



**Cement Corporation of India Limited
(A Govt. of India Enterprise)
Core V, SCOPE Complex, 7 Lodhi Road
NEW DELHI-110 003
CIN-U74899DL1965GOI004322**

E-mail: ed_proj@ccilttd.in / proj_co@ccilttd.in
Website: www.ccilttd.in

NIT NO. ED(PROJ)/CONSULTANT /TDO/2020

Dated: 11.02. 2020

**NOTICE INVITING LIMITED E-TENDER (NIT)
(Only through e-tender)**

Online Limited electronic bids through Electronic Tendering System (ETS) for detail design engineering service & consultancy for the following works for Tandur unit:

1. Installation of 01 no. Fly Ash storage Silo in steel with 500 MT capacities with handling system.
2. Installation of 01 no. Cement (Gr. 53 S) storage Silo in steel with 800 MT capacity and
3. Installation of 01 no. New Dynamic Separator for existing Coal mill no.1

The complete set of tender documents is available on websites www.ccilttd.in, www.eprocure.gov.in and www.cci-etender.com of Antares Systems Ltd.

E-Tender No.	ED(PROJ)/Consultant/TDO/01/2020
Mode of Tender	Limited e-tender System (Online Part A – Techno Commercial Bid and Part B - Price Bid) through www.cci-etender.com of Antares Systems Ltd.
Date of NIT available to parties to download	From 12.2.2020 (10:00 hrs.) Till 28.2.2020 (15:00 hrs.)
Date of Starting of e-Tender for submission of on line Techno Commercial Bid and Price Bid at www.cci-etender.com	From 12.2.2020 (10:00 hrs.)Till 28.2.2020 (15:00hrs.)
Date & time of opening of Part-A (i.e. Techno-Commercial Bid) Part-B Price Bid: Date of opening of Part-B i.e. price bid	28.2.2020 at 15:30 hrs.
Validity of bids	120 days from the date of the techno- commercial bid opening.

Offer is invited for the following on FIRM & FOR destination basis as per details given below: -

NIT No.	Name of the work	Activity
ED(PROJ)/CONSULTANT/TDO/2020	<p>design engineering service & consultancy for the following works for Tandur unit:</p> <ol style="list-style-type: none"> 1. Installation of 01 no. Fly Ash storage Silo in steel with 500 MT capacities with handling system. 2. Installation of 01 no. Cement (Gr. 53 S) storage Silo in steel with 800 MT capacity and 3. Installation of 01 no. New Dynamic Separator for existing Coal mill no.1 	<ol style="list-style-type: none"> 1. Design & Engineering 2. Supervision of Erection & commission and hooking up work.

- 1) Only those tenders will be considered who fulfill the terms & conditions mentioned in the tender documents.
- 2) The price- bid should be only as per CCI's price - bid format otherwise the tender is liable for rejection.

For and on behalf of CCI Ltd.

Executive Director [PROJ]

List of Annexure

The tender documents comprise of following:-

Annexure: A-I	Important Instructions to Bidders
Annexure: A-II	Covering letter which must be submitted by tenderer duly filled in.
Annexure: A-V	Part-III- Special terms & conditions
Annexure: A-VI	Part-IV- Technical specifications
Annexure: A-VII	Price Bid Performa (Price schedule) to be submitted duly filled in on-line as Part-B.
Annexure: 9	Declaration

Important Instructions for E-procurement

This is an e-procurement event of CEMENT CORPORATION OF INDIA. The e-procurement service provider is Antares Systems Ltd., No.24, 1st Floor, Sudha Complex, 3rd Stage, 4th Block, Basaveshwara nagar, Bangalore-560079.

You are requested to read the tender terms & conditions (**Annexure: A-I, A-II, A-III, A-IV, A-V & A-VI**) of this tender before submitting your online tender. Tenderers who do not comply with the conditions with documentary proof (wherever required) will not qualify in the Tender for opening of price bid.

1	<p>Process of E-Tender : Registration</p> <p>The process involves vendor's registration with Tender wizard e-procurement portal. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. Antares Systems Ltd is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).</p> <p>SPECIAL NOTE: THE PRICE BID AND THE TECHNO-COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.cci-etender.com</p> <ol style="list-style-type: none">1. Vendors are required to register themselves online with www.cci-etender.com→ 'Register Me' link. Filling up details and creating own user id and password→ Submit.2. Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form. <p>In case of any clarification, please contact CCI/Antares Systems Ltd, (before the scheduled time of the e- tender).</p> <p>Contact person (Cement Corporation of India):</p> <table><tr><td>1 .Mr. V.K. Pandey ,ED[Project] Email: ed_proj@ccilttd.in</td><td>2. Mr. B.N. chaudhary, DGM(MECH) E-mail: opns_co@ccilttd.in</td></tr></table> <p>3. Mr.J. Behera, DGM(MM) Email: mm_co@ccilttd.in</p> <p>Contact persons of Units:</p> <p>TCF- Shri B.M. Mahana, GM, Tandur Landline -05811247223 Email-gm_tdo@ccilttd.in</p> <p>Contact person (Antares Systems Ltd):</p> <table><tr><td>1. Mr. Pravesh Mani Sr.Exe-CRM Mobile: 09044314492</td><td>2. Help desk Ph. 080 4933200 Ph. 033 460 46611</td></tr></table>	1 .Mr. V.K. Pandey ,ED[Project] Email: ed_proj@ccilttd.in	2. Mr. B.N. chaudhary , DGM(MECH) E-mail: opns_co@ccilttd.in	1. Mr. Pravesh Mani Sr.Exe-CRM Mobile: 09044314492	2. Help desk Ph. 080 4933200 Ph. 033 460 46611
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1. Mr. Pravesh Mani Sr.Exe-CRM Mobile: 09044314492	2. Help desk Ph. 080 4933200 Ph. 033 460 46611				

	<p>Email:praveshmani.t@antaressystems.com</p> <p>B) System Requirement:</p> <p>Windows 8, 10 Professional Operating System, Internet Browser-9,10 &11. Signing type Class 3 digital signature Java JRE 6 and above</p>
2	<p>(A) Part-A Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness electronic opening of bid.</p> <p>(B) Part-B Price bid will be opened electronically of only those bidder(s) who's Part-A Techno- Commercial Bid is found to be Techno-Commercially acceptable by CCI. Such bidder(s) will be intimated date of opening of Part-B Price bid, through valid email confirmed by them.</p> <p>Note: The tenderers are advised to offer their lowest possible rates taking into account the prevailing market conditions. There would generally be no negotiations hence please submit your most competitive prices while submitting the price bid. However, if the rate is still considered high, action as per prevailing instruction/guideline shall be taken.</p>
3	All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
4	<p>In case of failure to access the payment towards non-refundable fees for any reason, the vender, in term, will not have the access to on line e-tender and no correspondence in this respect will be entertained and CCI will not be responsible for any such lapses on this account. Bidder(s) are advised to make remittance of non-refundable fees through separate DD well in advance and verify completion of transaction in respect of non-refundable fees.</p> <p>Vendors are instructed to use Upload Documents link in My menu to upload documents in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.</p> <p>Once documents are uploaded in the library, vendors can attach documents through Attach Document link against the particular tender. For further assistance please follow instructions of vendor guide</p>
5	All notices/corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by CCI. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with Tender wizard (i.e. Service Provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).
6	The responsibility of downloading the related corrigenda, if any, will be that of the downloading parties.
7	E-tender cannot be accessed after the due date and time mentioned in NIT.
8	<p>Bidding in e-tender:</p> <p>a.) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> <p>b.) CCI reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.</p> <p>c.) No deviation of the terms and conditions of the tender document is acceptable.</p>

	<p>Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.</p> <p>d.) Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.</p>
9	Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.
10	No deviation to the technical and commercial terms & conditions are allowed.
11	After submitting online bid, the bidder cannot access the tender, once it has been submitted with digital signature
12	CCI has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
13	The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.cci-etender.com of Antares Systems Ltd.
14	The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.
15	The bid will be evaluated based on the filled-in technical & commercial formats.
16	The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, punitive action including suspension and banning of business can also be taken against defaulting bidders.
17	Bidders are requested to read the vendor guide in the page www.cci-etender.com to familiarize themselves with the system before bidding.

For and on behalf of CCI Ltd.

Executive Director [PROJ]

(On the letterhead of the bidder)

Covering Letter

To,
 The Executive Director (Project)
 Cement Corporation of India Limited,
 Core-V, SCOPE Complex,
 7-Lodhi Road, NEW DELHI-110 003
 Bidder's Ref No.:

Dear Sir,

With reference to your NIT No. Dated

I/We am/are hereby uploading the scanned copies of the following documents online for your reference:

S. No.	Item	Yes/No/NA
1	Scanned copy of covering letter (Annexure-1)	
2	Copy of GST Registration Certificate and PAN Card	
3	Partnership Deed / Memorandum & Article of Association	
4	Balance Sheet for last 3 financial years	
5	Scanned Copy of duly filled and signed Integrity Pact Annexure-2	
6	Udyog Aadhar Number (For MSME bidders)	
7	Annexure 3 (Declaration of relation to officer of CCI)	
8	Annexure 4 (unexecuted / present contracts / jobs in hand)	
9	Annexure 5 (Bidder's firm/company profile)	
10	Annexure 8 (Details of orders executed including CCI during the last three years)	
11	Annexure 9 (Declaration letter of having read and understood the GTC)	

(For and on behalf of Bidder/Contractor)

(Office Seal)

CEMENT CORPORATION OF INDIA LTD.
(A Govt. of India Enterprise)
PART-III
SPECIAL TERMS AND CONDITIONS

In addition to the General Terms and Conditions of tender under PART – I & II, the following terms and conditions will also apply to the contract. These special terms and conditions, if contradictory to any conditions given in PART – I & II, will prevail upon the conditions given therein. In addition to the above, the following will also apply.

1.0 SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

- 1.0.1 Detailed design engineering service & consultancy for the following works for Tandur unit:
- i) Installation of 01 no. Fly Ash storage Silo in steel with 500 MT capacities with handling system.
 - ii) Installation of 01 no. Cement (Gr. 53 S) storage Silo in steel with 800 MT capacity and
 - iii) Installation of 01 no. New Dynamic Separator for existing Coal mill no.1
- 1.0.2 Site visit for reviewing the site condition and collection of all data, drawings etc for 2 to 3 days by 2 to 3 persons (Max).

1.3 EXPERIENCE CRITERIA

The firms having following Experience Criteria can participate in the tender:-

- 1.3.1 The consulting firm/agency should be a registered firm/company working for last 5 years, having under taken the design/ Engineering works for cement plants and should possess multi disciplinary team.
- 1.3.2 The firm should submit the list of Senior Consultants along with their experience (years), which should normally be 10-15 years in the field to judge the profile of the firm.

2.0 PRICES

- 2.1 The Bank Guarantees as mentioned under different columns (Security Deposit & Performance guarantee etc.) are to be submitted as per CCI formats from any Nationalized Bank only for equal amount as per validity indicated in the relevant clause with claim period of further three months.
- 2.2 Prices are to be quoted on firm and F.O.R. destination basis inclusive GST showing break up as per Price Bid format only. However, GST will be payable as per actual as applicable on

submission of documentary evidence or as quoted by the tenderer whichever is lower. No escalation during the period of contract / execution of the entire contract/extended period on whatever reasons thereof will be allowed in prices

2.3 The price should be quoted strictly in our prescribed Price Bid Performa only enclosed with the tender, both in figures and words to avoid ambiguities. In case of any difference in figures & words, the lower amount of the two will be taken into consideration.

2.4 Award of contract will be solely at the discretion of CCI.

3.0 TIME SCHEDULE:

3.1 The site visit and study of the plant at the earliest within a week of placement of LOI/ Work Order.

3.0.1 Draft report shall follow within Three weeks after the completion of the visit.

3.3 The final report shall be submitted within two weeks after receipt of the Final comments on draft report by CCI.

3.4 The date of award of LOI/Work Order shall be considered as the zero date for all purpose.

4.0 PAYMENT TERMS

4.1 30% Payment shall be released within 15 days after completion of site visit & submission of site visit report.

4.2 40% Payment shall be released within 15 days on submission of Draft Report.

4.3 30% Payment shall be released within 1 months on submission & acceptance of Final Report.

5. SECURITY DEPOSIT :

5.1 The successful tenderer shall have to furnish Security Deposit equivalent to 5 % (five percent) of the total value of the contract by way of Demand Draft / Bank Guarantee (in CCI format to be provided by CCI) in lieu of Clause 2.0 of PART – II of the tender towards satisfactory performance of the contract within 15 days from the date of award of the work order.

5.2 This Security Deposit shall be refunded within 2 months from the date of satisfactory completion of the work and on basis of certificates given by CCI.

6.0 PAYING AUTHORITY: HOD (FINANCE) of CCI, Corporate Office, New Delhi –110003

7.0 SUBMISSION OF FINAL REPORTS:

7.1 The Final Reports should be submitted separately in triplicate.

8.0 DURATION OF CONTRACT

8.1 Valid for three months from the placement of Work Order.

9.0 Mode of payment

9.1 All payment is through e-payment.

10.0 CCI shall be provided the free lodging & boarding at Tandur Cement plant.

PART-IV-
TECHNICAL SPECIFICATIONS
SPECIAL TERMS AND CONDITIONS

Brief description of Plant:

Tandur Cement Factory(TCF) is a unit of Cement Corporation of India Limited (CCI), (A Govt. of India Enterprise) is a single kiln plant using dry process technology of 3000 TPD clinker. Unit have coal fired rotary kiln with grate cooler, a twin string, 4 stage suspension pre-heater (PH) and an Off line Mitsubishi Fluidized Calciner (MFC) supplied by ACC-Vicker Babcock Limited (ABL). This plant was commissioned in 1986-87. The plant is run by DCS system of RS logic 5000 SCADA RS view 32 Supplied by Rockwell Automation for kiln and Cement mill is run by DCS System supplied by SIEMENS with SIMATIC MANAGER PCS-7.

Tandur Cement Factory is located approximately 130 KM from Hyderabad via Vikarabad route. It is well connected with road and rail. From Tandur, Railway Station (Hyderabad to Mumbai main line) is 15 KM away.

1. For Installation of 01 no. Fly Ash storage Silo in steel with 500 MT capacities with handling system. And
2. For Installation of 01 no. Cement (Gr. 53 S) storage Silo in steel with 800 MT capacity:

A. PRESENT SYSTEM:

TCF is having two cement grinding ball mill of capacity 100 TPH each having internal water spray system at both ends supplied by M/s Walchandnagar Industry Ltd. (WIL). These Mills are single pass/open circuit. Each mill is having two compartments separated by diaphragm liners. Each mill is driven by twin motors of 2000 KW each. Output of the mill fed to air slide then to chain bucket elevator for nib's separation then to air slide. From air slide to belt bucket elevator to 03 Nos. cement storage silos having capacity of 5000MT each. At the outlet of the cement mill, ESP is there to separate out the dust emitted.

M/s Cement Corporation of India (CCI) has started production of PPC grade of cement from Tandur Cement Factory. So in order to facilitate the storage facilities of 53S grade cement and considering the recent trend of dispatch of 53-S Grade Cement, CCI desires to have 800 MT Silo for 53-S cement near by the packing plant.

- Mill specification : 4.2 m \emptyset x 15.320 m long.
- First chamber : 4.2 m \emptyset x 4.989 m long (Effectively).
- Second chamber : 4.2 m \emptyset x 9.409 m long (effectively).
- Gap between Partition Diaphragms: 0.592 m.
- Mill Outlet Diaphragm : 0.330 m.
- Conventional Liners Type, each liner with two bolts.
- Motor Specification : 2 X 2000 KW, 990 rpm , 6.6 KV, 50 Hz.
- Gear box specification : - Single Helical, Single stage parallel shaft

Size: K-140; Make – WIL; Ratio – 990/126.8.

- Mill rpm : 15.4 rpm.
- Mill feed (clinker size) : 25 mm to 35 mm.
- Clinker sieve analysis
 - a) + 25 mm : 7 - 8 %
 - b) + 18 mm : 12 – 14 %
 - c) +12.5 mm : 22 – 26 %
 - d) + 6.25 mm : 16 – 20 %
 - e) - 6.25 mm : 32 – 43 %
- Cement surface : 3000 cm² / gm at 100 °C
- Grinding media first chamber./
 - a) 100 mm Ø , 3.0 MT.
 - b) 90 mm Ø , 9.5 MT.
 - c) 80 mm Ø , 11.6 MT.
 - d) 70 mm Ø , 16.0 MT.
 - e) 60 mm Ø , 26.0 MT.
- Grinding media in second chamber.
 - a) 60 mm Ø , 9.5 MT.
 - b) 50 mm Ø , 11.0 MT.
 - c) 40 mm Ø , 17.0 MT.
 - d) 30 mm Ø , 28.0 MT.
 - e) 20 mm Ø , 33.0 MT.
 - f) 16 mm Ø , 35.0 MT.
- Vertical Bucket Elevator : Type - Centrifugal Discharge Height- 25.65 M. Cap - 135 TPH.
- Electrostatic Precipitator (ESP)
Type : Plate type ; Collecting Electrode Area : 988 m².

Pressure drop in ESP : 20 mm WG; ESP Temp. Suitability (Max.) : 120 °C.
- ESP ID Fan Type : Backward curved imaginary blade. Make / Model : M/s. Voltas
Bombay Capacity : 47,000 M³/hr at 100 °C.
- Belt Bucket Elevator Capacity : 165 TPH; Height : 42 Mtr. Speed: 1.69 m/s ; Width :
450 mm, Type : Steel cord belt reinforced type 4 mm top & 4 mm bottom covers.
Strength : 1250 (N/mm) ; No. of Buckets : 227 Nos.
- **FLY ASH**, Grain size = 3000 ± 200 cm²/gm, Moisture content = 1%, Bulk Density=0.7 T/m³
All the data/specifications should be checked/viewed by the tenderer.

Basic Engineering

- a. Freezing of Fly Ash storage Silo in steel with 500 MT capacities with handling system and Steel Silo layout with 53S Cement Silo with feeding system to existing facilities (Data collection from site and drawing preparation.)
- b. Party should visit the site and study the area of existing Civil construction, structure, foundation and suggest minimum alterations / addition to accommodate the proposed projects with the existing facilities.

- c. Party should study / calculate and consider the load data like, soil safe load bearing capacity, wind load, temperature, seismic zone, dead load, live load etc., for designing.
- d. Preparation of project technical concept with indicating necessary equipment.
- e. Preparation of general layout and technological flow - sheet based on technical concept outlined and the proposed plant facilities with equipment details with all operation parameters.
- f. Preparation of general arrangement drawings with an equipment (indicative) fixing details.
- g. Recommend broad sizing of the major equipments, requisite energy conservation & pollution control measures.

Detail Engineering

- a. Study of existing structure design details and preparation of Civil General arrangement drawing.
 - b. Preparation of the detailed civil structural and RCC drawings in line with the general arrangement drawings with incorporation of report based on Soil Investigation and attached third party report (enclosed). Civil design foundations, structures, supports etc and preparation of related drawings. Strengthening arrangement of existing structures, if required for the proposed equipments and structures.
 - c. Ensure that the complete set of "as built" drawings incorporating all revisions & changes introduced during construction have been prepared correctively and submitted timely by the concerned contractor / supplier.
3. For installation of 01 no. New Dynamic Separator for existing Coal mill no.1

To meet the following Objectives.

- a) To increase the grinding capacity of coal mill by 5 %.
- b) To improve the coal quality fineness at mill-1 outlet i.e. 12-14% on 90 μ sieve and 2-3% on 212 μ sieve at 5% increased output compared to existing rate of coal mill.
- c) To reduce the overall power consumption of the grinding process.

3.1 The existing operational parameters like Draft, Temp. profile, Gas Volume, Dust loading etc .which are furnished are for existing operation However, As these data may be very important aspect in Designing enhanced system, therefore party is required to verify the same at site and should not be treat as Data required for design purpose without reconfirmation.

B. PRESENT SYSTEM:

TCF is having two nos. of coal mills of 8.5 E type mill of capacity 18TPH each for grinding of raw coal into fine powder. The 8.5 E type Coal Mill is an air swept mill in which the coal is fed on the centre of the table from the feed chute at top and the material gets ground in its passage between bottom rings and spherical balls of large diameter, hot air from PH outlet duct.

Raw coal is fed to mill through besta feeder \ redeler chain conveyor which is driven by DC motor of 1500 rpm. The gear box ratio 500:1 Normally the coal runs at 17 to 21 %

which is indicated in the DCS system. There is no direct measurement device for output of the coal mill.

The existing static classifier housing sits on top of the mill housing and houses a stationary classifier consisting of 16 no of blades/vanes which can be set at different positions manually through lever, which separates the airborne coarse particles from the airborne fines and returns the coarse material back to the mill through fan, rear circulating duct. This mill is in close loop.

There are two separate E-Mills for grinding of coal, one for MFC and another for Kiln firing.

E-Mills are in close circuit with recirculation duct at mill inlet.

Capacity of the mill rated 18 TPH each.

Raw feed size 25 mm (average).

Fine coal residue at 90 Micron – 20% to 25% (actual) for kiln firing.

Drive Motor detail 220 kW, 415 V, 50 Hz.

Coal Mill Fan Outlet is connected to common ESP for both mills. i.e. Inlet of ESP is connected to outlet of two coal mill fans .

- 3.2 The existing operational parameters like Draft, Temp. profile, Gas Volume, Dust loading TPH etc .which are furnished for existing operation only However, as these are a very important aspect in Designing , party is required to verify the same and should not be treated as Data required for design purpose. The parties shall take needful measurements / readings in their own interest before designing so that the performance of the separator meets the required norms/objectives.
- 3.2 Hot gas to coal mill is taken from exit of preheater fan through MCDC. The hot gas is fine lime stone dust laden.
- 3.3 Raw coal is feed to the mill through besto feeder which is driven by 1000/1500 rpm D.C. motor.
- 3.4 Normal operation of mill no. 01 for kiln firing is 34% speed of besto feeder where as mill no-II is 17%.
- 3.5 Ground coal in 1 to 1.5% moisture is weighed at fine coal weigh feeder both for kiln firing and MFC firing
 - a) for kiln firing --- 5 to 9 TPH
 - b) for MFC firing --- 18 to 21 TPH
 - Total--- 23 to 30 TPH
- 3.6 Coal mill no-1 is having suction through 4 nos of cyclones where as mill no.-2 is having suction through one big cyclone.

EXISTING OPERATIONAL PARAMETER

SI.NO		Description
1	Make	ABL, (ALSTOM) ,Sahabad (Karnataka)
2	Type/Model	E type 8.5

3	Year of installation	1986		
4	Size	3.545 m dia. X 5.36 m height		
5	Production	Actual i) 13.9 TPH approx. at 18 step of coal mill fan -1,with residue of 30% on 90 μ,coal ash of 38% ii)14.9 TPH approx. at 22 step of coal mill fan -1. with residue of 15% on 90 μ,coal ash of 31%		
6	Table Diameter	2.159 m Ball race dia		
7	Mill drive	220 KW/985 rpm		
8	Mill Feed Size	From 20 mm to 37 mm (approx. 25mm - average)		
9	Product Mill – 1	(Actual) 20 – 25 % Residue on 90 microns & 2-4 % residue on 212 micron sieve.		
	Mill – 2	38 – 45 % Residue on 90 microns & 19-25 % residue on 212 micron sieve		
10	Mill/Table Speed	40rpm		
11	Coal Mill Fan (1 no of each mill)	Design is for 48,000 m ³ /hr, 1,250 mmWG, 78°C. Operating for No. 01 is 43676 m ³ /hr @ 710 mmWG 38°C and for No. 02 operating is 36083 m ³ /h, 562 mmWG, 47°C		
12	Type of conveying system	FK Pumps		
13	No of Cyclones	In Mill No. - 1 – 04 cyclones		
14	Static separator detail	No. of static Vanes	16 Nos.	2222 mm PCD
15	Mode of transport	Air Swept		
16	Operating Data Parameters		Mill No – I	Mill No – 2
	Mill Inlet Pressure		38 mmWG	38 mmWG
	Mill Out Pressure		590 mmWG	398 mmWG
	Mill inlet Temp		240 °C	286 °C
	Mill Outlet Temp		50°C - 55 °C	51 °C
	Mill outlet Vol (m3/hr)		41220NM ³ /hrs	33720NM ³ /hrs
	Hot Gas Source		Hot air from PH outlet through MCDC.	Hot air from PH outlet through MCDC.
Hot Gas	Design	18900 NM ³ /hr	18900 NM ³ /hr	
Volume	Operating	21000 NM ³ /hr	16426 NM ³ /hr	
Hot Gas Temp	Design	350 °C	350 °C	
	Operating	240 °C	292 °C	

17	Feed Moisture (%)		9 % Max	7 % Min	8 % Avg
18	Coal Analysis/Properties		Unit	Raw Coal	Fine Coal
	Moisture Content		%	6-9.5	2.50 -3.60
	Ash Content		%	29.0 - 37.0	29.0 - 37.0
	Volatile Matter		%	29.8 – 32.0	29.8 – 32.0
	Fixed Carbon		%	38 – 27.3	38 – 27.3
19	Ash Analysis	SiO2	%	58.0 – 61.0	58.0 – 61.0
		Al2O3	%	20.0 – 25.0	20.0 – 25.0
		Fe2O3	%	3.8 - 5.8	3.8 - 5.8
		CaO	%	4.6 – 8.0	4.6 – 8.0
		MgO	%	toaces	
		Na2O	%	---	
		K2O	%	----	
		SO3	%	1.2 – 2.6	
		Cl	%	---	---
		Tio3	%	---	---
		P2O5	%	---	---
20	Calorific Value UHV		4000	Kcal/Kg	3700 - 4600

Note:-The actual figures are based on flow measurements taken in house and may be got confirmed by renderer before quoting in their own interest.

Drawings attached:

- a) Cement Mill flow sheet.
- b) GA drawing of Cement Mill.

PRICE BID PROFORMA**PRICE BID FORMAT**

Sl. No.	Description	Basic Price In INR (a)	Applicable GST on (Basic) In INR (b)	Total In INR (a+b)
A.	Detailed design engineering service & consultancy for the following works for Tandur unit :-			
1	Installation of 01 no. Fly Ash storage Silo in steel with 500 MT capacities with handling system.			
2	Installation of 01 no. Cement (Gr. 53 S) storage Silo in steel with 800 MT capacity			
3	Installation of 01 no. New Dynamic Separator for existing Coal mill no.1			

Note-1. Certified that the GST indicated as above are as per the prevailing Act of GST and provision made there under.

2. The Lowest Bidder(L-1) shall be evaluated on the basis of net cost (a+b) to the corporation individually for each work .

3.The prices are to be quoted as per clause. 2 of Part-III, special terms & condition.

Certified that the above rates have been given in accordance with the techno-commercial bid of the tender.

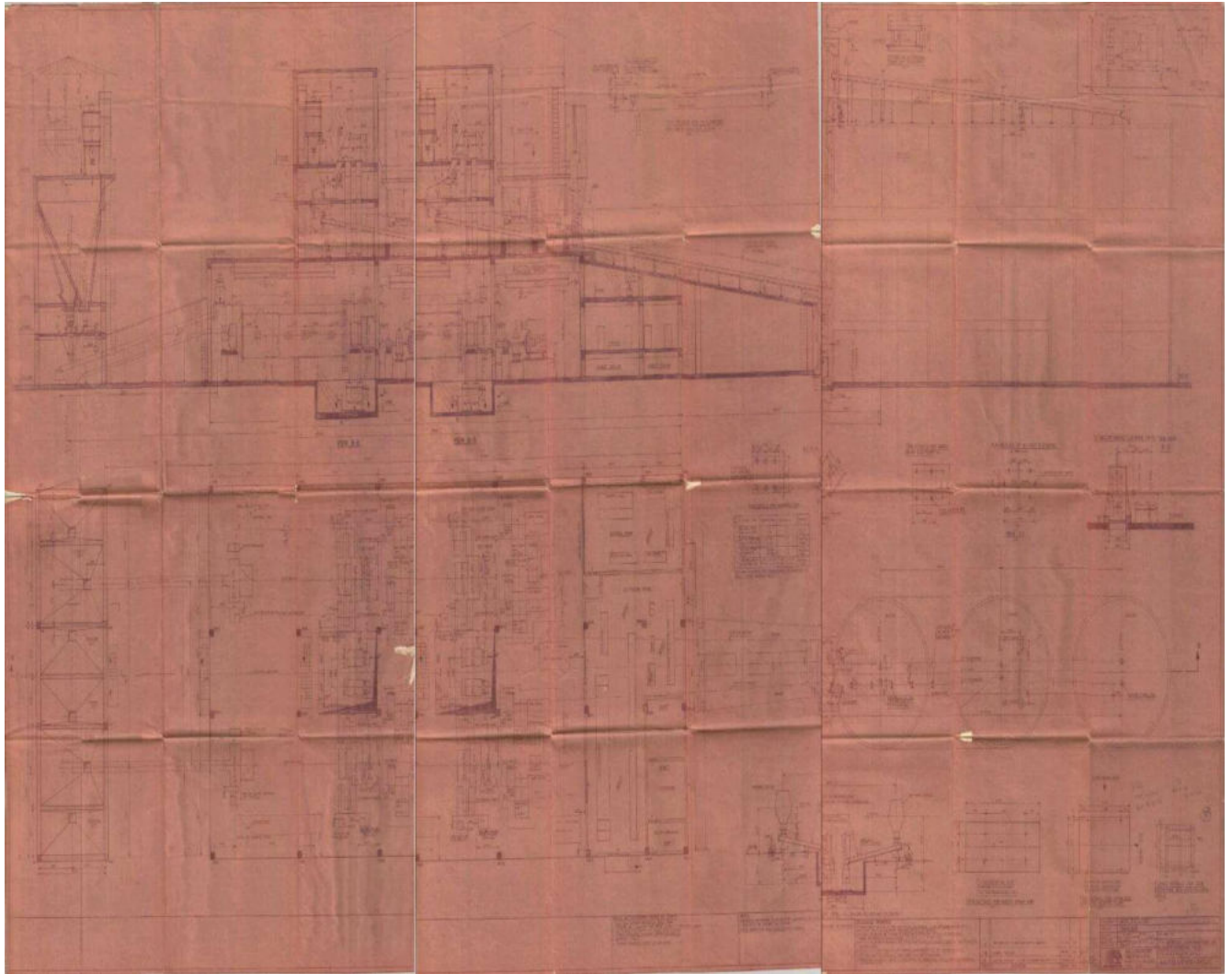
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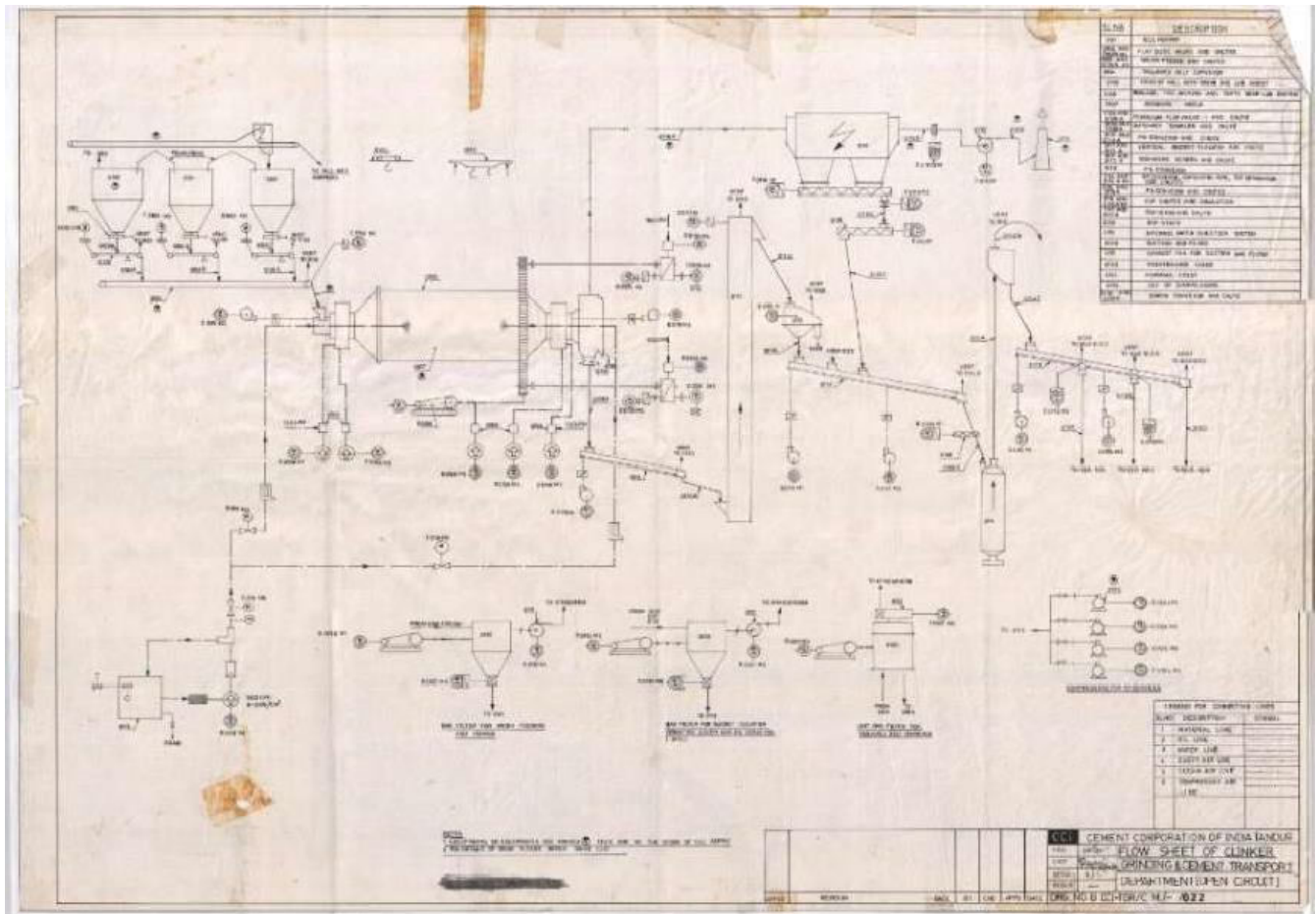
Signature

With company's stamp

Name and designation

Date :-





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CEMENT CORPORATION OF INDIA LIMITED
 FLOW SHEET OF CLINKER GRINDING & CEMENT TRANSPORT
 (DRAWING IN OPEN CIRCUIT)