

**TENDER NO: PSER:SCT:SAL-C2066:20**

**VOLUME -III**

**PRICE SCHEDULE-REV-00**

**FOR**

**CIVIL WORK FOR INSTALLATION OF DCFS ABSORBER OVER EXISTING PILE CAP  
AND ASSOCIATED CIVIL WORKS AT 3X250 MW BONGAIGAON TPP, SALAKATI,  
ASSAM.**

**BHARAT HEAVY ELECTRICALS LIMITED**  
**( A GOVT. OF INDIA UNDERTAKING )**  
**POWER SECTOR – EASTERN REGION**  
**PLOT NO. – 9 / 1, DJ – BLOCK,**  
**SECTOR – II, KARUNAMOYEE,**  
**SALT LAKE CITY,**  
**KOLKATA – 700091.**

**VOLUME-III**  
**PRICE SCHEDULE, REV-00**

**JOB: Civil Work for Installation of DCFS Absorber over Existing Pile Cap and Associated Civil Works at 3x250 MW Bongaigaon TPP, Salakati, Assam.**

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**PREAMBLE**

<b>SL NO</b>	<b>DESCRIPTION</b>
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned any where in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclose with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ( $\pm 15\%$ ) of the awarded price as per LOI.
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based service contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. The rates of unit rate/optional items shall remain valid till execution of the order, if the job/work is awarded to the bidder.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil & Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No. (i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

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JOB: Civil Work for Installation of DCFS Absorber over Existing Pile Cap and Associated Civil Works at 3x250 MW Bongaigaon TPP, Salakati, Assam.			
TENDER NO - PSER:SCT:SAL-C2066:20			
SCH-1 : TOTAL PRICE			
SL NO	DESCRIPTION	PRICE SCHEDULE REF	TOTAL PRICE (IN INR)
1.0	TOTAL PRICE FOR CIVIL WORK FOR INSTALLATION OF DCFS ABSORBER OVER EXISTING PILE CAP AND ASSOCIATED CIVIL WORKS AT 3X250 MW BONGAIGAON TPP, SALAKATI, ASSAM.	SCH 2 - PRICE BREAK UP	<u>IN FIGURES:-</u>  <u>IN WORDS:-</u>
2.0	NON-SCHEDULE ITEM For items not covered in Schedule 2, quote % above or % below or at par the CPWD Schedule of rates 2018		
a)	Rate of complete item		% above / % below/ at par of CPWD Rate Schedule 2018
b)	Rate of supply of material at site only		% above / % below/ at par of CPWD Rate Schedule 2018
c)	Rate for execution complete excluding supply of materials		% above / % below/ at par of CPWD Rate Schedule 2018
NOTE			
1.0	Bidder shall quote total price for SCH-2- Part only at Sl No. 1 above. All other amounts / rates of each item of works in respective schedules / parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place / schedule of Volume-III will not be reckoned & will stand null & void.		
2.0	Bidder to note that total price at Sl No. 1 above shall be considered for evaluation & awarding. As such total price should be complete in all respect for the full scope defined and considering all terms and conditions.		
3.0	Bidder's quoted total price of SCH-2 at Sl. No 1 above, shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules / parts. As such, bidder shall not indicate / quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.		
4.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items and its quantity after rounding off to upto 2 decimal places. However, RA bill payment shall be done after rounding off the gross amount to two decimal points. Any adjustment, if required, due to such methodology, will be effected / adjusted in final bill.		
5.0	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 Sl No.3 above.		
6.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.		
7.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.		
8.0	The quoted price shall be excluding GST including freight on FOR site basis.		
9.0	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates worked out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.		
10.0	For payment of non schedule items, the rate shall be derived from CPWD Schedule - 2018.		

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**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
	<b>100 EARTH WORK</b>			
	<b>Earth work:</b> Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following:			
101	<b>Earth work in excavation in all types of soil</b> including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	1953	0.00271372
b	Depth exceeding 2 m but not exceeding 4 m	CUM	88	0.00014557
c	Depth exceeding 4 m but not exceeding 6 m	CUM	10	0.00001805
102	Extra over ST No. 101 for dewatering of ground water by well point method as per IS 9759.	CUM	10	0.00002030
107	<b>Earthwork in Back filling</b> upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with <i>selected materials from compulsorily excavated earth</i> available within a lead upto 1 Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a1	Each layer compacted so as to achieve at least 85% maximum dry density as per IS-2720 (Part-VII)	CUM	834	0.00062959
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5	0.00000451
108	<b>Earthwork in Back filling</b> upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with <i>selected earth directly from excavation</i> within a lead upto 1Km and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following:			
a1	Each layer compacted so as to achieve at least 85% maximum dry density as per IS-2720 (Part-VII)	CUM	5	0.00000338
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5	0.00000415
109	Extra over ST No. 101,107 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.	CUM	10768	0.0016193
110	<b>Earth work in backfilling</b> upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness so as to achieve required compaction with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, testing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer for the following:			
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	50	0.00011279
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	5	0.00008647
A112	Providing and laying rubble soling with specified sizes of approved quality hard rock rubble or hand broken hard metal of sizes ranging from 100mm to 230mm, at all position and depths below or above finished ground floor level, below foundations, below flooring, and for providing hard standing etc in one or more layers each of approximately 230mm thickness, hand packing, filling in interstices with quarry spalls, grits and providing a layer of 50mm. thickness (consolidated) of moorum/equivalent locally available approved material over each layer of soling including watering, thoroughly compacting each layer with 10 tonne power roller with minimum 6 passes (or with vibrating plate of approved capacity at places not approachable by power roller) all as per the direction of the Engineer and as per specification.	CUM	5	0.00009023
	<b>200 CONCRETE WORKS</b>			
	<b>CONCRETE WORK:</b> Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shutting and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			

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**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
201	Concrete of grade <b>M7.5</b> (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, bed blocks , screed concreting , paving , passages, pathways paving etc and similar applications at any depth below finished floor level etc.	CUM	110	0.00831393
202	Concrete of grade <b>M10</b> (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, bed blocks , screed concreting , paving , passages, pathways paving etc and similar applications at any depth below finished floor level etc.	CUM	1	0.00007711
205	Providing and laying <b>Design Mix cement concrete</b> conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer (inlcuding cost of plasticizer/superplastiziers) conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M 25 Grade	CUM	1377	0.12968199
b	M 30 Grade	CUM	1	0.00009778
206	Providing and laying <b>Design Mix cement concrete</b> of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer(inlcuding cost of plasticizer/superplastiziers) conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M 25 Grade	CUM	66	0.00697238
b	M 30 Grade	CUM	1	0.00011015
214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in <b>water retaining/conveying structures</b> including addition of suitable plastiizer cum waterproofing cement additives confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades. Watertightness is to be ensured including structural grouting if required.			
a	M 25 grade	CUM	50	0.0049815
A215	<b>Dismantling concrete work</b> for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 1KM, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
a	Plain cement concrete of all grades	CUM	37	0.00137711
b	Reinforced cement concrete of all grades	CUM	85	0.00348318
AA215	Extra over ST No. A215 a & b for carriage of unservicable material for every 500m or part thereof beyond an initial lead of 1km.	CUM	976	0.00022309
A216	<b>Chipping of concrete</b> in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 1KM, as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	1	0.00000376
AA216	Extra over ST No. A216 for carriage of waste material for every 500m or part thereof beyond an initial lead of 1km.	CUDM	4	0.0000009
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	1	0.00000075
<b>300 FORM WORKS</b>				
	<b>FORMWORK:</b> Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centereing etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			
301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge..	SQM	1404	0.0095517
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.	SQM	145	0.00103574

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**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.			
a	Upto 150 mm depth	EACH	6	0.00001128
b	Pockets of depths more than 150mm and upto 300 mm depth	EACH	30	0.00011279
c	Pockets of depths more than 300mm and upto 600 mm depth	EACH	60	0.00040603
d	Pockets of depths more than 600mm and upto 1000 mm depth	EACH	6	0.00005414
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.			
a	Extra for Curve Shuttering for Item No. 301	SQM	66	0.00004963
b	Extra for Curve Shuttering for Item No. 302	SQM	11	0.00000827
<b>400 REINFORCEMENT</b>				
	<b>REINFORCEMENT WORK :</b> Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
402	Providing, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR confirming to IS:1786 including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	445	0.3610293
403	Transportation, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. <b>(BHEL to supply steel free of cost)</b>	MT	1	0.00012782
405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcemet bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall beconducted to ensure strength of bond and same is included in this item. Reinforcement bar shall be paid separately under item no. 402, 403, 405 as applicable.			
a	12mm Reinforcement bar	EACH	5	0.00005639
c	20mm Reinforcement bar	EACH	5	0.00006769
d	25mm Reinforcement bar	EACH	5	0.00007519
e	32mm Reinforcement bar	EACH	1440	0.02382458
<b>500 WATER PROOFING WORKS</b>				
	Water Proofing works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
511	Providing and applying two coats of hot bitumen grade 85/25 as per IS 702 ( @ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete.	SQM	1415	0.0058304
<b>600 JOINTS AND FILLERS</b>				
	<b>JOINTS AND FILLERS:</b> Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.			
a	12 mm wide joints.	SQM	5	0.00007331
c	25 mm wide joints	SQM	5	0.00011091
<b>700 MS EMBEDMENTS</b>				
	<b>MS EMBEDMENTS:</b> Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	MT	3	0.00225571

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**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
702	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	0.2	0.00018046
703	Same as above items 701 & 702 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.			
a	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.	MT	0.2	0.00003008
b	Mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc.	MT	3	0.00056394
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Kg	400	0.00045114
b	PVC pipes / conduits of all diameters	Kg	200	0.00060152
c	UPVC pipes / conduits of all diameters	Kg	200	0.00082709
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
iii	M12 bolts	EACH	10	0.0000376
706	Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	1	0.00002256
<b>800 GROUTING</b>				
	<b>GROUTING:</b> Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level, drawings and as directed by engineer - in - charge for the following:			
802	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	0.5	0.00007519
803	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	0.5	0.00007519
804	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	1	0.00037595
805	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	1	0.00037595
<b>1000 BRICKWORK</b>				
	<b>BRICKWORK:</b> Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge for the following:			
1001	Providing <b>brick work</b> in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions <b>below plinth</b> including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	CUM	1	0.00007519
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position <b>above plinth</b> including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	CUM	1	0.00007519
1005	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	1	0.00002256
1008	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:6 etc. complete.	CUM	1	0.00002632
<b>1200 CEMENT MORTAR PLASTER</b>				

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**JOB: Civil Work for Installation of DCFS Absorber over Existing Pile Cap and Associated Civil Works at 3x250 MW Bongaigaon TPP, Salakati, Assam.**

**TENDER NO - PSER:SCT:SAL-C2066:20**

**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
	<b>PLASTERING:</b> Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete	SQM	5	0.00001316
1203	Providing 12mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	SQM	5	0.00001128
	<b>1300 FINISHES TO CONCRETE / PLASTERED SURFACES</b>			
1310	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	SQM	600	0.00135342
	<b>1500 ROOFING / SIDE CLADDING</b>			
	<b>ROOFING / SIDE CLADDING:</b> Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
A1501	Providing, fitting and fixing troughed <b>permanently colour coated metal decking</b> as floor / roof decking, of <b>steel with zinc coated</b> to class Z275 with minimum bare metal thickness (i.e. excluding the thickness of coating and painting) of 0.8mm of grade G250 as per AS1397 / grade SS255 as per ASTM A653M / grade S250GD as per EN 10326 or with minimum bare metal thickness (i.e. excluding the thickness of coating and painting) of 0.6mm of grade G350 as per AS1397 / grade SS340 class 4 as per ASTM A653M / grade S350GD as per EN 10326 or of grade G550 as per AS1397 / grade SS550 as per ASTM A653M / grade S550GD as per EN 10326 or aluminium feed material of minimum bare metal thickness of 0.9 mm of aluminium alloy of series 31000 and above as per IS : 737 and IS : 1254, steel / aluminium both colour coated with total coating thickness of 35 microns (nominal) dry film thickness (DFT) comprising of Silicon Modified Polyester (SMP with silicon content of 30% to 50%) paint or Polyester paint, of 20 microns (nominal) SMP or polyester paint on one side (exposed side) over 5 micron (nominal) primer coat and 5 micron (nominal) SMP or Polyester paint over 5 micron (nominal) primer coat on other side, (SMP and Polyester paint shall conform to Product type 4 of AS/NZS 2728), and of approved profile, sectional properties (suitable for the specified loading / deflection and purlins / runner spacing), colour and shade, at all levels, including all labour, materials, handling, transportation, special coated fasteners conforming to corrosion resistant class 3 of AS 3566 and tested for 1000 hours salt spray test, scaffolding, equipment, end and side laps, cutting of openings, preparation of working drawings, testing, etc., all complete, as per specifications, drawings and instructions of the Engineer.			
a	Span Upto 1800mm	SQM	1	0.00001128
b	Span Exceeding 1800mm and upto 2500 mm	SQM	300	0.00349725
1503	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	1	0.00011279
	<b>1800 MISCELLANEOUS WORKS</b>			
	<b>MISCELLANEOUS:</b> Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge for the following:			
1801A	Providing and laying of 25 mm to 100mm thick Anti-corrosive bitumastic layer, using special grade bitumen and filler materials which can be either sand, crushed stone chips, quartz and mica chips and / or combination of these, dressing of base, heating and application of material, etc. below tank, including all labour, material, equipment, handling, transportation, etc., all complete as per specifications, drawings and instructions of the Engineer.	CUM	4	0.00045115
1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	10	0.00026317
	<b>2300 STRUCTURAL STEEL</b>			
	<b>STRUCTURAL WORKS:</b> 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 for the following:			

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**JOB: Civil Work for Installation of DCFS Absorber over Existing Pile Cap and Associated Civil Works at 3x250 MW Bongaigaon TPP, Salakati, Assam.**

**TENDER NO - PSER:SCT:SAL-C2066:20**

**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
2301	Supply, 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 red oxide zinc-chromate primer (one coat at shop and one coat after erection), 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 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° 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 seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.	MT	2	0.00180456
2302A	Extra over item 2301 above for <b>Blast cleaning</b> by shot blasting of steel surfaces to near white metal surface (Sa 2½) and applying <b>Inorganic Zinc Silicate primer</b> of minimum <b>75 micron (DFT)</b> , instead of primer coat of chlorinated rubber zinc phosphate, including touch up painting for the damaged surfaces of primer.	MT	2	0.00012151
2303A	Extra over ST NO. 2301 for applying <b>intermediate (under) coat</b> [over inorganic Zinc Silicate primer, (excluding cost of primer).] consisting of minimum <b>75 micron DFT epoxy based Titanium dioxide / Micaceous iron oxide (pigmented)</b> of approved make and shade to achieve an even shade including touch up painting for the damaged surfaces of intermediate paint.	MT	2	0.0000609
2304A	Extra over ST NO. 2301 for <b>applying finish coat</b> [over Intermediate (under) coat, (excluding cost of Intermediate coat)], consisting of minimum <b>75 micron DFT Epoxy based colour pigmented finish Poly Amide cured paint and Final Finish coat with minimum 25 micron DFT Polyurethane colour pigmented finish paint</b> of approved shade including final touch up painting for the damaged surfaces of Finish and Final Finish Paint.	MT	2	0.0000606
2307	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, packing, grinding, drilling, welding, edge preparation, etc. all complete.			
a	Minimum galvanisation of 610 g/sqm	MT	1	0.00112785
2308	Supplying, fabrication, erection and alignment of factory made galvanised welded grating units with mild steel 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 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), fixing clamps, fittings, fixtures, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	0.5	0.00047231
2309	Extra over above ST NO. 2301 for finishing the grating units/bolts/inserts with hot dipped galvanisation @ 610 gm/sqm over blast cleaned steel surfaces instead of painting with two coats of red oxide zinc-chromate primer all complete.	MT	0.5	0.0001242
2313	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	5	0.00075396
<b>2500 PILING</b>				
	<b>PILING WORK:</b> Piling works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge for the following:			
2503	Mobilisation of conventional DMC/RMC piling rigs and accessories capable of pile boring/drilling in all types of strata/installing various size of bored cast in situ RCC piles to project site and demobilisation of the same after completion of piling works etc all complete.	EACH	5	0.00751902

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**TENDER NO - PSER:SCT:SAL-C2066:20**

**SCH-2: PRICE BREAK UP**

<b>ST No.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>TOTAL QTY</b>	<b>WEIGHTAGE</b>
2504	Installation of Bored cast-in-situ RCC vertical pile as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level to the bottom of pile) using cement concrete grade M25 conforming to IS:456 with 20 mm nominal size stone aggregates with a minimum cement content of 400Kg per cum of concrete including providing all materials (but excluding reinforcement steel for which measurement/payment shall be made separately), boring/drilling in all types of soil, providing bentonite slurry and/or casing for stabilization of pile bore, flushing of pile bore, cleaning, providing plasticizer wherever required, breaking pile head to cut off level and exposing pile reinforcement for embedment in pile cap etc including empty boring from ground level to pile cutoff level etc all complete as per specification, drawing and as directed by the engineer-in-charge for the following.			
e	Pile with 760 mm diameter and 20 m length below cut off level	EACH	117	0.28051825
2505	Extra over ST. No. 2504 for pile length more than the specified length of 20m below cut off level for the following.			
e	For 760 mm diameter pile	RM	819	0.07728384
2506	Rebate on ST.No.2504 for pile length less than the specified length of 20m below cut off level for the following.			
e	For 760 mm diameter pile	RM	30	-0.00214301
2510	Extra over ST.No.2504 for boring/drilling in rock for a length not exceeding 3 times the diameter of pile, cleaning the pile hole, concreting etc all complete for the following.			
e	For 760 mm diameter pile	RM	267	0.03011366
2511	Conducting initial load test upto a maximum test load of 2.5 times the safe load capacity on single pile as specified in accordance with IS 2911 Part-4 including preparation of pile head for testing, necessary excavation, all arrangements of loading, unloading, test equipments/ accessories, jacks, recording of results, labour, submission of test report but excluding the cost of installation of pile ( installation of pile shall be paid separately) etc. all complete as per specification, drawing and as directed by engineer in - charge for the following:			
a	For vertical compression test by cyclic load method			
iv	760 mm diameter pile	EACH	2	0.00759496
b	For lateral load test			
iv	760 mm diameter pile	EACH	2	0.00428584
c	For tension/uplift test			
iv	760 mm diameter pile	EACH	2	0.00466179
2512	Conducting routine load test on single job pile as specified in accordance with IS 2911 (Part-4) including preparation of pile head for testing, necessary excavation, providing all arrangements of loading, unloading, test equipments/accessories, jacks, recording of results, labour, submission of test report etc but excuding the cost of installation of job pile complete as per specification, drawing and as directed by the engineer-in-charge for the following.			
a	For vertical compression test by maintained load method			
iv	760 mm diameter pile	EACH	2	0.00315799
b	For lateral load test			
iv	760 mm diameter pile	EACH	2	0.00165418
2513	Carrying out pile integrity test on <b>760 mm</b> diameter pile including all arrangements for test, equipments/ accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile all complete as per specification and as directed by the engineer-in-charge.	EACH	117	0.00468014
2516	Installation of Sheet piling if higher water table prevails in the area including design, labour, equipment, materials etc. all complete. This item to be opearted if sheet piling is specifically required as per drawing.	SQM	10	0.00116545
	<b>TOTAL</b>			<b>1.00000000</b>