting to Rs.20.42 crore (previous year Rs.20.33 crore) have been provided for and considered for capitalisation, although the levy of such tax is disputed by the Company and appeals filed in different courts are pending for disposal. Interest/penalty amounting to Rs.4.27 crore (Previous year Rs.4.27 crore) imposed by Sales tax authorities has been shown as "Miscellaneous Expenditure (to the extent not written off/adjusted)" (Schedule No.1.9) pending adjustment based on decisions of Orissa High Court/Supreme Court.

1.4 Contingent liabilities not provided for :

	Year ended 31st March '97 (Rs. in Crore)	Year ended 31st March '96 (Rs. in Crore)
--	---	---

- i) Claims not acknowledged as debts/disputed demands:
- a) Sales tax on :

Works Contracts under dispute	49.53	45.26
Sale of products	50.87	12.27
- b) Excise Duty on fabrication works 6.09 6.10
- c) Customs Duty on design/ engineering charges, steel billets & other claims 17.32 17.23
- d) Claims of contractors & suppliers 18.44 18.05
- e) Land acquisition & interest thereon 11.88 11.43

	Year ended 31st March '97 (Rs. in Crore)	Year ended 31st March '96 (Rs. in Crore)
--	---	---

f) GRIDCO for energy bill	0.25	0.25
g) Income Tax	—	1.35
h) Contribution to Mineral Exploration Fund	1.28	1.28
ii) Excise Duty for non submission of :		
a) Proof of export	17.78	26.88
b) Other documents	3.40	2.63
iii) Unrealised bank guarantees due to court injunctions	1.13	1.26
iv) Outstanding letters of credit, guarantees and counter guarantees	56.50	47.40
TOTAL	234.47	191.39

Besides the above, 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 at this stage. Amount paid under protest against some of the above claims amounting to Rs.20.33 crore (previous year Rs.6.27 crore) is shown under Loans and Advances.

1.5 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 31.3.97 amounting to Rs.86.92 lakh (previous year as on 31.3.96 Rs.331.37 lakh). This method of accounting has no effect on the Profit and Loss Account.

1.6 Bharat Gold Mines Limited (BGML) was paid a working capital loan of Rs.5 crore during May 1989, repayable in six months. Although BGML has been referred to BIFR under Sick Industrial Companies (Special Provisions) Act, 1985 and default was committed by BGML in repayment of principal overdue, the same together with interest accrued of Rs.87.50 lakh has been considered good in view of BGML, being a Government Company and the assurance letter from Government of India stating that in the event of default by BGML, Government would pay from the budgetary support. However BGML have cleared outstanding interest up to 31st Dec '95 as of date.

1.7 Mineral Exploration Corporation Ltd., (MECL) was paid a working capital loan of Rs.2 crore in August 1991 repayable in one year which has been realised by 31.3.97 together with interest up to 6th May, 1994. The interest outstanding up to 31.03.97 amounting to Rs.0.45 crore (previous year Rs.0.41 crore) is considered as good in view of MECL being a Government Company and being under the same administrative control of Ministry of Mines.

1.8 Andhra Bank Financial Services Limited (ABFSL) vide agreement Dt. 28.01.97 have settled balance outstanding principal of Rs. 5.00 crore, interest accrued thereon at the



Schedules forming part of the Accounts

agreed rate amounting Rs.3.57 crore and the past interest of Rs.3.99 crore. Of the total amount due, ABFSL delivered 9% tax free IRFC Bonds of face value of Rs.12.00 crore and the balance amount of Rs.0.56 crore was paid in cash.

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.B.1.2 1.3 and 1.6. Had the depreciation been calculated on various assets by applying the rates specified in Schedule XIV of Companies Act, 1956, the charge for the year would have been lower by Rs.55.30 crore (previous year lower by Rs.49.81 crore). The accumulated depreciation as on 31.3.97 is understated by Rs.826.31 crore (previous year Rs.881.61 crore after rectification of errors of Rs.77.84 crore). Such arrears of depreciation are being accounted through higher rates adopted as above than those required under Schedule XIV of Companies Act, over the balance life of assets.
- 2.2 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.63.71 lakh and Rs.256.41 lakh for 1995-96 and 1996-97 respectively have been retained with the Nalco Employees Provident Fund Trust.
- 2.3 Government of India through Department of Scientific and Industrial Research (DSIR) has given a grant of Rs.60 lakh towards "Programme Aimed at Technological Self Reliance" (PATSER) project. The Company has also contributed equal amount. The total unspent amount of Rs.26.55 lakh (previous year Rs.119.30 lakh), for the project is kept in a separate Bank Account and included under cash and bank balances.
- 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, the extent of which is not readily ascertainable.
- 2.5 Interest and financing charges reflected in Schedule No. 2.11 is exclusive of Rs.390.77 lakh (Previous year Rs.-206.29 lakh) being the interest charged to the primary heads of account, including Prior Period Adjustments of Rs.123.31 lakh.
- 2.6 a) Provision for Taxation includes Rs.6593.50 lakh

(previous year Nil) towards Minimum Alternate Tax (MAT), Rs.1.79 lakh (previous year Rs.1.59 lakh) towards Wealth Tax and is net of excess provision made in earlier years toward Income tax of Rs.179.83 lakh (previous year nil).

- b) The Company is legally advised that it is not liable to pay Minimum Alternate Tax (MAT), under Income Tax Act., due to exemption of profit in respect of captive generation of power which is more than the book profit considering the market price of power so generated. By way of abundant caution, in view of possible controversy relating to such computation of profit from power generation and distribution, as advised, provision has been made towards MAT in the current financial year to avoid attraction of penal provisions. However, MAT for the year is available for set off towards income tax liability of succeeding five years.
3. The changes made in the accounting policies during the year have the following effects on the items in financial statements :
 - a) Consequent to starting of accounting for Grants-in-aid (Policy No. A.1), the amount of Capital Reserve is increased by Rs.60 lakh and the current liabilities is reduced by same amount.
 - b) Consequent to change in the method of accounting for MODVAT credit in respect of capital goods on accrual basis (Policy No. A.2.1 & 5.2 and B.3.4) the net fixed assets is reduced by Rs.143.39 lakh, inventory is reduced by Rs.752.30 lakh, claims receivable is increased by Rs.2296.77 lakh and profit is increased by Rs.1401.08 lakh (current year Rs.739.35 lakh and prior period Rs.661.73 lakh).
 - c) Consequent to starting of valuing the inventory of work-in-process (Policy No. A.5.5), the net fixed assets is decreased by Rs.1052.99 lakh, the inventory is increased by Rs.2634.61 lakh and the profit is increased by Rs.1581.62 lakh (current year Rs.186.78 lakh, prior period Rs.1394.84 lakh).
 - d) Consequent to starting of accounting for liability in respect of leave encashment and post retirement medical facilities (Policy No. B. 7.3), the profit is reduced by Rs.441.28 lakh (current year Rs.83.51 lakh, prior period Rs.357.77 lakh) and provision is increased by same amount.
 4. Previous year's figures have been regrouped/rearranged wherever necessary to make them comparable with those of current year.



Schedules forming part of the Accounts

	Current Year (Rs. in lakhs)	Previous year (Rs. in lakhs)
Schedule 4		
ADDITIONAL INFORMATION FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 1997		
1. Whole-time Directors' Remuneration :		
Salaries (including arrear salary)	20.05	7.36
Company's contribution to Provident Fund	1.67	0.76
Leave travel concession	0.35	0.50
Medical benefits	1.24	1.17
Other Benefits	5.47	3.52
TOTAL	28.78	13.31
(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.4,800 per annum)		
2. Expenditure incurred in Foreign Currency on cash basis :		
Interest on loans	3,074.15	8,363.77
Continued technical assistance to Aluminium Pechiney	192.14	793.78
Payments to consultants/supervision charges	17.96	2.43
Travelling expenses	47.21	67.47
Agency commission on sales	4.02	7.06
Books, periodicals, advertisement, bank charges etc.	22.04	13.72
Agency, syndication and management fees	—	2.20
TOTAL	3,357.52	9,250.43
3. Earnings in Foreign Currency on cash basis :		
Export of goods	62,468.22	41,547.01
Interest on bank deposits	252.95	278.04
Despatch money	58.90	46.75
TOTAL	62,780.07	41,871.80
4. Value of Imports calculated on CIF basis :		
Raw materials	10,067.74	7,425.00
Components, spare parts and construction materials	3,335.69	5,058.17
Capital goods	973.01	828.80
TOTAL	14,376.44	13,311.97
5. Value of Raw materials, stores, spares & components consumed during the year :		
	Current Year	Previous Year
	Value	Value
a) Raw materials :		
Imported	10408.51	8500.51
Indigenous	12316.35	10808.35
TOTAL	22724.86	19308.86*
b) Stores, spares and components :		
Imported	6796.02	5341.64
Indigenous	8745.52	6421.19
TOTAL	15541.54	11762.83

* includes Rs.102.68 representing Consumption for trial production which has been capitalised.



Schedules forming part of the Accounts

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	25,58,002	24,08,472
Aluminium Hydrate	Not Applicable	8,00,000	8,00,000	8,43,240	8,05,135
Calcined Alumina	Not Applicable	8,00,000	8,00,000	8,40,062	8,07,130
Aluminium Standard Ingots	Not Applicable	88,000	88,000	83,384	88,114
Aluminium Sow Ingots	Not Applicable	—	—	52,253	45,430
Aluminium Wire rods	Not Applicable	100,000	100,000	55,735	50,553
Aluminium Billets	Not Applicable	30,000	30,000	12,451	8,191
Electricity	Not Applicable	720 MW	720 MW	4,187 MU	4,147 MU

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

2. Production of Aluminium metal includes production during trial runs, for the year Nil (previous year 374 MT)

3. Bauxite of 25,17,150 MT (previous year 23,79,527 MT), Alumina Hydrate of 840,062 MT (previous year 807,130 MT), Calcined Alumina of 3,99,567 MT (previous year 3,76,156 MT) and Electricity of 3,284 MU (previous year 3,056 MU) have been consumed internally during the year.

7. Stock and Sales :

Products	Opening Stock		Sales		Closing Stock	
	Quantity In Tonnes	Value Rs. in lakhs	Quantity In Tonnes	Value Rs. in lakhs	Quantity In Tonnes	Value Rs. in lakhs
Bauxite	421,480 (392,600)	362.47 (357.27)	— —	— —	442,796 (421,480)	615.48 (362.47)
Alumina Hydrate	216 (3688)	6.00 (86.78)	3,383 (1,422)	316.04 (136.01)	11 (216)	0.31 (6.00)
Calcined Alumina	93,073 (84,035)	3,239.61 (2,525.98)	468,654 (420,079)	30,819.25 (31,199.17)	58,055 (93,073)	2,109.94 (3,239.61)
Aluminium standard & sow ingots	2,183 (2,010)	641.50 (564.67)	137,410 (1,33,041)	87,846.16 (88,723.86)	390 (2,183)	127.14 (641.51)
Aluminium Wire rods	64 (96)	19.32 (26.88)	55,504 (50,471)	41,189.54 (38,908.63)	282 (64)	112.89 (19.32)
Aluminium Billets	561 (713)	201.38 (215.98)	12,964 (8,334)	9,141.17 (6,468.50)	48 (561)	18.25 (201.38)
Electricity (in MU net)	— —	— —	903 (1,093)	7,574.02 (8,961.75)	— —	— —

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

2. Sales do not include sell-out of trial production.

3. The closing stock of Aluminium ingots includes 301 MT of Sow Ingots (previous year 1,510 MT)

4. Figures of closing stock are after adjustment of internal transfers, shortages/excesses.

9. Social Amenities :

(Rs. in lakhs)

Expenses	Township	Education	Medical	Social/Cultural	Canteen	Total
Payments to employees	82.60	—	215.96	—	62.72	361.28
Welfare expenses	0.48	244.88	149.67	41.75	143.67	580.45
Materials consumed	92.22	—	102.99	—	2.84	198.05
Repairs & maintenance	392.87	7.10	8.87	7.88	0.12	416.84
Power, fuel & water charges	184.22	—	0.12	—	1.09	185.43
Depreciation	328.95	9.53	7.01	8.51	3.92	357.92
TOTAL	1,081.34	261.51	484.62	58.14	214.36	2,099.97
Less : Recoveries	96.63	—	5.07	—	—	101.70
Net Expenditure	984.71	261.51	479.55	58.14	214.36	1,998.27
For previous year	728.67	216.41	404.39	47.03	194.92	1,591.42



Schedules forming part of the Accounts

10. Balance Sheet Abstract and Company's General Profile :

i) Registration Details :

Registration No.	1500920
State Code	15
Balance Sheet Date	31st March 1997

	<u>Current Year</u>	<u>(In thousand rupees) Previous Year</u>
ii) Capital raised during the year:		
Public Issue	Nil	Nil
Right Issue	Nil	Nil
Bonus Issue	Nil	Nil
Private Placement	Nil	Nil
iii) Position of mobilisation and deployment of Funds :		
Total Liabilities	3584,24,66	3621,85,04
Total Assets	3584,24,66	3621,85,04
Sources of Funds :		
Paid-up Capital	1288,61,92	1288,61,92
Reserves & Surplus	1715,62,74	1308,31,94
Secured Loans	Nil	Nil
Unsecured Loans	580,00,00	1024,91,18
Application of Funds :		
Net Fixed Assets	2829,49,69	3011,35,69
Investments	31,50,00	20,50,00
Net Current Assets	717,88,39	582,34,42
Misc. Expenditure	5,36,58	7,64,93
Accumulated losses	Nil	Nil
iv) Performance of the Company :		
Turnover	1768,86,18	1743,97,92
Total Expenditure	1326,94,13	1277,78,29
Profit/Loss before Tax	555,91,15	535,27,96 *
Profit/Loss after Tax	491,75,69	535,26,37 *
Earning per Share (In Rupees)	3.82	4.15 *
Dividend rate (%)	6.00	3.50
* Excluding Extraordinary Income		
v) Generic Name of Principal products/services :		
(Disclosed as per Licence)		
Item Code No.	335000000	
Product	Aluminium Ingots	



Cash Flow Statement for the Year ended March 31st, 1997

(Rupees in Crore)

	Year ended March 31st, 1997	Year ended March 31st, 1996
A. Cash flow from Operating Activities		
Net Profit before tax and Extraordinary Income	555.91	535.26
Adjustments for :		
Depreciation	258.94	268.13
Foreign Exchange loss/(gain) on loans	(27.39)	(29.01)
Foreign Exchange loss on working capital	0.15	0.31
Interest & Financing charges	36.33	114.14
Miscellaneous Expenses written off	0.47	14.97
Provisions (Net)	3.91	3.39
Loss on maturity of investments	—	0.27
Interest income	(23.18)	(41.99)
Loss/(Profit) on sale of assets (net)	0.04	(0.19)
	<u>249.27</u>	<u>330.02</u>
Operating Profit before working capital changes	805.18	865.28
Adjustments for :		
Inventories	(20.93)	(46.20)
Inter-corporate & bank deposits	(30.00)	223.73
Trade & other receivables	(39.73)	(150.85)
Trade payables	<u>9.79</u>	<u>16.12</u>
	<u>(80.87)</u>	<u>42.80</u>
Cash generated from Operation	724.31	908.08
Adjustments for :		
Interest & financing charges paid	(43.93)	(115.02)
Direct taxes paid	<u>(58.52)</u>	<u>—</u>
	<u>(102.45)</u>	<u>(115.02)</u>
Cash flow before Extraordinary Items	621.86	793.06
Extraordinary Items	—	—
Net cash from operating activities	621.86	793.06
B. Cash Flow from Investing Activities :		
Purchase of Fixed Assets	(70.59)	(60.68)
Exchange loss on repayments of loans (Capital)	(13.13)	(52.38)
Sale of Fixed Assets	0.17	0.42
Purchase of Investments	(12.00)	(1.00)
Sale of Investments*	1.00	9.50
Interest received	<u>25.53</u>	<u>57.26</u>
Net Cash used in investing activities	(69.02)	(46.88)

* at face value



Cash Flow Statement for the Year ended March 31st, 1997

(Rupees in Crore)

	Year ended March 31st, 1997	Year ended March 31st, 1996
C. Cash Flow from Financing Activities :		
Proceeds from issue of Share Capital	—	—
Proceeds from long term borrowings	(397.04)	(715.19)
Dividends paid	(45.10)	(38.65)
Net cash used in Financing activities	(442.14)	(753.84)
D. Net changes in Cash & Cash equivalents (A+B+C)	110.70	(7.66)
E. Cash & Cash equivalents - Opening balance	27.98	35.64
F. Cash & Cash equivalents -Closing balance	138.68	27.98

- 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 the Board of Directors

Bhubaneswar
2nd July, 1997

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, 1997 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

Visakhapatnam
2nd July, 1997

V. SEETARAMAIAH
Partner



Offices and Customer Contact Centres

UNITS

1. Mines & Refinery

Damanjodi - 763 008
Dist. : Koraput (Orissa)
Telex : 06601-201 DMJD IN
Fax : 06853-22214/22288

2. Captive Power Plant

Dist. : Angul (Orissa)
Pin : 759 122
Telex : 06306-205 CPP IN
Fax : 06764-20646

3. Smelter Plant

Nalco Nagar - 759 145
Dist. : Angul (Orissa)
Telex : 06306-207 SMLT IN
Fax : 06764-20132

PORT FACILITIES

Visakhapatnam

Opp. Ore Handling Complex,
Visakhapatnam - 530 035,
Andhra Pradesh
Phone : 0891-561433/561435
Telex : 0495-299 NAL IN
Fax : 0891-561598

MARKETING OFFICES

1. Bangalore

Reshma Complex,
5th Floor, 50 M. G. Road,
Bangalore - 560 001
Phone : 080-5587298/5587086
Telex : 0845-8781 NAL IN
Fax : 080-5586151

2. Mumbai

215, T. V. Industrial Estate,
S. K. Ahire Marg, Worli,
Mumbai - 400 025
Phone : 022-4939288/4939289
Telex : 011-75553 NAL IN
Fax : 022-4950500

3. Calcutta

Binoy Bhawan,
6th Floor, 27-B, Camac Street,
Calcutta - 700 016
Phone : 033-2478792
Telex : 021-7022 NAL IN
Fax : 033-2478936

4. New Delhi

303, Mercantile House,
15, Kasturba Gandhi Marg,
New Delhi - 110 001
Phone : 011-3713430/3713757/3711634
Telex : 031-62775 NAL IN
Fax : 033-3711636

5. Chennai

3J, Century Plaza, 560, Anna Salai,
Teynampet, Chennai - 600 018
Phone : 044-4344162
Telex : 041-23345 NAL IN
Fax : 044-453495

STOCK YARDS

1. New Delhi

National Small Industries Corporation Ltd.
P.D.T.C. Okhla Industrial Estate,
New Delhi - 110 020

2. Bhiwandi

Godown No. A/20
Gupta Warehousing Complex,
Mahatre Compound,
Padoda Village
Taluka, Bhiwandi,
Dist. Thane

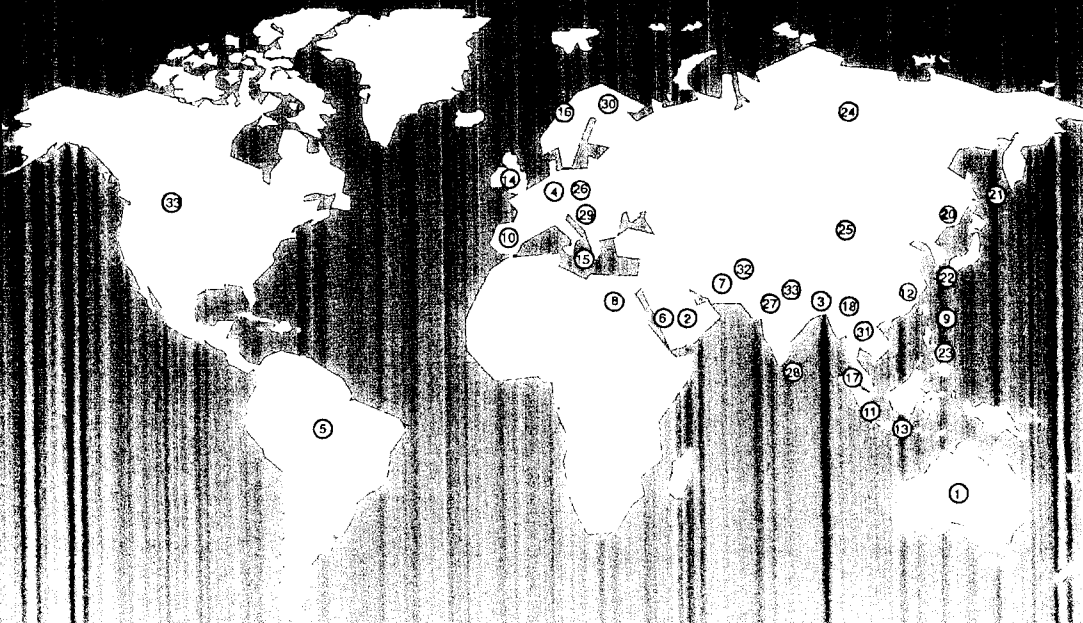
3. Faridabad

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

4. Pondicherry

J. K. Towers, II Floor (East),
100, Feet Road, Ellaipillaichavady,
Pondicherry - 605 013
Phone : 0413-51109/50276
Fax : 0413-50277

GLOBAL PRESENCE



● TECHNOLOGY ASSOCIATES
■ ALUMINIUM EXPORT
▲ ALUMINIUM EXPORT

- ▲ 1. AUSTRALIA
- ▲ 2. BAHRAIN
- 3. BANGLADESH
- 4. BELGIUM
- ▲ 5. BRAZIL
- 6. CHINA
- 7. DUBAI
- ▲ 8. EGYPT
- ▲ 9. FINLAND
- 10. FRANCE
- 11. GERMANY

- 12. HONG KONG
- 13. INDONESIA
- 14. IRAN
- 15. ITALY
- 16. JAPAN
- 17. MALAYSIA
- 18. MYANMAR
- 19. NEPAL
- 20. NORTH KOREA
- 21. NORWAY
- 22. PAKISTAN

- ▲ 23. PHILIPPINES
- ▲ 24. RUSSIA
- 25. SAUDI ARABIA
- 26. SINGAPORE
- 27. SOUTH KOREA
- 28. SRI LANKA
- 29. SWITZERLAND
- 30. TAIWAN
- 31. THAILAND
- 32. UK
- 33. USA

CV
22/2/2000

	INITIALS	DATE
PREPARED BY	A. Vagal.	22/2/2000
CHECKED BY	AG	2/3/2000