

**REF.No.NBC/BD/Adv/08, Date:21.07.2008**

**Sub: Expression of Interest (EOI) for Joint Venture on 100% graphitized cathode carbon block manufacturing Plant.**

National Aluminum Company Ltd (NALCO) is interested to set up a 100% graphitized Cathode Carbon block manufacturing Plant of approx 5,000 MTPA and above capacity in India, through a Joint Venture partnership. For this purpose NALCO invites Expression of Interest (EOI) from the interested and competent manufacturers having expertise in production and marketing of 100% graphitized cathode blocks. NALCO is open to different options for the Joint Venture for the project. However, Nalco's equity participation could be between 26% to 40%. Nalco's own requirement of cathode carbon blocks(Semi-graphitic) is currently 2600 MTPA, which is likely to go up to 4,000 MTPA by the end of 2012.

The existing demand of Nalco is fully met by imports. The demand for 100% graphitized Cathode Carbon blocks is likely to increase many folds with the planned and announced expansions of aluminum smelters in the country over next 5 years. This presents a good business opportunity for setting up a modern 100% graphitized cathode Carbon block production facilities in India. There is good opportunity for the plant manufacturing a variety of products based on graphitized carbon, viz- in copper smelters, battery manufacturing, steel plants (Blast furnaces) etc.A special agreement with suitable pricing mechanism can be signed with JV for obtaining Nalco's requirement.

PART-1

1.0 General Information:

1.1 Company profile and location of the plant:

NALCO was incorporated in 1981 following a major investment decision by the Government of India to exploit a part of the Bauxite deposit discovered in the East coast of India. The company has charted an excellent track record in both physical and financial performance, and has been listed in the LME(London Metal exchange).Recently, the company has been conferred the "Nav Ratna"(literally Nine Jewels} by the Govt.of India, in recognition of its consistent outstanding performance over the years, herby incorporating higher investment and operational autonomy.

NALCO is operating a multi-location Bauxite Mines-Alumina-Aluminium complex along with a Captive Power Plant, in the State of Orissa, India. A major expansion programme (1st phase) was started in 1997/1998 and

the same has already been completed. Currently the organization is in the midst of Phase-2 expansion, due for completion in December, 2008.

The plant capacity and location of various units of the complex after

Phase-1 expansion and ongoing expansion are as under:

Unit	Location	Current Capacities	Capacities after ongoing expansion
Bauxite Mines	Panchpatmali, Distt:Koraput, Orissa	4.8 MTPY	6.3 MTPY
Alumina Refinery	Damanjodi, Distt:Koraput, Orissa	1.575 MTPY	2.1 MTPY
Aluminium Smelter	Angul, Distt. Angul, Orissa	0.345 MTPY	0.460 MTPY
Captive Power Plant	Angul, Distt,. Angul, Orissa	960 MW	1200 MW

The current product mixes of NALCO are as follows:

- 1 **Alumina & Hydrate**      Calcined Alumina (Metallurgical Grade)  
Alumina Hydrate
  
- 2 **Special Products**      Specialty Hydrate/Specialty Aluminas
  
- 3 **Aluminium Metal**      Ingots  
Sows  
Billets  
Wire rods  
Alloy wire rods
  
- 4 **Flat Product**              Aluminium Flat Rolled Products and Cast Strips

Nalco's metal is registered in the LME and the products are sold both in domestic and international market.

## Brief company Highlights:

### 1.2.1 Financial:

All figures are as on 31st March, 2008

Sl.No.	Particulars	In INR Crores*	Equivalent in US\$ Mn
1	Paid-up Share Capital	644.31	150.29
2	Net Worth	8874.45	2070.08
3	Sales Turnover	5474.45	1276.99
4	Net Profit after Tax (PAT)	1631.52	380.57

\*1Crore equals to 10 Millions.

### 1.2.2 General:

The company is listed on National Stock Exchange of India. The registered office is located at Nalco Bhawan, P/1, Nayapalli, Bhubaneswar-751013, Orissa, India. It is certified for ISO 9001: 2000, ISO 14001 and OHSAS 18001. It has won several awards for Environmental performance including the most coveted, Indira Gandhi Paryavaran Puraskar- 2000, Pollution Control Excellence Award-2000, and CII, Orissa, Environment Safety & Health Management Award-2005. The Company has also won CAPEXIL Highest Export Award continuously since 1988, the EEPC Export award, FIEO Niryat Shree Award and many other awards for excellence in export performance.

### 1.3 Company Background

Presently NALCO uses semi graphitic cathode carbon blocks of following sizes and quantities in each electrolytic pot of NALCO:

SL.NO	DESCRIPTION	SIZE IN MM	QTY IN NOS
1	Bottom Blocks	L-3200 W-670 H-450	12
2	Side Blocks	L-550 W-300 H-150	87

Since, NALCO is contemplating to switch over to higher amperage i.e. from 180KA to 220 KA under AP technology for its existing smelter , 100% graphitized cathode carbon blocks would be required in future. Moreover, all the announced/planned expansions in India/Abroad are likely to adopt 300/360/500 KA technology for Aluminium smelting.Hence,the proposed plant should have flexible production processes to manufacture various sizes of 100% graphitized cathode carbon blocks to meet the requirements of different consumers in the aluminium industry, as well as other products.

#### 1.4 Raw Material Availability:

The major raw material required for production of 100% graphitized cathode carbon blocks i.e. Calcined Petroleum coke and Coal Tar Pitch are available in various parts of India. NALCO is also separately contemplating setting up a CT Pitch plant in the JV mode.

#### 1.5 Possible Location of the Proposed Plant:

Some of the key considerations for setting up a 100% graphitized Cathode carbon block Plant, which would influence its possible site location include proximity to raw material, access to abundant utilities, availability of skilled personnel, ready availability of market and adequate infrastructure facilities. The JV partners can decide the location of the proposed plant in India taking the above points in consideration.

## **PART-2**

#### 2.1 QUALIFICATION CRITERIA:

Firms intending to participate are expected to meet the pre-qualification requirement stated hereunder:

2.1.1 The firms should have technical capability and own production capacity of minimum 4,000 TPA of 100% graphitized Cathode Carbon Blocks.The plant should be in operation for the past 3 years.

2.1.2 The Firms must have supplied their products to Aluminium Smelters operating at 220 KAmps or above and the pots using such products should be in operation at least for 2/3 years.

2.1.3 The firms should have adequate expertise in development and marketing of cathode carbon blocks in the domestic and/or export markets.

2.1.4 The firms should be financially sound, which would be judged by their latest audited accounts. The net worth and financial performance should be commensurate with the volume of operation being proposed under this invitation, but should be positive, during the last accounting year.

## 2.2 PREPARATION/SUBMISSION OF EOI

### 2.2.1 EOI outline requirements:

The interested Firms are invited to furnish a proposal in a format as outlined below in order to achieve the objective of maintaining uniform proposal structure from all the Firms:

CHAPTER-I	LETTER OF SUBMISSION OF THE PROPOSAL
CHAPTER-II	ORGANIZATION PROFILE
CHAPTER-III	EOI QUALIFICATION SUMMARY (as per Para 2.1 above)
CHAPTER-IV	INFORMATION ABOUT ORGANIZATION In this section, the Firm is requested to furnish details pertaining to company formation, legal status, place of registration, principal place of business of the company, number of years in the relevant business, and volume of sales along with market share in the related segment. Organization Structure along with qualification & experience of key personnel, etc may be provided
CHAPTER-V	TECHNICAL CAPABILITY In this section, the Firm may furnish details about technical capability, capacity, market etc in undertaking similar nature of works. Firm may also submit any other information he desires to furnish on his own to supplement his capabilities.

CHAPTER-VI OUTLINE OF THE PROPOSED PROJECT  
(PROPOSAL)

In this section, Firm is expected to furnish a brief on production and business plan which should comprise of the technology to be used, their market, growth potential, market price, raw materials and utility sourcing, financial analysis, cash flow and profitability statements etc.

CHAPTER-VII OTHER REQUIRED DOCUMENTS

- 1) Details of the experience as per Para 2.1 above
- 2) Annual Report and Audited Accounts of the latest financial year.

2.3 SUBMISSION OF EXPRESSION OF INTEREST(EOI):

Firms are expected to prepare EOI in accordance with requirement vide Para 2.1 and 2.2. The language of the proposal shall be “English“ with all units in MKS system. The proposal along with all information and requisite documents should be delivered through post or courier in printed format at the following address .**Last date for submission of proposal is 25<sup>th</sup> Aug,2008.**

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