

TENDER SPECIFICATION

BHEL PSSR SCT 1360

**CONSTRUCTION OF FOUNDATIONS IN MAIN PLANT
(I.E. POWER HOUSE, BOILER, ESP, MILL & MILL BAY, TG
FOUNDATION, ID DECK, FAN FOUNDATIONS AND
TRANSFORMER FOUNDATIONS ETC).**

FOR

2 X 600 MW

AT

**MALWA THERMAL POWER PROJECT,
KHANDWA, MADHYAPRADESH.**

VOLUME - III

RATE SCHEDULE

BOOK NO



**BHARAT HEAVY ELECTRICALS LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR – SOUTHERN REGION
690, ANNA SALAI, NANDANAM, CHENNAI – 600 035**

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
POWER SECTOR – SOUTHERN REGION,
690, ANNA SALAI, NANDANAM, CHENNAI – 600 035.

TENDER SPECIFICATION No. BHEL PSSR SCT 1360

NAME OF THE WORK

Construction of foundations in Main Plant (i.e. Power House, Boiler, ESP, Mill & Mill Bay, TG foundation, ID Deck, Fan foundations and transformer foundations etc) for Unit 1&2 of 2 x 600 MW at Malwa Thermal Power Project, Malwa, Khandwa, MadhyaPradesh.

Volume III
RATE SCHEDULE

DATE:

Issued to
M/s.

For and on behalf of
BHARAT HEAVY ELECTRICALS LTD

AGM / CONTRACTS

The tender documents are not transferable.

Place: Chennai-600035
Date:

PREAMBLE FOR THE SCHEDULE OF QUANTITIES

PREAMBLE TO THE SCHEDULE OF QTS. (SOQ)

- 1) Details of the items in this Schedule shall be read in conjunction with the corresponding MPPGCL specifications and other documents and shall have precedence over any contrary statement mentioned any where in this document.
- 2) The work shall be carried out as per construction drawings (which will issued progressively during the execution), specifications, the description of the items in this schedule and/or Engineer's instructions., The layout, sizes and details of the building, structures and foundations may vary at a large extent during actual construction.
- 3) Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 4) Unless specifically mentioned otherwise in the contract, the bidder shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant , temporary works, labour, materials, levies , taxes , transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services , temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
- 5) The rate quoted shall be inclusive of cleaning the site of any vegetations, dressing and leveling etc., required for commencement of site activities. No separate payment will be made towards the same.
- 6) The rate shall also be inclusive of carrying out survey of site to establish levels and coordinates at suitable intervals, form existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references , pillars and other identification marks etc. No separate payment will be made towards the same.
- 7) The quantities of the various items mentioned in the schedule are approximate and may vary up to any extent or be deleted altogether. The quoted rates of each item shall remain firm as long as the variation in the total value of the works executed under this contract, including extra items if any, remain within +/- 30% (thirty percent) of the Bid Price of the probable extent of the work to be executed under any particular item in this schedule, before under taking any preliminary work or purchasing bought out component related to the work. The variation clause will be applicable as stipulated in the General conditions of contract, Volume 1 of this tender.
- 8) Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellation should be counter signed by the bidder. In case of illegibility, the interpretation of the engineer shall be final. All entries shall be in English language.

- 9) Engineers decision shall be final and binding on the contractors regarding clarification of items in this schedule with respect to the other section of the contract.
- 10) Unless otherwise specified in the schedule of items Structural and Reinforcement steel will be issued by BHEL as FREE ISSUE for incorporation in the permanent works as specified elsewhere in this tender document.
- 11) In case of any matching sections (Structural steel) not issued by BHEL, but required for incorporation in the work as per drawings/specification, on the direction of the engineer in-charge the materials shall be supplied by agency. The cost of the same shall be reimbursed as per the price indicated by SAIL yard price at the nearest outlet of the project.
- 12) In case of any discrepancy between item description, relevant drawing and/or specification clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the bidder has quoted for the more stringent requirement.

HIERARCHY

In case of any conflict/deviations amongst various documents, the order of precedence shall be as follows

- Items in Schedule of quantities
- Statutory Regulations
- MPPGCL specification
- BHEL's standard specification (with prior approval of Engineer-in-charge).
- IS/BS standards

Mode of Award of work for Unit 1 and Unit 2

- (i) There are two units of 600 MW each at Malwa Thermal Power Project. Tender SCT1360 is for Unit 1 – 600 MW only. The quantity indicated in the price bid is for Unit 1 only and the quantity for Unit 2 is also same.
- (ii) The L1 bidder against this quote will be awarded the contract for unit 1 Malwa Thermal power project.
- (iii) BHEL reserves the right to award the contract for Unit 2 of Malwa Thermal Power Project on the same terms and conditions of SCT 1360 to the next lowest bidder in the order of competitiveness who should match his rates / price with awarded price / rate for Unit 1.
- (iv) Thus the work for Units 1 and 2 will be awarded to two agencies i.e. Unit1 work for one agency and Unit 2 work for the other agency.
- (v) In case the other bidders in their order of competitiveness do not accept to match their rates/Price with awarded price / rate of Unit 1, then BHEL reserves the option to consider the L1 bidder , for award of Unit-2 work

also at the same rate/Price and at the same Terms & Conditions of Unit-1. This will be solely at the discretion of BHEL and the L1 bidder, who is awarded the work of Unit-1, shall not have any claim for award of Unit-2 work to him, on conditions whatsoever.

- (vi) In case BHEL, at its discretion opts to go for retendering for award of work for Unit-2, then the L1 bidder who is awarded with Unit-1 work shall not be considered for Unit-2 work.
- (vii) Each unit will be treated as a separate contract.
- (viii) Refer Clause **25.0** in the special condition of the contract for mode of award of work for unit 1&2

GENERAL:

NOTE: The bidder to note the following before submission of the offer

Technical requirements in Volume- II should be read in conjunction with BOQ in Volume – III and other sections of the tender / contract. In case of any conflict between the contents of BOQ in Volume – III and Technical Requirements in Volume – II, then BOQ will prevail over Technical requirements.

In case of any conflict between Technical requirements in Volume – II – Book 1 (Customer spcn) and Volume – II – Book 2 (standard technical specification), then Volume – II – Book 1 (Customer spcn) will prevail over standard technical specification in Volume – II – Book 2.



2X600 MW MALWA TPP

RATE SCHEDULE

BILL OF QUANTITIES

BHEL:PSSR:SCT:1360: VOLUME III

CONSTRUCTION OF FOUNDATIONS IN MAIN PLANT (i.e, POWER HOUSE, BOILER, ESP, MILL & MILL BAY, TG FDN, ID DECK, FAN FDNS, TRANSFORMER FDNS, ETC)

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION AND DRAWINGS				
101	Excavation up to 2m depth below ground level for foundation,trenches,pipe lines,pile cap,drains etc including dewatering, shuttering and shoring if required,dressing of sides,levelling to grade and ramming of bottoms,stacking/disposal of surplus excavated material with in a lead of 1Km etc complete as per specifications, drawings and instructions of engineer				
i)	In all types of soils including expansive soil, ash, morrum except rock.	CuM	30000		
ii)	In soft rock and weathered rockwhich can be excavated by means of crowbar, pick axe etc etc, but does not require chiselling, chemical grouting and blasting.	CuM	20000		
iii)	In hard rock by means of controlled blasting.	CuM	4000		
iv)	In hard rock (where blasting is prohibited) by means of chiselling, wedging etc.	CuM	1000		
102	Extra over item 101 above, for all types of soil/rock, for additional lifts beyond the initial lift of 2 meters (included in item 1 above) all complete as per specifications, drawings and instructions of the engineer for the following lifts:				
i)	In all types of soils including expansive soil, ash, morrum except rock.				
a)	beyond 2 m and upto 4 m	CuM	18000		
b)	beyond 4 m and upto 6 m	CuM	3000		
c)	beyond 6 m and upto 8 m	CuM	1000		
d)	beyond 8 m (Rate each lift of one metre)	CuM	500		

Signature of the Bidder

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
ii)	In all types of rocks				
a	beyond 2 m and upto 4 m	CuM	500		
b	beyond 4 m and upto 6 m	CuM	2000		
c	beyond 6 m and upto 8 m	CuM	1500		
d	beyond 8 m (Rate each lift of one metre)	CuM	1000		
103	Earth work in stripping of top soil upto a minimum depth of 0.30m below natural ground level so as to exclude all debris, grass, vegetation and disposal for all leads all complete.	CuM	2000		
104 a	Disposal of surplus excavated earth/rock beyond an initial lead of 1km (Rate per every one Km lead), loading, transporting and shall be dumped and levelled in horizontal layers not exceeding 500mm thickness as specified and directed by the Engineer-in-charge.	CuM	30000		
105	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, grading & levelling etc. in layers not exceeding 300 mm thickness including all lead and all lifts and including excavation, loading from stock pile, carting, unloading, filling, watering and compacting/ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities: Finished surface shall be free of irregularities & depressions and shall be with in +/- 20mm of specified level.				
i)	Ordinary manual compaction	CuM	1000		
ii)	90% standard proctor density/relative density	CuM	4000		
iii)	95% standard proctor density/relative density	CuM	20000		
105 a	Filling using selected excavated materials directly from excavation area in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc. in layers not exceeding 300 mm thickness including all leads & all lifts, filling, watering and compacting/ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities:Finished surface shall be free of irregularities & depressions and shall be with in +/- 20mm of specified level.				
i)	Ordinary manual compaction	CuM	1000		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
ii)	90% standard proctor density/relative density	CuM	4000		
iii)	95% standard proctor density/relative density	CuM	20000		
106	Filling using selected materials in grading & levelling, trenches, plinths, sides of foundations, in the space below the grade level slab and other under ground structures, pipes etc. in layers not exceeding 300 mm in thickness including all lead & lifts and including excavating, loading, unloading, carting, filling, watering and compacting/ramming each layer, all complete as per specifications, drawings and as directed by the engineer for the following works				
i)	With selected soil of Cohesive non-swelling as per IS1498-1970 brought from borrow areas arranged by contractor, including royalties, fees etc.in layers not exceeding 300 mm thickness for all leads and compacted to following densities.Finished surface shall be free of irregularities & depressions and shall be with in +/- 20mm of specified level.				
a	90% standard proctor density/relative density	CuM	5000		
b	95% standard proctor density/relative density	CuM	5000		
iii)	with river sand including royalities and all other statutory and compacting to 85% relative density etc. for all leads	CuM	3000		
107	Filling in trenches, plinths, area paving and other underground structures with stone (63mm down graded), in layers including breaking of boulders to required sizes, filling the interstices with river sand and mechanical compacting for all lead & lifts in complete as per instructions of Engineer-in-charge.	CuM	1000		
108	Filling in transformer pits etc. , with clean 40 mm nominal size stone aggregate including all labour, materials, royalties, equipments etc. complete as per instructions of engineer in charge.	CuM	200		
109	Providing and laying 230mm thick boulder pitching (single stone) on slopes of earth fill/cut including filling the interstices with rock fragments, gravel, watering and compaction, etc complete as per specification	CuM	1000		
110	Providing anti termite/weed treatment in column pits, wall trenches, foundations, under floors etc. as per specification IS:6313 Part II.	SqM	8000		
111	Extra over item No 101 to 106 above for excavation below ground water table by de-watering using well-point/suitable method for lowering of ground water table 300m below foundation level to maintain dry working conditions for all activities up to filling/testing, water proofing all complete as per specifications, drawings and instructions of the engineer in charge. The payment shall be on the basis of earth work excavation involved in that particular area.	CuM	2000		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING INCLUDING COST OF PLASTICIZERS/ADMIXTURES CONFORMING- IS9103 LATEST TO ACHIEVE SLUMP AS PER SPECIFICATION/DIRECTION OF ENGINEER/MANUFACTURERS RECOMENDATION ETC FOR STRUCTURAL CONCRETE, IN CONCRETE WHEREEVER REQUIRED AND CURING (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) COMPLETE AS PER DRAWING AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE FOR THE FOLLOWING:				
201	Concrete of following grade shall be used for filling course at any level below finished floor level, under and around foundations/floors, mass dumps, under ground pipes, drains, toilets, screeds etc with 40 mm nominal size graded aggregate.				
	a) Grade M5 (1:5:10)	CuM	200		
	b) Grade M7.5.	CuM	1000		
	c) Grade M10.	CuM	1500		
	d) Grade M15.	CuM	1000		
	e) Grade M20.	CuM	500		
202	Concrete of grade M20 as foundations, under floors, drains, screeds, column/beam encasements etc with 12.5/20 mm nominal size graded aggregate.	CuM	1000		
203	Concrete of grade M25 as foundations, grade slabs, encasements under ground pipes, beam encasements, floor slabs, beams, columns, walls, etc at all depths , elevations below finished floor level complete with 20 mm nominal size graded aggregate.	CuM	15000		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
204	Concrete of grade M-25 in Machine Foundations like TG sub-structure(except TG deck & columns at all heights from finished floor level), Mill fdns, ID & Fan foundations etc and other allied equipment foundations at all depths and all levels etc complete with 20 mm nominal size graded aggregate.	CuM	2500		
205	Providing and laying concrete grade M-30 for reinforced concrete works using graded aggregate in Columns & top decks of TG foundation/Machine foundation at all levels including preperation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement-sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc. all complete as per specification, drawing and instructions of engineer and rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/epoxy grout etc(UPV test shall be carried out by the owner at his own cost) but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete. However agency has to provide necessary facilites & arrangements required fro conducting the test.	CuM	1750		
206	Providing and laying concrete grade M-35 for reinforced concrete works using graded aggregate in Columns & top decks of TG foundation/Machine foundation at all levels including preperation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement-sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc. all complete as per specification, drawing and instructions of engineer and rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/epoxy grout etc but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete.	CuM	1750		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
207	Concrete of grade M-20 in pre-cast works with 20mm graded aggregate, like trench/drain covers, etc at all levels in all kinds of work including form works/moulds , curing, handling storing, transporting, all leads, erection with out damage, setting in position with Cement Sand mortar(1:3), filling the gaps between adjacent pre-cast units with Cement sand mortar 1:3 and including marking of holes for bolts fixing, welding etc complete.	CuM	200		
208	Extra over sl no 203,204 & 206 above for conducting UPV testing as directed by the engineer in charge,including submission of test reports (4 copies). Rate to include all labour charges,staging and other misc charges etc complete as per specification. If any defect found in UPV the same shall be grouted with epoxy pressure grout as directed by engineer in-charge.	CuM	4000		
209	Extra over St. No. 203, 204, 205 & 206 above, for controlling of temperature of freshly laid concrete to less than 23 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc., all complete as per specification, drawing and instruction of engineer in charge.	CuM	4000		
210	Dismantling concrete work for all types of structures at all levels including stacking of servicable material and disposal of unservicable material for all leads & hieghts/lifts, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.				
i)	Plain cement concrete of all grades.	CuM	10		
ii)	Reinforced cement concrete of all grades including reinforcement cutting.	CuM	50		
212	Providing and applying Curing compound of approved make & quality to a fresh concrete surface as per standard specification.	SqM	5000		
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATIONS FOR ALL STRUCTURES, AS PER SPECIFICATIONS AND INCLUDING ALL LABOUR MATERIAL, SCAFFOLDINGS AND CENTEREING COMPLETE INCLUDING POCKETS ETC. FOR THE FOLLOWING:				
301	Ordinary form work below finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SqM	3500		
302	Fairface form work below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. for exposed concrete works.	SqM	35000		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
303	Ordinary form work above finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, dooms, arches, mass concrete, trenches etc for all heights.	SqM	3500		
304	Fair face form work above finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, dooms, arches etc for all heights for exposed faces.	SqM	15000		
305	Fairface formwork for Machine foundations/Decks like TG, MDBFP, TDBFP, ID etc at all heights from finished floor level..	SqM	1500		
305 A	Staging and destaging required for all spring mounted decks like TG, ID etc including all labour, staging materials as per std specifications and instructions of Engineer in charge site. Item is inclusive of designing the staging & approval of the same, shuttering, including all materials like cribs, structural cols, t&p, labour all complete as per specification.(The plan area will be considered for payment).	SqM	550		
305B	Ornamental/curved shuttering using fairface formwork. Item is inclusive of materials, labour, t&p all complete.	SqM	200		
306	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 SqM contact surface area with concrete) 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.				
i)	Upto 300 mm depth	Nos.	375		
ii)	From 301 mm upto 600 mm depth	Nos.	325		
iii)	From 601 mm upto 1000 mm depth	Nos.	285		
400	REINFORCEMENTS				
402	Straightening, cutting, bending, placing at any level, binding in position High yield strength steel reinforcements in concrete including cost of binding wire, labour,transportation of reinforcement steel from BHEL stores with in the plant boundary to work spot,loading,unloading etc. complete all as per specifications & drawings.	Mt	2500		
500	WATER PROOFING AS PER SPECIFICATIONS.				
501	Two(2) coats of hot Bitumen(80/25) confirming to IS 702 at 1.7Kg/Sqm to be provided for all concrete foundations below ground level coming on direct contact with soil over a coat of primer except for foundation requiring water proofing/ hydro insulation.	SqM	10000		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
502	Providing and mixing approved super plasticiser-Cum-cement based water proofer compound in concrete or cement mortar for works wherever specified or directed as per specification/manufacturer's instructions, testing of samples for water proofing etc confirming to IS2645 & IS 9103 all complete.	Litre	2000		
600	SUPPLYING & INSTALLATION OF JOINT FILLER AND SEALING COMPOUND:				
601	Supplying & installation of bitumin 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, labour, material, equipments etc all complete at all levels as per specification, drawings and instruction of engineer in charge:				
a	12mm thick joints.	SqM	45		
b	20mm thick joints.	SqM	70		
c	25mm thick joints.	SqM	85		
602	Supplying and filling in position hot applied bitumin sealing compound(Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints at all levels including application of primer, labour, material, equipments etc. all complete as per specification/drawing, instruction of engineer in charge.	Kgs	50		
603	Supplying and filling in position expanded polystyrene slab of fire retarding grade of Type-2 conforming to IS:4671 in gaps in joints at all levels including, labour, material, equipments etc. all complete as per specification/drawing, instruction of engineer in charge. Density of material shall not less than 25 kg/cu.m	SQM	200		
604	Supplying and filling in position two part polysulphide sealant conforming to IS 12118 including cleaning, mixing, pouring/injecting sealing compound in gaps in joints at all levels including labour, material, equipments etc. all complete as per specification/drawing, instruction of engineer in charge.	Kg	100		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
700	M.S. EMBEDMENTS				
701	Fixing of embedments, MS inserts, pipe sleeves, rails, guide rails angle pieces, anchor bolts of various diameters, plates of dimensions as required including cost of all labour, materials and equipment for fixing in position, scaffolding and setting in position, transportation from stores within the plant boundary to work spot, loading, unloading etc. complete as per specifications and drawings. (Only embedments will be provided by BHEL under free issue)	Mt	100		
702	Supply, fabrication, transportation, delivery at site, erection, installation and alignment of MS foundation bolt (Grade-1 of IS:432 & IS:2062) assembly in concrete along with nuts, lock nuts (IS:1363, IS:1364 & IS:3138), anchor plates, stiffner plates, protective tape etc. upto and including 80 mm dia, 3000 mm long including furnishing of labour, materials, equipments, welding, cutting, grinding, threading, drilling, pipe sleeves etc. all complete as per specification, drawing and instruction of the engineer.	Mt	50		
703	Fabrication, transportation, delivery at site, erection, installation and alignment of MS foundation bolt (Grade-1 of IS:432 & IS:2062) assembly in concrete along with nuts, lock nuts (IS:1363, IS:1364 & IS:3138), anchor plates, stiffner plates, protective tape etc. upto and including 80 mm dia, 3000 mm long including furnishing of labour, materials, equipments, welding, cutting, grinding, threading, drilling, pipe sleeves etc. all complete as per specification, drawing and instruction of the engineer. (Structural steel supply by BHEL free of cost) . (BHEL will supply rolled sections like joists, channels, angles, plates only as a free issue. Balance other materials required for incorporation in the permanent works are in the agency scope)	Mt	50		
704	Providing all assistance for pre compressing, placing, locking and releasing of vibration isolation system over foundations at all elevations including transportation from stores, making of required staging, platforms, alignment, all laboures etc complete as per specification and drawing.	NOS.	150		
1800	MISCELLANEOUS				
1801	Providing Water stops at the joints as a continuous diaphragm to contain the filler material and/or to exclude passage of water or any other material into or out of the structure confirmng to IS 12200. Rate shall include materials, labour, joining all complete as per drawings, specification and as directed by the engineer.				
a	Providing and fixing PVC water stops 150mm wide, 6 mm thick.	RM	150		

SL. NO	DESCRIPTION	UNIT	QTY for 1 unit	RATE	AMOUNT
b	Providing and fixing PVC water stops 225mm wide, 6 mm thick.	RM	150		
1802	Providing 75mm thick anticorrosive layer laid to slope consisting of compacted crushed stone screenings, fine gravel, clean sand or similar material as directed by the Engineer, mixed in hot asphalt 10% by volume and rolled or compacted complete as per drawings and specifications, below fuel oil tanks and at such other places as per specifications and as directed by the Engineer.	SQM	500		
1803	Fixing transformer rails including guide rails in concrete including joining of rails. Anchoring lugs etc. complete as per specification. Rate to include transportation of Rails from stores within the plant boundary to work spot, loading, unloading etc. complete all as per specifications & drawings. (Only Rail will be provided by BHEL under free issue)	MT	75		
1804	Laying of earthing mats/rods including transportation from yard stores, loading, unloading, cutting to length, welding etc. complete as per specification and as directed by Engineer-in-charge. (Only Earth mat rod will be provided by BHEL under free issue) (Excavation and back filling payable separately)	MT	150		
1805	Providing and fixing GI rungs in concrete/brick walls at all elevations including @ zinc coating shall not be less than 500 g/sqm all complete.	KG	250		
				TOTAL	
	<u>Note to Rate schedule:</u>				
i)	The quantities of the various items mentioned in the schedule are approximate and may vary up to any extent or be deleted altogether. The quoted rates of each item shall remain firm as long as the variation in the total value of the works executed under this contract, including extra items if any, remain within +/- 30% (thirty percent) of the Bid Price of the probable extent of the work to be executed under any particular item in this schedule, before under taking any preliminary work or purchasing bought out component related to the work. The variation clause will be applicable as stipulated in the General conditions of contract, Volume 1 of this tender.				
ii)	PAYMENT FOR ADDITIONAL ITEMS				
	For working out the rates for supplemental / additional items, the least of the following will be operated.				
a)	Near similar item (or) derived from LOI items				
b)	Direct from CPWD schedule of rates. The cost index (based on formula) for the project site prevailing during the year of reckoning, shall be calculated and applied over the DSR-2007 item rate.				
c)	Derived from CPWD rates (While deriving the rate from CPWD, the above procedure (as given in (b)) shall be followed).				
	If any item could not be derived from the above, Rate will be worked out based on market rate for such item with 15% plus towards contractor's overhead and profit.				