Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)

Project Engineering Management

OPEN TENDER ENQUIRY FOR ELEVATORS FOR 1X 800 MW GSECL WANAKBORI STPP, UNIT No. 8

Ref No. : PE/PG/WAN/E-5127/2015 **Date: 21.03.2016**

CORRIGENDUM/ ADDENDUM- 9

Tender Enquiry no.: PE/PG/WAN/E-5127/2015
Date: 18.12.2015

EXTENDED DUE DATE
04 Apr 2016
02:00 PM

Ma'am/ Sir,

Kindly note that one (01) no. Mill area Elevator is added to BOQ of subject Tender Enquiry due to which due date of tender opening of above said package is hereby extended up to 04.04.2016 (02:00 PM).

Techno-commercial bid (Part-I) for offer(s) received by 02.00 PM on 04.04.2016 shall be opened at 03.00 PM on 04.04.2016. Bidders who have already submitted their offers are requested to submit the revised offer considering the total revised scope, in Tender Room formed behind reception desk of BHEL-PEM office, Noida.

Amendment-2 to Technical Specification (alongwith Annexures A, B, C & D and sketch (location of mill area elevator)) and Revised Price Format shall be uploaded on BHEL and BHEL-PEM websites alongwith this corrigendum for information of all prospective bidders.

Please ensure submission of offer by or before extended due date & time.

All bidders are requested to regularly visit BHEL websites www.bhel.com (Tender Notifications Section) OR www.bhelpem.com (http://www.bhelpem.com/Tenders_Rev/NewTenders.aspx). All future corrigendum(s), addendum(s), amendment(s), if any, for this tender shall be hosted only on above websites.

Thanking you,

Yours faithfully,
For and on behalf of BHEL

Amit Gaur 21/03/2016

AMIT KUMAR
(ENGINEER/Project Group-1-1)

Please reply to:

Amit Kumar-Engr./ Shri Prakash-Sr. Engr.
PEM/PGI-1
Power Project Engineering Institute Building
HRD & ESI Complex, Plot No. 25, Sector -16 A,
BHEL-PEM, Noida-201301 (U.P.)
Tel No. 0120-436 8831,-421 3621

CORRIGENDUM/ ADDENDUM – 09
ADDITIONAL REQUIREMENT OF ELEVATOR.

CL. NO. 2.0 Scope of equipment supply and services:-

Under above clause of technical specification stipulated at page no. 09 of 204, SECTION-C1 of Vol-II. In addition to the elevators mentioned from sl. no 1 to 2 in table, one more elevator has been added: as follows:

Sl. no	Building	No. of elevators	Capacity	No. of landings	Total rise	Type	Speed
3	Mill Area	1 No.	2000 Kg	***Ground + Eight (8).*** *Main landings at 0.0 m, 4.11 m, 22.75 m, 62.88 m & 73.9 m Last landing* *&* *Dummy landing at 12.0 m, 32.7 m, 44.10 m & 56.30 m*	73.9 M	**Conventional Type (Goods cum passenger elevator)**	0.5 M/s

Note:

1) Technical features of mill bay elevator shall be similar to TG building elevator as specified in various section of tender specification (PE-TS-408-502-A001). Further technical data sheet of mill elevator attached with this corrigendum-09 is also to be referred (Annexure-A to corrigendum-09).

2) In place of one set of mandatory spares asked for TG hall elevator a common set of mandatory spares to shall be quoted for TG building elevator and mill bay elevator as elevator capacity & type are similar for both the buildings.

3) CL. NO. 05, PAGE NO. 12 OF 204, SECTION-C1 of tender specification (PE-TS-408-502-A001), bidder may please read as follows:

   Elevators pit for TG building, Mill area and Service building shall be bare pit (i.e. pit without any RCC block / pedestal for buffer for CAR & CWT). Accordingly, MS structure & buffer required for elevator resting shall be provided by bidders.

4) Split air Conditioner: Higher of two i.e. Min 2 T capacity or Air conditioner capacity selected based on design criteria attached with this corrigendum (refer Annexure-B to corrigendum-09). Further successful bidder shall furnish the heat load calculation and capacity of air conditioner after considering all actual heat loads of elevator machine room during detail engineering stage for selection of final capacity of air conditioner.

   Split air conditioner is to be supplied for all the elevators covered in the specification and corrigendum based on above mentioned criteria.

5) Refer Annexure-C to corrigendum-09 for Civil input.
6) Refer Annexure-D to corrigendum-09 for Electrical load list.

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ROLLING SHUTTER (2.0MX2.5M)

DRAIL 1.0T

100

101

4825

4675

13500

S1R

FIRST ROW OF BOILER COLUMNS

4000

4000

SPACE FOR MILL AREA ELEVATOR

SPACE FOR BOILER CONSTRUCTION ELEVATOR

SPACE FOR CHP HANDLING VAULT

02

M

N

S19R

S2R

5250 (TYP)

CL. OF MILL 'A'

Amit Jaiswal 21/03/2016

ANNEXURE-A- CORRIGENDUM/ADDENDUM-09

GOODS CUM PASSENGER ELEVATORS FOR ~~STEAM GENERATOR &~~ MILL AREA

1.	Type of service	Goods-cum-Passenger type.
2.	Rated load on the elevator	2000 Kgs (minimum).
3.	Rated speed of lift	0.5 metres/sec.
4.	Total travel	To be recommended by the steam generator supplier for Owner's approval.
5.	Minimum number of floors to be served	~~To be decided by the Bidder.~~ However access to the following minimum Boiler landings shall be provided. Final number of landings shall be approved by Owner. a) Ground Floor. b) All burner operating floors/feeder floor c) Alternate soot blower levels. d) Tripper floor e) Any other landings where access is required.
6.	Car and landing door	Horizontal Sliding door.
7.	Entrance and platform size	As per IS-14665
8.	Drive Motor	A.C. Motor.
9.	Method of control	Microprocessor based AC variable voltage and variable frequency type.
10.	Flooring	MS chequered flooring. MS base & framework with shock absorber.
11.	Position of machine room	Directly above the lift shaft/Top of hoist way. M/C room shall be Air-conditioned.
12.	Design, construction and finish of the car	S.S. sheet fabricated hairline finish.
13.	Lighting and fan	One cabin fan, two recessed fluorescent lamp fittings suitable for operation on 240V, 50 c/s A.C. single phase power supply.
14.	Car entrance and landing door	S.S panel centre opening door horizontal sliding door.

Apni Jayen 21/03/2016

15.	Car Enclosure, Car door & Landing door	SS construction (Hairline finish)
16.	Method of operation of car and landing door	Power operated with automatic door opening and closing device.
17.	Operation	Automatic, simplex collective with and without attendant with provision for locking control in "Auto" or "Attendant" position. Key type lock switch shall be provided.
18.	Signals	Car position indicator in car, car position indicator at all floors, telltale lights at all floors, battery operated alarm bell and emergency light with suitable battery, battery charger and controls. Remote alarm shall be provided.
19.	Void	
20.	Other requirements	1. Plant Telephone Communication system shall be extended upto the elevator car, through EPABX in M/C room. 2. Suitable arrangement shall be provided to intimate unit control room during emergency in the form of audio-visual alarm. 3. Automatic rescue device. 4. If floor to floor distance between 2 floors is more than 10m, dummy landing should be provided in between these 2 floors. Dummy landing should have the connectivity with the staircase. 5. Hall Lantern & gong with scrolling indicator. 6. Scrolling indicator in car. 7. CFL lighting inside car 8. Overload sensing device & warning indicator. 9. Announcement of floor level.

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ANNEXURE- B- CORRIGENDUM/ADDENDUM-09

1. **Air Cooled Non Duct-able Split Air Conditioners**

Air Cooled Non Duct-able Split Air Conditioners shall be complete with hermetically sealed rotary compressors and air cooled condensers in the outdoor units with powder coated GI casing, built-in electrical items & supports and Indoor units housing dry panel type HDPE filters, cooling coils, evaporator fans with two speed drive motors, all encased in powder coated GI casings with swivelling type supply air grilles and decorative RA grilles and interconnecting refrigerant piping (duly insulated) between outdoor and indoor units and insulated drain piping, microprocessor based cordless remote control panel and 240V, single phase MCB with connecting cable, Voltage stabilizer, all supporting structure and refrigerant piping to suit as per actual site condition for each split unit. Split AC shall be minimum BEE Rating 5 Star.

Required no. of suitable capacity should be selected with minimum one unit as stand-by.

2. **DESIGN CRITERIA**

Outdoor design condition	:	**Summer**	: **43.3 Deg. C (DB), 25.6 Deg. C (WB)**
		Monsoon	: **32.2 Deg. C DB, 28.3 Deg. C WB**
		Winter	: **15.6 Deg. C DB, 10.6 Deg. C WB**
Inside design condition	:	**22.0 Deg. C ± 1 Deg. C DB & RH 55 % ± 5% for critical areas like control room, control equipment rooms, control room, UPS rooms, AVR rooms etc.**	
		24.0 Deg. C ± 1 Deg. C DB & RH not exceeding 60% for the non-critical areas like offices, conference room, SWAS room, battery charger room, telephone exchange etc. and the areas served by split / window air conditioners.	
		For service building the inside conditions shall be 24.0 Deg. C ± 1 Deg. C DB & RH not exceeding 60% in all seasons except winter. In winter a DB temperature of 22.0 Deg. C shall be maintained.	

Any equipment/process demanding any other (less) temperature shall be provided with.

Floor area	:	**As per actual layout**
Roof area	:	**As per actual layout**
Glass area	:	**As per actual layout. All windows in the Air Conditioned shall be provided with light coloured Venetian blind**
Lighting load	:	**21.4 Watt/sq.m (or actual) for all areas except shift charge engineer's room & technical building & administrative building where 16 watt per sq.m (or actual) shall be considered.**
Occupancy	:	**One (1) person in 12 sq.m (or actual)**
Equipment/Panel load	:	**As actual.**
Solar load	:	**Solar and transmission load through walls, roofs, doors, windows, glazing, floors etc. should be considered.**

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Plant sizing	:	Plant sizing is to be done by allowing 5% margin on total sensible and latent heat calculated on the basis of above design considerations. An overall margin of 10% on calculated cooling load shall be considered in selecting Plant capacity.

Bidder shall submit the detailed heat load calculation for justifying the selection of Split AC.

3. Energy recovery ventilator:

Fresh air system for the SWAS rooms and Conference room and other areas served by FCUs / Non Duct-able Split Air Conditioners, involves Energy Recovery Ventilators (ERV).

ERV shall consist of inlet fresh air fan motor set and room air exhaust fan motor set with individual ducts with grilles/cowls, a molecular sieve coated aluminium energy recovery wheel along with drive motor for exchange of heat between fresh air and room exhaust air, powder coated sheet metal casing insulated with 13 mm closed cell high density insulation, washable synthetic pre-filters, brush seals to minimize cross contamination, corded remote control panel. The ERV will be suitably mounted on the inside wall of the conditioned space.

4. Make of Air conditioner:

S. No.	Item / equipment	Sub Supplier/ Sub vendor
1	Split Air Conditioner	Voltas / Blue star / Carrier / Hitachi / LG

Note: Above sub-vendors are subjected to Customer approval during detailed engineering without any cost and time implication.

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CIVIL INPUT DETAILS.

Details of Elevator shaft well dimension as per layout is 4000 mm x 4000 mm is tabulated below. For location a sketch is attached with this annexure.

Building / Location	No. of elevator	Capacity of elevator (KG)	Type of elevator (Conventional / panoramic)	Type of service (Passenger Elevator / Passenger cum goods elevator / Goods cum passenger elevator)	Elevator shaft dimension (inside clear space over plaster) as per layout (C X D) mm		Entrance door size with type of door	Elevator shaft construction with	Remarks
					C	D			
Mill Area.	1 No.	2000 Kg	Conventional	Goods cum Passenger Elevator	4000 (ENTRANCE)	4000	1700 mm clear opening. Bi-parting horizontal sliding type door.	Structural shaft with cladding.	-

Note:

1. Min height above M/c Room slab till M/c Room ceiling (below secondary roof beams) shall be 4.00 m.

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LOAD TITLE	RATING (KW)		UNIT (U)/STN (S)	Nos.		VOLTAGE CODE*	FEEDER CODE**	EMER. LOAD (Y)	CONT.(C)/ INTT.(I)	STARTING TIME >5 SEC (Y)	LOCATION	BOARD NO.	CABLE		BLOCK CABLE DRG. No.	CONTROL CODE	REMARKS	LOAD No.
	NAME PLATE	MAX. CONT. DEMAND (MCR)		RUNNING	STANDBY								SIZE CODE	NOs				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ANNEXURE –D- CORRIGENDUM/ADDENDUM-09																		
MILL AREA / BUILDING ELEVATOR ***(IN ADDITION TO TG BUILDING ELEVATOR AND SERVICE BUILDING ELEVATOR LOAD LIST).***																		
ELEVATOR MOTOR		22	S	1	0	D	S	-	C		Mill area / building Elevator Machine room							
MIN 2 T A/C FOR MILL AREA M/C ROOM AND LIGHTING FOR ELEVATOR M/C ROOM & SHAFT AND MAINTENANCE AND INSTALLATION REQUIREMENT.		10	S	1	0	D	S	-	C		Mill area / building Elevator Machine room							

Note:

1) **No other single phase or 3 phase supply shall be provided for elevator erection / operation etc.**
2) **Only two (3 phase) supply feeders per elevator shall be provided, one feeder shall be dedicated to elevator motor and other 3 phase supply feeder shall be provided by BHEL for air conditioner, machine room and shaft lighting and maintenance / installation requirement. Bidder to consider CT for stepping down the voltage as per their requirement.**

NOTES: 1. COLUMN 1 TO 12 & 18 SHALL BE FILLED BY THE REQUISITIONER (ORIGINATING AGENCY); REMAINING COLUMNS ARE TO BE FILLED UP BY PEM (ELECTRICAL)

2. ABBREVIATIONS : * VOLTAGE CODE (7):- (ac) A=11 KV, B=6.6 KV, C=3.3 KV, D=415 V, E=240 V (1 PH), F=110 V (DC): G=220 V, H=110 V, J=48 V, K=+24V, L=-24 V

: ** FEEDER CODE (8):- U=UNIDIRECTIONAL STARTER, B=BI-DIRECTIONAL STARTER, S=SUPPLY FEEDER, D=SUPPLY FEEDER (CONTACTER CONTROLLED)

भेल/BHEL	LOAD DATA (ELECTRICAL)	JOB NO.	408	ORIGINATING AGENCY		PEM (ELECTRICAL)
		PROJECT TITLE	1X800 MW WANAKBORI STPP.	NAME		DATA FILLED UP ON
		SYSTEM / S	ELEVATOR- MILL AREA	SIGN.		DATA ENTERED ON
		DEPTT. / SECTION	MAUX / MH	SHEET 1 OF 1	REV. 00	DE'S SIGN. & DATE

21/03/2016