

**TENDER
SPECIFICATION
BHEL PSSR SCT 2233**

FOR

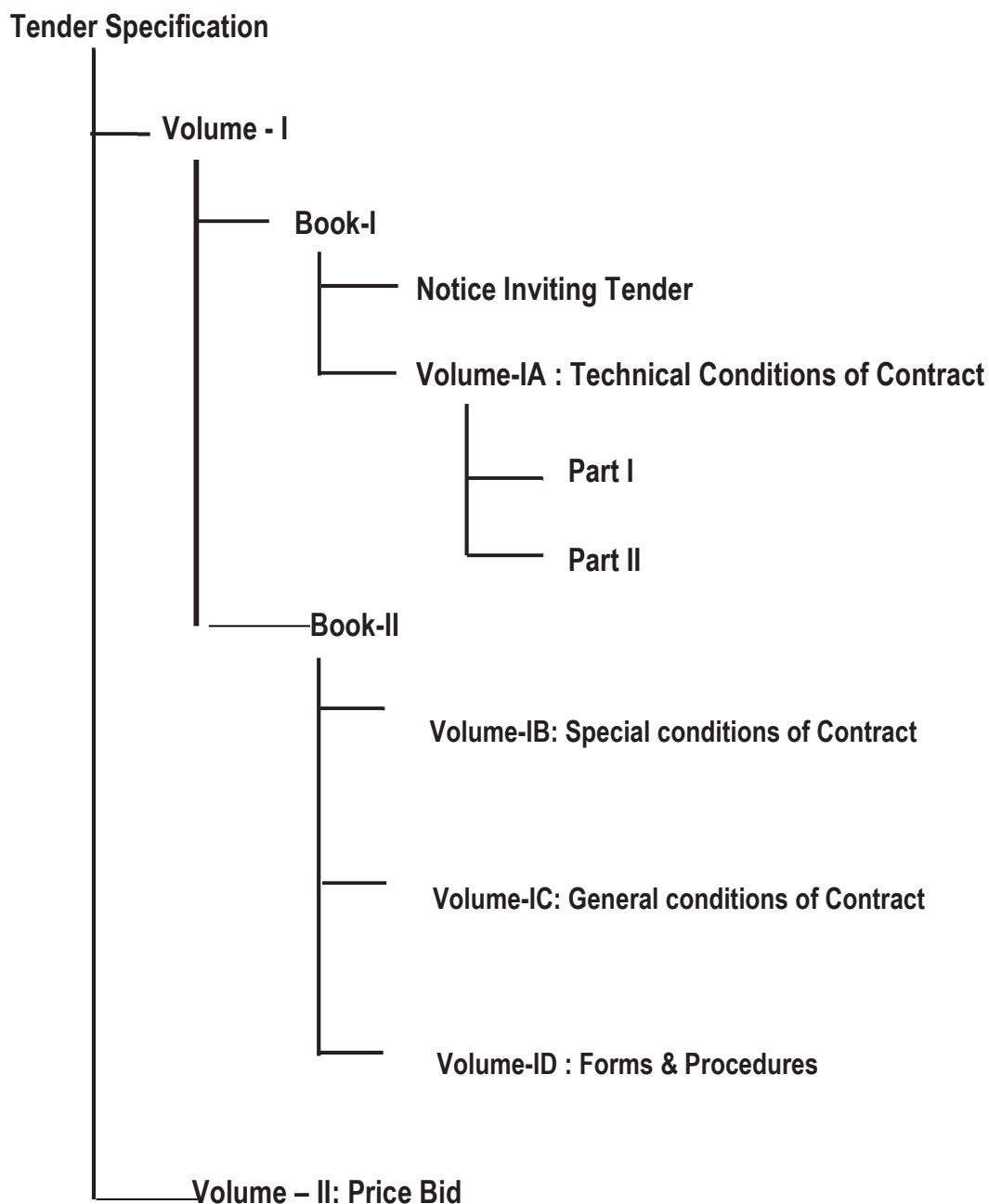
Erection, Testing, Commissioning, Trial Operation & PG Test of balance works of Pipe Conveyor system from New TP 2 (outside plant boundary of Ennore SEZ) to Crusher House (inside Ennore SEZ) of 2X660MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamilnadu.

**PRICEBID
VOLUME –II**



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector – Southern Region
BHEL Integrated Office Complex, TNEB Road
Pallikaranai, Chennai -600100

TENDER SPECIFICATION CONSISTS OF



PRICE BID

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PRICE BID

PART A

Instruction to Bidders:

1. Bidders shall only quote “Total Lumpsum amount” in the format given in the price bid. The “Total Lumpsum amount” is for the entire scope of work. Payment will be as per actual quantity executed as certified by BHEL Engineer.
2. Tenderers are requested to affix their company seal and authorized signature in all pages.
3. Bidders shall quote ‘Total Amount’ in the format enclosed as a separate Excel File in BHEL NIC e-Procurement portal for the subject tender and upload the same under ‘Packet details - > Tender covers -> Finance '(Cover Type Description – Price Bid)’ and same shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope of work defined in specification and in accordance with terms & conditions of the tender. Any other entry elsewhere in the price bid shall be treated as Null and Void. Quoting of rates in any other form/ formats will not be entertained.
4. The above mentioned ‘Total amount’ is for the entire Bill of Quantity (BOQ) given in Part -C of the Price Bid.
5. BHEL has pre-fixed the weightages for the amount of individual items of Bill of Quantity with respect to the ‘Total Amount’ in Part-C.
6. Based on the pre-fixed weightages, the amount for the individual items of the Bill of Quantity shall be arrived at. This amount shall be rounded off to the nearest rupee.
7. Based on the quantities of individual item and the amount arrived in SI No: 6 above, unit rate of individual items shall be derived. This unit rate shall be rounded off to four decimal places.
8. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.7 above.

Part C : Bill of Quantities

Tender Specification for Erection, Testing, Commissioning, Trial Operation & PG Test of balance works of Pipe Conveyor system from New TP 2 (outside plant boundary of Ennore SEZ) to Crusher House (inside Ennore SEZ) of 2X660MW Ennore SEZ

at 2 X 660 MW - ENNORE SEZ SUPERCRITICAL THERMAL POWER PROJECT AT ASH DYKE OF NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
1.0	Supply of structures related to Galleries & tail end trolley station as per the drawing provided by BHEL/FLS	MT	301	.2152919
2.0	Assembly of structures related to Galleries & tail end trolley station as per the drawing provided by BHEL/FLS	MT	303	.0632226
3.0	Erection of structures related to Galleries & tail end trolley station as per the drawing provided by BHEL/FLS	MT	688	.1429083
4.0	Assembly, Erection of Other Structure :(Take-up seal plate, Ladder, Platform, Cross Over, Hoist Maintenance Platforms, Chute Supports & Brake Support Frame)	MT	28	.0059213
5.0	Erection of technological structures for conveyors.: (Base frames, take-up weight alone in tower, Chutes, Skirt boards,Pulley Frames, Deck Plates,Tail & head stringers Handrails, Skirt board access ladder, Sheave & brackets etc) (Handrails here refer to the the rails which are mounted on the standard module assembly.)	MT	160	.0309787
6.0	Erection of technological structures for conveyors. (Std module) Complete Idler assemblies (on carrying side as well as return side) with brackets and all the fixing accessories as per the approved GA drawing.	MT	545	.1055213
7.0	Erection of Chequer Plate	MT	40	.0103764
8.0	Erection of Hand Rail	MT	27	.0068518
9.0	Erection of conveyor equipments. (Gearbox Motor, Pulleys, Coupling,Bearing, Plummer block, Scrapers,Winch assembly. Electric hoist,Brakes, Trolley etc)	MT	140	.0275012
10.0	Belt laying for Pipe conveyor including arrangement of wire rope for belt pulling, winch machine, sheave pulleys etc. and other tools & tackles required for laying. (- 24 nos of belt drums)	MT	485	.1458708
11	Erection of counter weight	MT	30	.0063161

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
12.0	Dismantling and Re-erection of dismantled items under bidder's scope of work due to any manufacturing defect or contingency requirement (as per BHEL engineer instruction) including lifting to required position, aligning in position, tack welding (if applicable), final welding (if applicable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc to meet the system requirement. Note: No payment shall be made for re-erection due to defects in workmanship, wrong erection and mishandling of items by bidder.	MT	50	.0150852
13.0	Supply and Erection of roof sheeting as per the drawing & specification	Sq MTR	2,222	.0271496
14.0	Supply and Erection of cladding sheeting as per the drawing & specification	Sq MTR	1,321	.0167615
15.0	Supply and Erection of transparent sheeting as per the drawing & specification	Sq MTR	100	.0016636
16.0	Operation & Maintenance (O&M) of equipment till handing over to customer.	Shifts	300	.032351
17.0	Miscellaneous supplies & erection	--		
17.A	Foundation Bolts	--		
17.A1	M16X320 Lg	Nos	26	.0002077
17.A2	M20X470 Lg	Nos	16	.0001639
17.A3	M24X820 Lg	Nos	84	.0008842
17.B	Consumables	--		
17.B1	MINERAL OIL ISO VG 320	Litres	1,080	.0029843
17.B2	MINERAL OIL EP-90	Litres	30	.000079

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
17.B3	MINERAL OIL ISO VG 68	Litres	40	.0001053
17.B4	INDIAN OIL (EP-90) ISO VG 320	Litres	44	.0001158
17.B5	Grease	Kgs	313	.0007413
17.B6	Supply and Application of Touchup Paint Neromastic Primer	Litres	4,500	.0198787
17.B7	Supply and Application of Touchup Paint MIO (Mid coat)	Litres	3,250	.0137459
17.B8	Supply and Application of Touchup Paint Finish Paint	Litres	2,750	.0111142
17.B9	Supply and Application of Thinner	Litres	2,100	.0028225
17.C	Supply & Erection of Coupling Guards,Pulley Guards Take-Up guards	MT	11.5	.0102683
17.D	Skirt sealing Rubber	--		
17.D1	Rubber curtain (DCH8) Drg. No. 10469191 (Sh 7 of 24),PN 9048730	Set	1	.0000251
17.D2	Rubber (DC10) Drg. No. 10469191 (Sh 17 of 24),PN 9048795	Set	1	.0000251
17.D3	Seal rubber (SR1) Drg. No. 10469191 (Sh 22 of 24),PN 9048819	Set	2	.0000502
17.D4	Seal rubber (SR2) Drg. No. 10469191 (Sh 23 of 24) PN 9048816	Set	4	.0001004
17.D5	Seal rubber (SR3) Drg. No. 10469191 (Sh 24 of 24)PN 9048821	Set	2	.0000502
17.E	Bolt, nuts, washers, fasteners, U bolts (Indicative list as per BOQ chapter)	Lot	1	.0038066
17.F	Belt Supporting Rollers with frame (as per attached drg)	--		

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
17.F1	Belt Supporting Rollers	Nos	28	.0011158
17.F2	Frame for 3- roll Belt Supporting Rollers	MT	8	.0057446
17.F3	Frame for single roll Belt Supporting Rollers	MT	4	.0028723
17.G	Finger Rollers with brackets:as per attached drgs.	Sets	12	.0058424
17.H	Bearings with sleeves for Pulleys as below (shall be from approved make, refer drg) :	--		
17.H1	Bearing type 23164 BEA-XL-K-MB1 + H3164 HG	Nos	2	.0029512
17.H2	Bearing type 23152 BE-XL-K + H3152-XHG	Nos	2	.0029512
17.H3	Bearing type 22222 E1-XL-K / H322	Nos	2	.0029512
17.I	Supply of Belt Vulcanising Kits for PC Belt ST 800, 2200mm Wide, 8/6 FR, LRR as per OEM Forech recommendation and Belt splicing, joining & Hot vulcanizing including arrangement of jointing agency, vulcanizing machine, DG set and all tools and tackles, for belt	Nos	30	.0173692
18.0	Electrical, C&I works	--		
18.A	Power Cables	--		
18.A1	3C x 16 Sq.mm	Mtrs	560	.000109
18.A2	3C x 240 Sq.mm	Mtrs	1,680	.0008858
18.A3	3C x 300 Sq.mm	Mtrs	1,540	.0008685
18.A4	3C x 185 Sq.mm	Mtrs	280	.0001445

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
18.A5	1C x 120 Sq.mm	Mtrs	1,680	.0005069
18.A6	1C x 150 Sq.mm	Mtrs	1,120	.0004137
18.A7	3C x 2.5 Sq.mm	Mtrs	2,240	.0003537
18.B	Control & Signal cables	--		
18.B1	2P X 1.5 Sq.mm	Mtrs	3,475	.0003625
18.C	FO Cables - Pipe conveyor VFD-main PLC at Feed end to RIO panel at discharge end	Mtrs	9,000	.0018271
18.D	Cable Trays	--		
18.D1	FRP Perforated Tray - 50mm WIDTH	Mtrs	2,170	.0014073
18.D2	FRP Ladder Tray - 150mm WIDTH	Mtrs	6,510	.0058739
18.E	Earthing Accessories	--		
18.E 1	50x6mm HOT DIP GI FLAT	Mtrs	2,464	.0021538
18.E 2	25x3mm HOT DIP GI FLAT	Mtrs	70	.0000908
18.E 3	8 SWG GS WIRE	Mtrs	2,800	.0004316
18.E 4	M8 Ring type Al Lug for 8 SWG wire	Nos	2,800	.0005158
18.F	Welding Sockets	--		
18.F1	415V Welding Sockets	Nos	1	.0000254

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
18.F2	240V Welding Sockets	Nos	1	.0000179
18.G	Lighting Cables	--		
18.G1	5C X 10 Sq.mm Al cable	Mtrs	8,750	.0041943
18.G2	3C X 2.5 Sq.mm flexible Cu cable	Mtrs	1,050	.0004402
18.H	Local push button station - DOL Type for all conveyors & cooling motors of pipe conveyors	Nos	6	.000141
18.I	Control Junction boxes	Nos	12	.0001861
18.J	Lighting JB	Nos	400	.003346
18.K	35W LED Fixtures	Nos	400	.0036468
18.L	Instruments	--		
18.L1	Pull cord switch	Nos	140	.0011185
18.L2	Belt sway switch	Nos	16	.0002226
18.L3	Zero speed switch	Nos	2	.0000346
18.L4	Chute block switch	Nos	4	.0001105
18.L5	Overfill detection switch	Nos	4	.0001293
18.L6	Hooters	Nos	2	.0000545
18.L7	Motor RTD	Nos	48	.0012632

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
18.M	VFD Transformer	--		
18.M1	1500KVA Distribution transformer - 2700mm L x 2750mm D x 2900mm H â 2 NO'S	Nos	2	.0024743
18.M2	750KVA Distribution transformer - 2450mm L x 2600mm D x 2450mm H â 2 NO'S	Nos	2	.0021359
18.N	VFD Panel with PLC for Pipe Conveyor	--		
18.N1	Pipe conveyor VFD panel at head end START/DELTA PANEL (Dimension -1200 (L) x 2250 (H) x 800 (D)) â 2 NO'S	Nos	2	.000423
18.N2	Pipe conveyor VFD panel at head end MASTER (Dimension - 2600 (L) x 2250 (H) x 800 (D)) â 2 NO'S	Nos	2	.000423
18.N3	Pipe conveyor VFD panel at head end SLAVE-1 (Dimension - 3000 (L) x 2250 (H) x 800 (D)) â 2 NO'S	Nos	2	.000423
18.N4	Pipe conveyor VFD panel at tail end SLAVE-2 (Dimension - 2600 (L) x 2250 (H) x 800 (D)) -2 NO'S	Nos	2	.000423
18.N5	Pipe conveyor VFD LCS (Dimension - 300 (L) x 350 (H) x 150 (D)) â 2 NO'S	Nos	2	.0000846
TOTAL Weightage				0.9999999