

# **TENDER SPECIFICATION BHEL PSSR SCT 2057**

**FOR**

**Balance structural works of coal handling plant and ash  
handling plant area and Non plant structures of Unit-1&2  
Package-I at 2x660MW Udangudi STPP.**

**PRICE BID  
VOLUME –II**



**BHARAT HEAVY ELECTRICALS LIMITED**

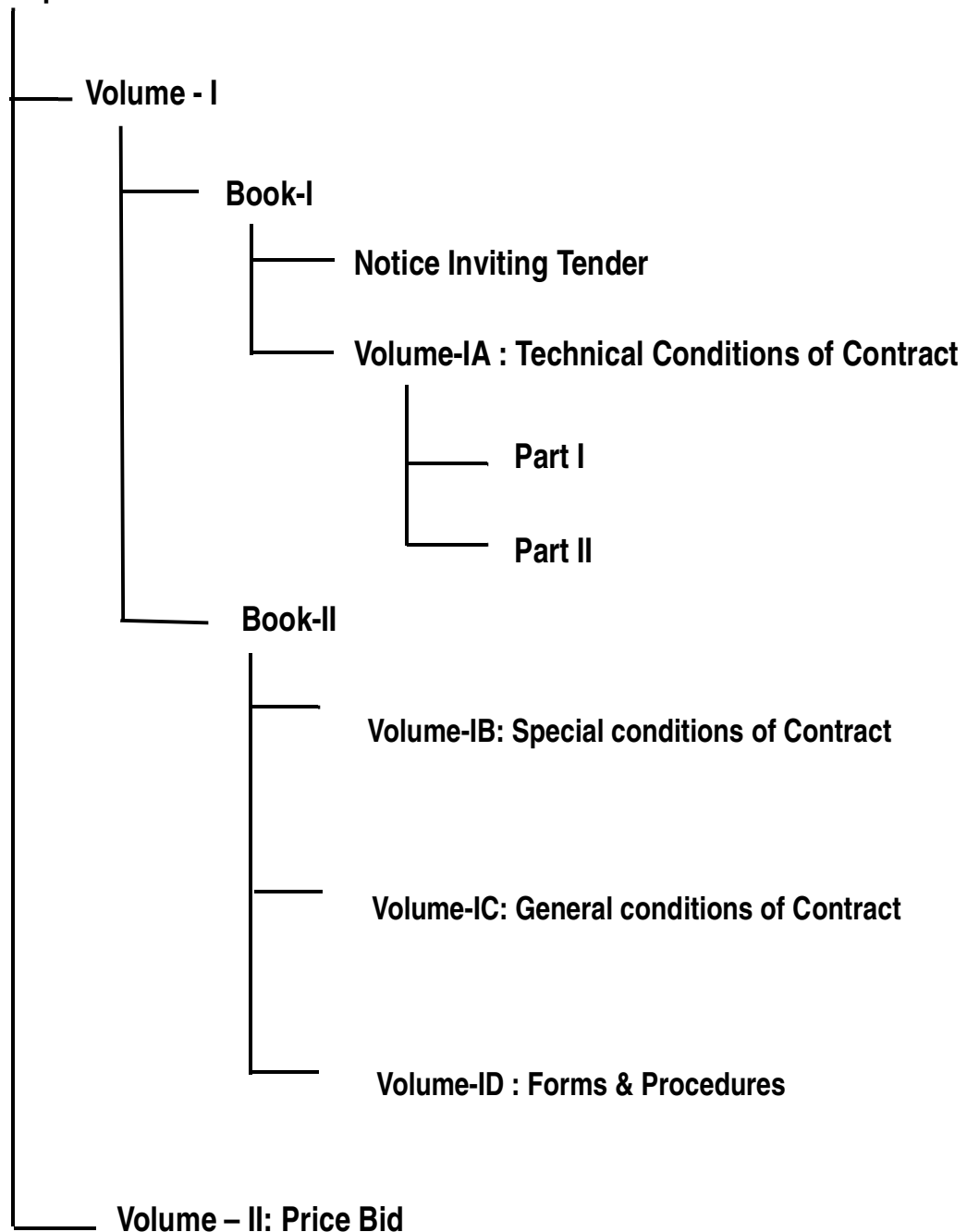
(A Government of India Undertaking)

Power Sector – Southern Region

Integrated Office Complex, 26/4, Velachery-Tambaram Main Road,  
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**TENDER SPECIFICATION CONSISTS OF**

**Tender Specification**



## PRICE BID

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### **PART A**

#### **Instruction to Bidders:**

1. The quantity indicated in the BOQ / Price bid (Part C) is approximate only and is liable for variation. 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 BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

### at Udangudi Thermal Power Station

| 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 |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------|--------------------------------------------------------------------------------------------|
| 802.0   | Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand ) using non shrink admixture etc. all Complete.                                                                                                                                                                                                                                                                                                                      | CUM                 | 13   | .0004513                                                                                   |
| 803.0   | Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips ) using non shrink admixture as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor). | CUM                 | 19   | .0006327                                                                                   |
| 804.0   | Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).                                                                              | CUM                 | 5    | .0004528                                                                                   |
| 805.0   | Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent as per specification, drawing and direction of engineer-in-charge.(Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).                                                                             | CUM                 | 54   | .0082366                                                                                   |
| 2300.0  | STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.                                                                                                                                                                                                                      | --                  |      |                                                                                            |

**Part C : Bill of Quantities**

**Tender Specification BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

**at Udangudi Thermal Power Station**

| 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 |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------|
| A2301        | Collection of material from BHEL stores, Transportation, Fabrication, erection and alignment of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of zinc-silicate primer (one coat at shop and one coat after erection, Dry film thickness of each primer coat shall be 50 microns.), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 200 C for welding over 20 mm and upto 40 mm & 660 C for welding over 40 mm and upto 63 mm & 1100 C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL (BHEL to supply steel free of cost). | --                  |        |                                                                                            |
| A2301<br>(a) | Fabrication Fiup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MT                  | 10,297 | .1143959                                                                                   |

### Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

#### at Udangudi Thermal Power Station

| 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 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------|
| A2301<br>(b) | Fabrication and welding                                                                                                                                                                                                                                                                                                                                                         | MT                  | 10,297 | .1372751                                                                                   |
| A2301<br>(c) | Primer painting                                                                                                                                                                                                                                                                                                                                                                 | MT                  | 12,651 | .0281096                                                                                   |
| A2301<br>(d) | Erection placement                                                                                                                                                                                                                                                                                                                                                              | MT                  | 13,221 | .1175044                                                                                   |
| A2301<br>(e) | Erection Alignment                                                                                                                                                                                                                                                                                                                                                              | MT                  | 13,465 | .0897548                                                                                   |
| A2301<br>(f) | Scrap cutting and completion of work                                                                                                                                                                                                                                                                                                                                            | MT                  | 13,699 | .0304382                                                                                   |
| B2302        | Extra over ST No.2301 for blast cleaning by shot/metal blasting of steel structures to near white metal surface (Sa 2 ½) as per SIS05-5900).                                                                                                                                                                                                                                    | MT                  | 12,651 | .1197896                                                                                   |
| 2303.<br>0   | Extra over ST NO. 2301 for providing and application of two coats of primer consisting of chemical resistant epoxy resin and hardener (Minimum 1 Kg of primer mix shall be consumed for priming of 4 to 5 m2 area of surface) instead of primer coat of red oxide zinc-chromate, including touch up painting etc. all complete.                                                 | MT                  | 75     | .0000156                                                                                   |
| 2304.<br>0   | Extra over ST No. 2301 for providing and applying two coats of synthetic enamel paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete. | MT                  | 85     | .0003591                                                                                   |

## Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

### at Udangudi Thermal Power Station

| 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 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------|
| A2305     | Providing and applying two coats of High built epoxy finish paint of approved brand over steel sections already having primer coats. Dry film thickness of each finish coat shall be 90 microns. The undercoat and finish coat shall be of different tint to distinguish the same from finish paint. The total dry film thickness with primer shall not be less than 300 microns. The item includes protection, cleaning, scaffolding, touch-up painting etc. all complete as per specification. | --                  |        |                                                                                            |
| A2305 (a) | First and second coat of epoxy paint after completion of fabrication, at ground level                                                                                                                                                                                                                                                                                                                                                                                                            | MT                  | 12,651 | .0405013                                                                                   |
| A2305 (b) | Final coat of epoxy paint after completion of erection                                                                                                                                                                                                                                                                                                                                                                                                                                           | MT                  | 13,699 | .0657845                                                                                   |
| 2306.0    | Providing, laying and clamping of crane rails over the crane girder at all elevations as per IS 3443 including all fixtures, clamps, testings etc. all complete as per drawing and specification.                                                                                                                                                                                                                                                                                                | MT                  | 14     | .0023968                                                                                   |
| 2307.0    | Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel having minimum galvanisation conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.                                | --                  |        |                                                                                            |
| a         | Minimum galvanisation of 610 g/sqm                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MT                  | 331    | .0550837                                                                                   |
| b         | Minimum galvanisation of 900 g/sqm                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MT                  | 5      | .0009307                                                                                   |
| 2311.0    | Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade `C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.                                                                                                                                                                                                                                           | KG                  | 10,505 | .0013932                                                                                   |

## Part C : Bill of Quantities

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### at Udangudi Thermal Power Station

| 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 |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------|
| 2312.0  | Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade `C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class `8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.                                                                                                                                                                                                                                           | KG                  | 54,780 | .0079569                                                                                   |
| 2313.0  | Dismantling of steel structure, lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions ( weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.                                                                                                                                             | MT                  | 73     | .0010963                                                                                   |
| 2314.0  | Addition to, alterations in and/or modifiction of Erection Marks including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:                                                                   | --                  |        |                                                                                            |
| a       | In erected position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MT                  | 57     | .0019557                                                                                   |
| b       | In fabrication yard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MT                  | 57     | .001615                                                                                    |
| 2315.0  | Re-erection of dismantled fabricated structural steel members including carriage of modified Erection Marks from the field fabrication shop to erection site, lifting to required posiion, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismnatled members, re-alignment of adjacent connected members(weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete. | MT                  | 23     | .0004967                                                                                   |

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**at Udangudi Thermal Power Station**

| 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 |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------|--------------------------------------------------------------------------------------------|
| 2318.0  | Providing and fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of $\pm 50$ mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads. | --                  |      |                                                                                            |
| a       | 20 Tons                                                                                                                                                                                                                                                                                                                                                                   | EACH                | 23   | .000611                                                                                    |
| b       | 25 Tons                                                                                                                                                                                                                                                                                                                                                                   | EACH                | 31   | .0009286                                                                                   |
| c       | 40 Tons                                                                                                                                                                                                                                                                                                                                                                   | EACH                | 39   | .0012563                                                                                   |
| d       | 50 Tons                                                                                                                                                                                                                                                                                                                                                                   | EACH                | 34   | .0011721                                                                                   |
| e       | 60 Tons                                                                                                                                                                                                                                                                                                                                                                   | EACH                | 36   | .0013223                                                                                   |
| f       | 100 Tons                                                                                                                                                                                                                                                                                                                                                                  | EACH                | 41   | .0016913                                                                                   |
| g       | 130 Tons                                                                                                                                                                                                                                                                                                                                                                  | EACH                | 19   | .0008696                                                                                   |
| h       | 200 Tons                                                                                                                                                                                                                                                                                                                                                                  | EACH                | 15   | .0007544                                                                                   |
| 2319.0  | Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium stripped edges as sealing below top of bunker and bottom of tripper floor to avoid the coal dust nuisance all complete.                                                                                                               | RM                  | 50   | .0002786                                                                                   |
| A2320   | Each tower shall be provided with step bolts not less than 16 mm diameter and 175 mm long spaced not more than 450 mm apart, staggered on faces on one leg extending from about 0.5 meters above ground level to the tower. The step bolt shall conform to IS:10238.Ladders on towers with lighting appliances shall be provided with safety guards.                      | MT                  | 1    | .000153                                                                                    |

**Part C : Bill of Quantities**

**Tender Specification BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

**at Udangudi Thermal Power Station**

| 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 |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------|--------------------------------------------------------------------------------------------|
| 2323.0  | Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RM                  | 40   | .0000706                                                                                   |
| 2324.0  | Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RM                  | 51   | .0000733                                                                                   |
| 2325.0  | Conducting ultasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SQM                 | 40   | .0000271                                                                                   |
| 2326.0  | Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RM                  | 41   | .0000469                                                                                   |
| 2327.0  | Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RM                  | 4    | .000004                                                                                    |
| A2329   | Design, supply, fabrication, erection of stoplog gates,sluice gates etc in CW Pumps/Sea water Intake/Outfall pumps made out of SS 316L with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, blasting(SA 2 1/2) to near white metal surface, along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete as per approved drawings. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of stainless steel including embedments shall be considered for payment purpose).( supply of stainless steel is in the scope of contractor only) | MT                  | 113  | .0782002                                                                                   |

**Part C : Bill of Quantities**

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**at Udangudi Thermal Power Station**

| 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 |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------|--------------------------------------------------------------------------------------------|
| B2329   | Design, supply, fabrication, erection of stoplog gates in CW/ACW Pumps/Sea water intake & outfall pumps with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and anti-corrosive Hi-build epoxy coating system of DFT 260 microns, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose).<br>(SS component paid separately under BOQ item no A2331) | MT                  | 15   | .0028858                                                                                   |
| A2331   | SS component mentioned under ST No. A2329.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MT                  | 2    | .0011835                                                                                   |
| A2332   | Supplying, fabricating, erecting in position and testing / examining bolted and / or welded structural steel work for stationary coarse screens made out of stainless steel SS 316L mesh over SS 316L frame including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, fittings etc all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MT                  | 104  | .0675101                                                                                   |
| B2332   | Supplying, fabricating, erecting in position and testing / examining bolted and / or welded structural steel work for stationary fine screens made out of stainless steel SS 316L mesh over SS 316L frame including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, fittings etc all complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MT                  | 19   | .0123336                                                                                   |
| 2334a   | Supply Transporation and erection/Fixing, welding of MS Flat Toe guard of size 100mm x 8mm and shall be provided along the railing for all steel platforms/landings and RCC staircases as per drawings and specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MT                  | 7    | .0008757                                                                                   |
| 2334b   | Supply Transporation and erection/Fixing, welding of MS Flat Toe guard of size 65mm x 8mm and shall be provided along the railing for all steel platforms/landings and RCC staircases as per drawings and specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MT                  | 4    | .0005004                                                                                   |

**Part C : Bill of Quantities**

**Tender Specification BHEL:PSSR:SCT:2057 for Balance structural works of coal handling plant and ash handling plant area and Non plant structures of Unit-1&2 Package-I at 2x660MW Udangudi STPP.**

**at Udangudi Thermal Power Station**

| <b>Ref.No.</b>         | <b>Description</b>                                                                                                                                                      | <b>Unit of Measurement</b> | <b>Qty.</b> | <b>Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount</b> |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|---------------------------------------------------------------------------------------------------|
| 2335.0                 | Supply & welding of 10mm Sq bar to the chequered plate walk way at all conveyor galleries in CHP including all consumables as per the directions of engineer in charge. | MT                         | 5           | .0006255                                                                                          |
| <b>TOTAL Weightage</b> |                                                                                                                                                                         |                            |             | 1.0                                                                                               |