

Job:Execution of structural works all complete for Combined Cycle Captive Power Plant, ONGC Hazira, Gujarat				
<b>PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price</b>				
ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
<b>COMBINED CYCLE CAPTIVE POWER PLANT, ONGC HAZIRA, GUJARAT</b>				
<b>2300 STRUCTURAL STEEL</b>				
<b>Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification,</b>				
2301	<p>Taking delivery of steel from BHEL stores / store yard, loading, Transportation, unloading, fabrication and erection of <b>structural steel with mild steel rolled section / built up section / combination of both</b> 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. connection design &amp; preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, <b>peening</b>, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts &amp; 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 &amp; 66° C for welding over 40 mm and upto 63 mm &amp; 110° C for thickness over 63 mm &amp; 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, <b>online production test coupons</b>, 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 <b>preparation/re submission of fabrication/erection drgs</b> for final approval, in consultation with BHEL.</p>			
2301A	<p><b>Fabrication and erection of structural steel built up sections like Girders/ Columns composed of Structural plates only</b> conforming to IS:2062, in columns, beams, portals, space frames, hangers, struts, monorails, galleries, stiffeners, brackets, stub columns, trestles etc. including straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, assembly, edge preparation, preheating / post heating(if required), inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, <b>online production of test coupons</b>, protection against damage in transit etc all complete as per specification. Payment shall be made for net weight of finished structure along with gussets, stiffeners but not for Nuts &amp; Bolts/washers. Nuts &amp; Bolts/shall be paid under separate item.</p>			
(I)	<b>Fabrication</b>	MT	425	23.4937728
(II)	<p><b>Erection, alignment &amp; welding</b> <b>Payment Break up:</b> <b>a) Erection :70%</b> <b>b) Alignment and Welding : 30 %</b></p>	MT	425	13.42396395
2301B	<p>Fabrication and Erection of <b>structural steel built up section composed of rolled sections and plates</b> conforming to IS:2062, in columns, beams, gantry girders, roof trusses, portals, frames, hangers, struts, brackets, bracings, base plates, ladders, stairs, stringers, treads, landings, hand-rails etc including straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, assembly, edge preparation, preheating / post heating (if required), inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, <b>online production of test coupons</b>, protection against damage in transit etc all complete as per specification. Payment shall be made for net weight of finished structure along with gussets, stiffeners but not for Nuts &amp; Bolts/washers. Nuts &amp; Bolts/washers shall be paid under separate item.</p>			
(I)	<b>Fabrication</b>	MT	250	11.05589308
(II)	<p><b>Erection, alignment, welding</b> <b>Payment Break up:</b> <b>a) Erection :70%</b> <b>b) Alignment and Welding : 30 %</b></p>	MT	250	6.317159507
2301C	<p>Fabrication and erection of <b>structural steel with mild steel rolled section like ISMC, ISMB, ISA / (angle, channel, beam)</b> conforming to IS:2062, in stub columns, beams, portals etc. including straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, assembly, edge preparation, preheating / post heating (if required), splicing, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, <b>online production of test coupons</b>, protection against damage in transit etc all complete as per specification. Payment shall be made for net weight of finished structure along with gussets, stiffeners but not for Nuts &amp; Bolts/washers. Nuts &amp; Bolts/washers shall be paid under separate item.</p>			
(I)	<b>Fabrication</b>	MT	175	5.804343868
(II)	<p><b>Erection, alignment, welding</b> <b>Payment Break up:</b> <b>a) Erection :70%</b> <b>b) Alignment and Welding : 30 %</b></p>	MT	175	3.316508741

TECHNICAL CONDITIONS OF CONTRACT (TCC)  
CHAPTER XI –BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
2302	Extra over ST NO. 2301 for <b>blast cleaning of steel structures</b> to near white metal surface(Sa 2 1/2 ) and applying epoxy resin based zinc phosphate primer in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection, including touch-up painting etc all complete. <b>Note: In ONGC Hazira complex no sand blasting or shot blasting shall be done.</b> <b>Payment Break up:</b> <b>a) Shot Blasting &amp; first coat of primer :70% (Seventy Percent)</b> <b>b) Second Coat of primer : 30 % (Thirty Percent)</b>	MT	850	13.85356017
2302-a	Extra over ST NO. 2301 for providing and application of intermediate coat of epoxy resin based paint pigmented with Titanium dioxide of 100 micron (DFT) primer over steel structures already having primer coats.	MT	850	7.538128554
2302-b	Providing and applying top coat of epoxy paint suitably pigmented of approved colour and shade finish paint with glossy finish of minimum 75 micron dry film thickness (DFT) and finishing coat of polyurethane of 25micron (DFT) thick of approved make and shade to achieve an even shade over steel sections already having primer coats and Inter mediate coat keeping overall DFT not less than 300 microns including protection and cleaning, scaffolding etc. all complete	MT	850	8.540519736
2309	Extra over above ST NO. 2301 for <b>finishing the grating units</b> with hot dipped galvanisation @ 610 gm/sqm over blast cleaned steel surfaces instead of painting with two coats of primer all complete.	MT	50	4.08991153
2311	<b>Providing and fixing in positing of high strength structural bolts</b> (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.	Quintal	1	0.096450723
2312	<b>Dismantling of steel structure</b> , 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	1	0.034778071
2313	Addition to, alterations in and/or modification of " <b>Erection Marks</b> " 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	1	0.047179989
b	In fabrication yard	MT	1	0.044173464
2314	<b>Re-erection of dismantled fabricated structural steel</b> members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, 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 dismantled 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	1	0.035909838
2320-a	Supply, fabrication and fixing of <b>hot dip galvanized (at 610gm/sqm over blasted cleaned surface) hand railing</b> (1000 mm high) with 40mm NB pipes of medium class confirming to IS: 1161 with threaded ends, necessary bends, tees, elbows, sockets etc. including transportation, loading/ unloading, touch up painting etc. all complete.	MT	5	1.855039246
2321	Conducting <b>radiography test on welds</b> wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	20	0.200003067
2322	Conducting <b>ultrasonic test on welds</b> wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	20	0.131405903
2325	Conducting <b>dye penetration test on welds</b> 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	20	0.121297756
GRAND TOTAL Weightage				100