

FORMAT B.1

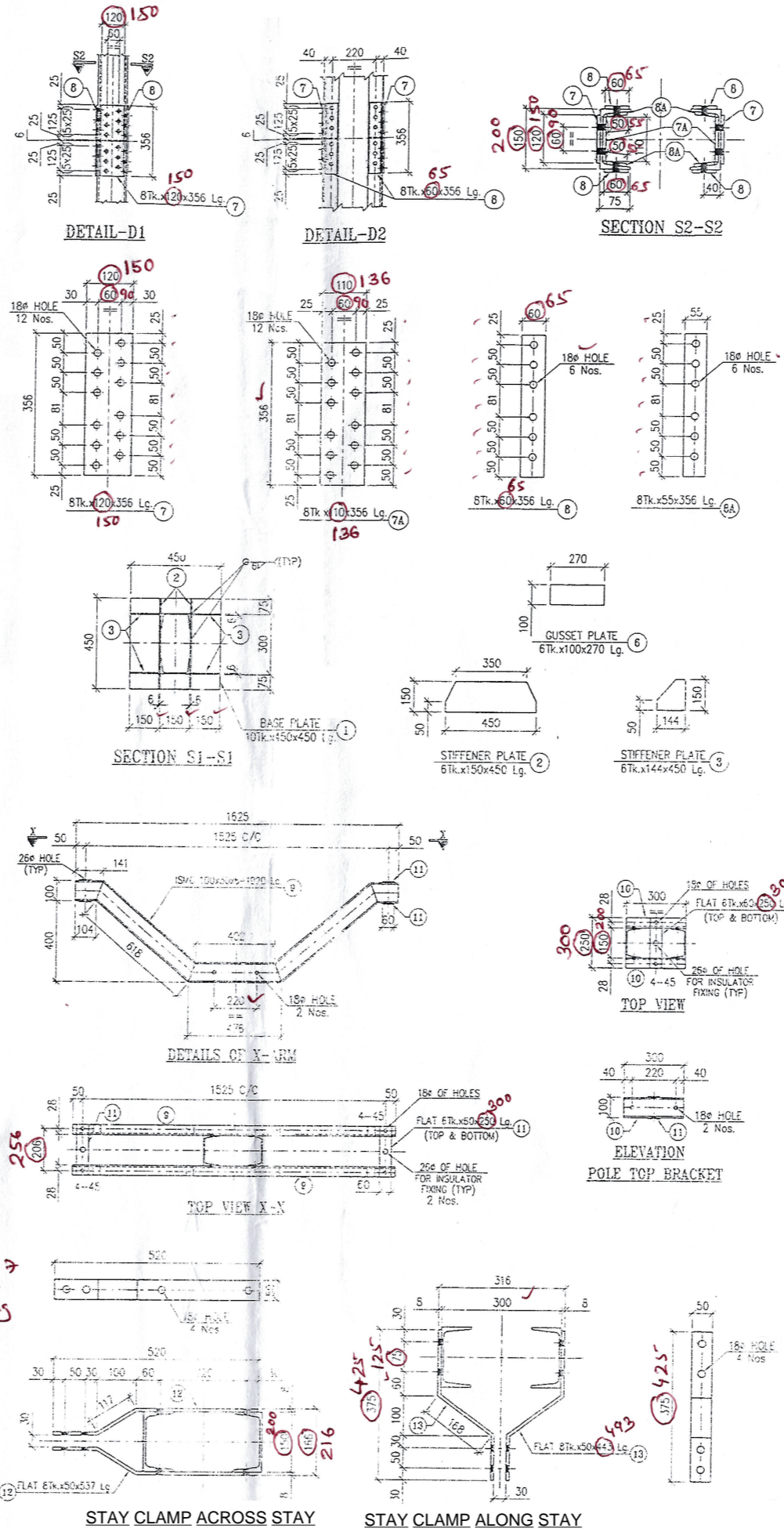
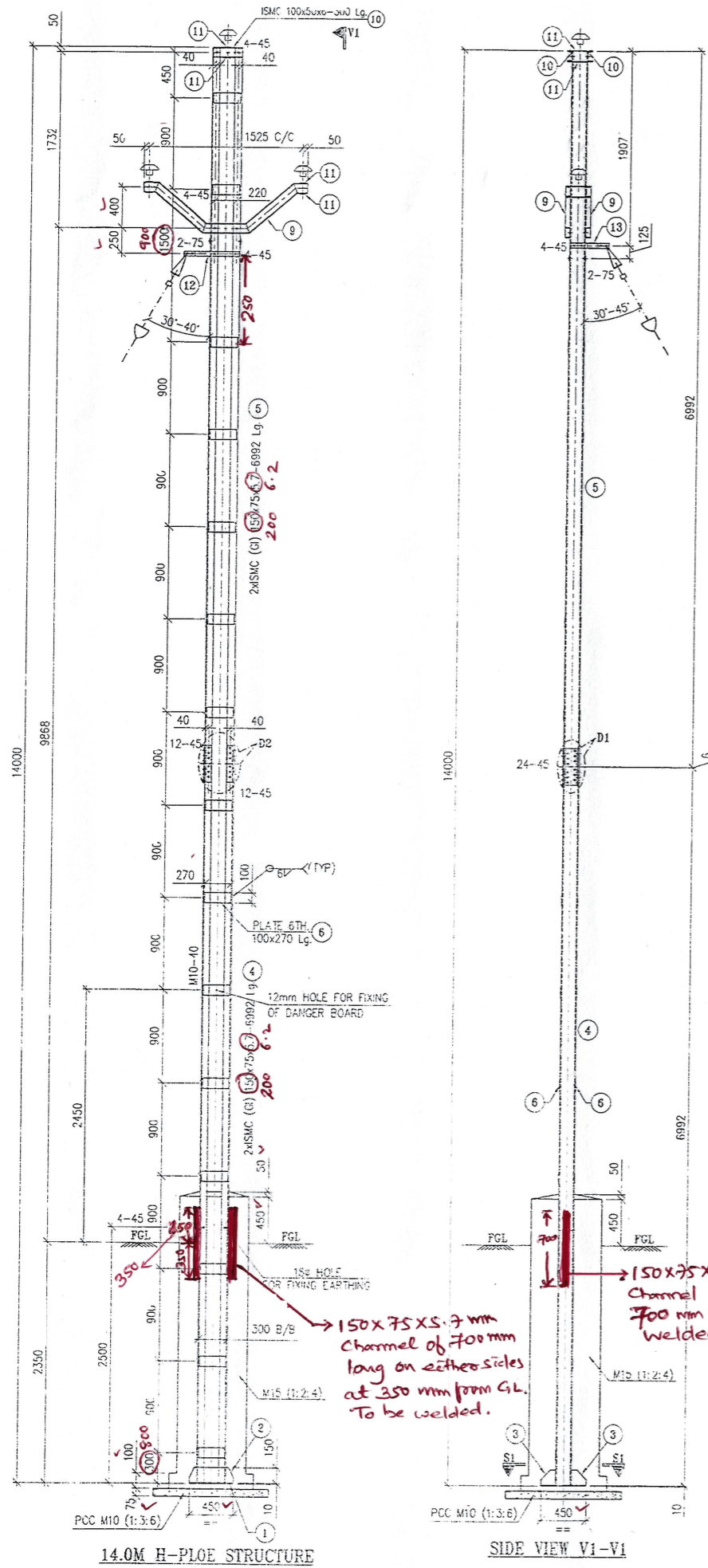
Format for Technical Pre-Bid Queries

Tender No TPCODL/P&S/100000092/2021-22

Package Name Rate contract for WPB Poles, H Poles, Angle, Channel

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	Tata Power Response
1	2	3	4	5
1	Annex 1 - Price Schedule	Line item 2, 3, 4 & 5	Detailed fabrication drg's for these items are not available	Fabrication drawings shall be shared during detailed engineering. Typical drawing of H pole is shared via mail for reference only.
2	Annex II - Technical Specs. of H Poles	ENG-HV-036, Specs. of H Pole	Drg's not available, MS Channel 200 x 80 x 8 mm (17.7 kgs/mts) is non standard, length of H-Pole not specified, Stiffener sizes not specified, 6 nos. Foundation bolts specified confirm this will be part of supply with H-Pole. Channel connection stiffeners of 100 x 270 x 5.7 mm is non standard it should be 100 x 270 x 6 mm instead	1) Vendor to prepare the fabrication drawing & same shall be discussed & reviewed during detail engineering. Design calculations to be furnished. 2) MS Channel 200 x 80 x 8 mm (17.7 kgs/mts) has been used in TPCODL. However small changes will be acceptable as long as the overall structure strength is not compromised. 3) Height / Length of H-Pole not specified- 14 Mtr 4) Appropriate stiffener size to be provided to maintained the strength of the overall structure. 5) 6 nos. Foundation bolts specified confirm this will be part of supply with H-Pole- Confirm 6) Channel connection stiffeners of 100 x 270 x 5.7 mm is non standard it should be 100 x 270 x 6 mm instead- Accepted.
3	Annex II - Technical Specs. of Galvg. Angle 50 x 50 x 6	Specs. of Galvg. Angle 50 x 50 x 6	Drg's & tech. Data Sheet missing	GTP is enclosed Galvanising shall be as per TPCODL standard
4	Annex II - Technical Specs. of Galvg. Channel 100 x 50	Specs. of Galvg. Channel 100 x 50	Drg's & tech. Data Sheet missing	GTP is enclosed. Galvanising shall be as per TPCODL standard
5	Annex II - Technical Specs. of Galvg. Channel 75 x 40	Specs. of Galvg. Channel 75 x 40	Drg's & tech. Data Sheet missing	GTP is enclosed. Galvanising shall be as per TPCODL standard

Minutes of online Prebid meeting hold on 11 August 2021 on tender number 100000092 for WPB Poles, H Poles, Angles and Channel				
Following points were discussed and agreed in the meeting:				
1. H Beam Channel section will be ISMC 200 X 75 X 6.2				
2. Stiffner plate dimension of H beam to be checked and confirmed - refer attached sample drawing for details of stiffener plate.				
3. Cross Arm, item no 9 of H beam drawing not included in scope of supplier- Bidder has to submit bid for H pole only (no V cross arm, stay clamp, etc is to be supplied with H pole)				
4. Item 10 of H beam drawing will be ISMC 100X50X5.				
5. Item no 3,4 and 5 of Tender i.e. ISA 50X50X6, ISMC 100X50X5, ISMC 75X40X4.8 are separate items and not a part of H-pole. These shall be supplied as per standard length with no fabrication. These shall be galvanized as per TPCODL standard.				
6. Foundation bolt is not required for the H-Poles				



LEGENDS:-

- FGL - FINISHED GROUND LEVEL
- TYP. - TYPICAL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE SPECIFIED.
2. ALL WELDS ARE 6MM FILLET CONTINUOUS WELD UNLESS OTHERWISE SPECIFIED.
3. SPRING WASHER SHALL CONFORM TO IS-3063.
4. ALL BOLTS NUTS AND LOCK NUTS SHALL CONFORM TO REQUIREMENTS OF INDIAN STANDARD SPECIFICATION IS : 1363/1367 (LATEST REVISION)
5. ALL PLAN WASHERS SHOULD CONFORM TO IS 2016.
6. ALL STRUCTURAL STEEL SHALL BE OF MILD STEEL GRADE E250A AS PER IS 2062:2006, SHALL BE USED.
7. ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED WITH MIN. COATING OF 610 g/Sq.m & FOR SURFACE WHICH SHALL BE EMBEDDED IN CONCRETE THE ZINC COATING SHALL BE MIN. 800 g/Sq.m AS PER TECH. SPEC. & IS: 4759 & IS: 2633.
8. FASTENING BOLTS & NUTS SHALL BE GALVANIZED AS PER TECHNICAL SPECIFICATION.
9. ALL SPRING WASHERS SHALL BE ELECTRO GALVANIZED AS PER TECHNICAL SPECIFICATION.
10. PLAIN WASHERS SHALL BE HOT DIP GALVANIZED AS PER TECHNICAL SPECIFICATION.
11. ALL BOLT HOLES ARE 17.5φ FOR M16 BOLTS UNLESS NOTED OTHERWISE.
12. 2% EXTRA NUTS & BOLTS SHALL BE PROCURED FOR ERECTION.

BILL OF QUANTITY PER STRUCTURE

Erection No.	Size / Description	Length(mm)	Quantity	Section wt/m	weight/piece	Total weight (Kg)
1	10 thk Base plate	450 x450	1	78.5	15.9	15.9
2	6 Thk Stiffener plate	150x450	2	47.1	3.18	6.36
3	6 Thk Stiffener plate	144x150	4	47.1	1.02	4.08
4	ISMC 200x75x6.2	6992	2	22.3	155.92	311.84
5	ISMC 200x75x6.2	6992	2	22.3	155.92	311.84
6	6 Thk Flat	100x270	30	47.1	1.27	38.1
7	8 Thk plate	150x356	2	62.8	3.35	6.7
8	8 Thk plate	136x356	2	62.8	3.018	6.036
9	8 Thk plate	65x356	4	62.8	1.453	5.812
10	8 Thk plate	55x356	4	62.8	1.23	4.92
11	ISMC 100x50x5	1920	2	9.56	18.35	36.7
12	ISMC 100x50x5	300	2	9.56	2.87	5.74
13	6 Thk Flat	60x300	6	47.1	0.84	5.04
14	6 Thk Flat	50x537	2	47.1	1.26	2.52
15	6 Thk Flat	50x493	2	47.1	1.16	2.32
16	150x75x5.7	700	2	16.8	11.781	23.562

TPCODL <small>TP CENTRAL ODISHA DISTRIBUTION LIMITED</small>	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
	TECHNICAL BOOKLET		
Document Title	GENERAL TECHNICAL PARTICULARS AND DRAWINGS		
Document No.	TPCODL-ENGG. -001	Issue Date: 05.07.2021	
Revision No.	00	Page 3 of 191	
Prepared by: Engineering Department	Reviewed By: Phiroj Uttaray Khajan C. Bhardwaj	Approved By: Pourush Garg	Issued By: Praveen Verma

1.0 GALVANIZATION (Spec: TPCO-OTH-010)

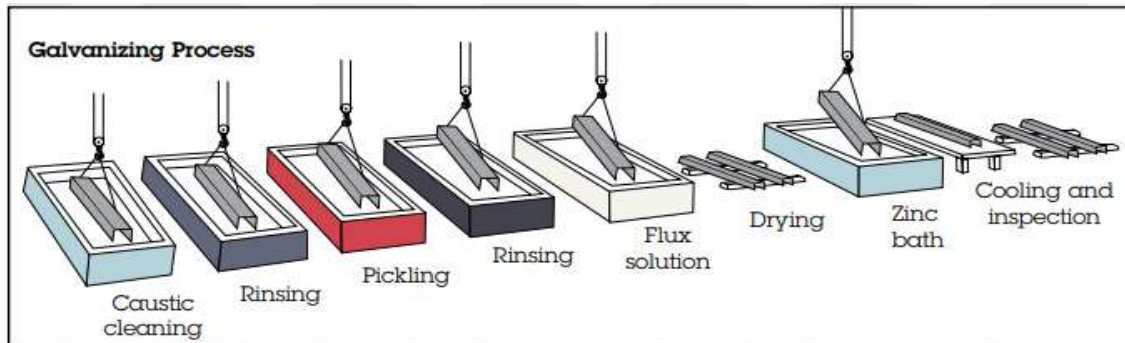
Zinc Coating thickness/ Mass of Zinc Coating to be as per mentioned in Tender /TPCODL requirements. Minimum Zinc Coating to be as detailed below:

Sl. No.	Product	Minimum Value for Average Mass of Coating (g/m ²)	Coating thickness in microns (No of Dip)
1	Fabricated steel articles:		
	a) 5 mm thick and over	705	100 (6Dip)
	b) Under 5 mm, but not less 2 mm	610	86 (5 Dip)
	c) Under 2 mm, but not less than 1.2 mm	340	48 (3 Dip)
	d) All type Steel Pole	850	120 (7 Dip)
2	Threaded items (Not bolts etc.) other than tubes and tube fittings:		
	a) 10 mm dia and over	460	65
	b) Under 10 mm dia	320	45

NOTES:

- The requirements for the minimum mass of coating shall be increased as agreed to between the galvanizer and the purchaser.

Detailed Process Flow of Galvanization Steps:



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4.0 100x50x6mm, 75x40x4.8 mm GI CHANNEL & 65x65x6mm, 50x50x6 GI ANGLE

GENERAL TECHNICAL PARTICULARS

SL. NO.	TECHNICAL PARTICULARS	DESIRED VALUE			
		100X50X6 mm	75X40x4.8 mm	65X65X6 mm	50X50X6 mm
1	Material	Hot-Dip Galvanized Channel	Hot-Dip Galvanized Channel	Hot-Dip Galvanized Angle	Hot-Dip Galvanized Angle
2	Relevant Standard	IS: 2062, IS: 2633, IS: 2629, TPCO-OTH-010.	IS: 2062, IS: 2633, IS: 2629, TPCO-OTH-010.	IS: 2062, IS: 2633, IS: 2629, TPCO-OTH-010.	IS: 2062, IS: 2633, IS: 2629, TPCO-OTH-010.
4	Grade of Steel	E 250 A	E 250 A	E 250 A	E 250 A
5	Minimum Tensile Strength	410 N/mm ²	410 N/mm ²	410 N/mm ²	410 N/mm ²
6	Yield Stress	250 N/mm ²	250 N/mm ²	250 N/mm ²	250 N/mm ²
7	Percentage Elongation (Min.) at Gauge Length	23%	23%	23%	23%
8	Bend Test (Internal Dia)	Min-2t	Min-2t	Min-2t	Min-2t
9	Mass of Zinc Coating	705 gm/m ²	610 gm/m ²	705 gm/m ²	705 gm/m ²
10	Zinc Coating Thickness	86 Micron (5 Dip)	100 Micron (6 Dip)	100 Micron (6 Dip)	100 Micron (6 Dip)
11	Chemical composition	Grade: E 250 (As per IS: 2062)	Grade: E 250 (As per IS: 2062)	Grade: E 250 (As per IS: 2062)	Grade: E 250 (As per IS: 2062)
12	Engraved Marking (Punching before galvanisation)	TPCODL, Manufacture's name or trademark,			