

CENTRALIZED CONTRACTS GROUP

Corriengum-1

31.01.2024

NIT No.: TPCODL / CCG / 23-24 / 100000551

Tender Description: Rate Contract - Supply of WPB, RS Joist, H-Pole, Rebar Lacing Pole at TPCODL, TPNODL, TPSODL & TPWODL for One Year

1.1 Scope of work

Bids are invited from interested Bidders to award Rate Contract (RC) for Procurement of WPB, RS Joist, H-Pole, Rebar Lacing Pole at TPCODL, TPNODL, TPSODL & TPWODL as mentioned below:

Sl. No.	Item Description	UOM	TPCODL Qty.	TPNODL Qty.	TPSODL Qty.	TPWODL Qty.	TOTAL QTY
1	9 Mtr WPB Pole	EA	-	1,500	276	-	1,776
2	11 Mtr WPB Pole	EA	7,000	9,022	6,316	-	22,338
3	13 Mtr WPB Pole	EA	4,000	3,621	4,725	-	12,346
4	13 Mtr. Long H-Pole	EA	1,535	-	1,026	-	2,561
5	14 Mtr. Long H-Pole	EA	300	-	-	40	340
6	RS JOIST 8 METER Pole	EA	-	-	550	-	550
7	RS JOIST 9 METER Pole	EA	-	-	550	2,000	2,550
8	11 KV Rebar Lacing Pole	EA	50	-	1,487	-	1,537
9	33 KV Rebar Lacing Pole	EA	50	-	1,070	-	1,120

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ANNEXURE-I : Price Schedule

S. No.	Item Description	Unit	Qty.	HSN/ SAC Code	Unit Ex-Work Price (Rs./ Unit)	Freight (Rs./ Unit)	GST (Rs./ Unit)	All Inclusive Unit Rate (Rs.)	Total All Inclusive Value (Rs.)
A	B	C	D	E	F	G	H	I=(F+G+H)	J=(DxI)
1	9 Mtr WPB Pole	EA	1,776						
2	11 Mtr WPB Pole	EA	22,338						
3	13 Mtr WPB Pole	EA	12,346						
4	13 Mtr. Long H-Pole	EA	2,561						
5	14 Mtr. Long H-Pole	EA	340						
6	RS Joist 8 METER Pole	EA	550						
7	RS Joist 9 METER Pole	EA	2,550						
8	11 KV Rebar Lacing Pole	EA	1,537						
9	33 KV Rebar Lacing Pole	EA	1,120						
GRAND TOTAL AMOUNT (Rs.)									

NOTE:

- Prices shall remain variable as per IEMA formula.
- The bids will be evaluated commercially on **Line-Item** basis.
- The unit price to be entered in column “F” & “G” of above table is exclusive of GST.
- The prices mentioned above shall be on FOR basis for all the TPNODL, TPCODL, TPSODL & TPWODL locations.
- Issuance of Release Orders (RO) shall be done by respective Discoms as per their requirement.
- The material shall be delivered as per the location captured in the release order.
- The bidders are advised to quote prices strictly in the above format. Failing to do so, bids are liable for rejection.
- The bidder must fill each and every column of the above format. **Mentioning “extra/inclusive”/other conditions in any of the column may lead for rejection of the price bid.**
- No cutting/ overwriting in the prices is permissible.
- The quantity mentioned above are for evaluation purpose only and may vary as per actual site requirement.

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Note:

This document shall be an integral part of the tender and bidder shall submit signed/stamped copy of this document along with technical bid, as a token of acceptance. The tender document stands modified only to the extent stipulated herein above in this document. All other terms & conditions shall be strictly followed as per Bid documents.

CONFIDENTIAL

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
	TECHNICAL SPECIFICATION	
Doc. Title	Specification For WPB Pole (9MTR)	
Doc. No	ENG-HV-WPB Pole (9MTR)	Eff. Date: 16/03/2022
Rev. No	00	Page 1 of 10
Prepared by: Ranjan Kumar Sahoo	Reviewed by: Priya Kumar Sharma	Approved & Issued By: Mahendra Kumar Pandey

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	TECHNICAL SPECIFICATION	
Doc. Title	Specification For WPB Pole (9MTR)	
Doc. No	ENG-HV-WPB Pole (9MTR)	Eff. Date: 16/03/2022
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Prepared by: Ranjan Kumar Sahoo	Reviewed by: Priya Kumar Sharma	Approved & Issued By: Mahendra Kumar Pandey

1. SCOPE:

This specification covers the design, manufacture, testing and supply of 160mm X 152mm WPB pole, 9 mtr. long having unit weight of 30.44Kg per meter. Scope also includes transportation & unloading of poles at store / site.

2. APPLICABLE STANDARDS:


The equipment covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian, International Standards and shall conform to the regulations of the local authorities:

IS 12778	Hot Rolled Parallel Flange Steel Sections for Beams, Columns and Bearing Piles - Dimensions and Section Properties
IS 2062	Hot Rolled Medium and High Tensile Structural Steel
IS 12779	Rolling and cutting tolerances for hot rolled parallel flange beam and column sections
IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
IS 2633	Methods for testing uniformity of coating of zinc coated articles
IS 4759	Hot-dip zinc coatings on structural steel and other allied products
IS 6745	Method for determination of mass of zinc coating on zinc coated iron and steel articles

3. CLIMATIC CONDITIONS OF THE INSTALLATION:

The material shall be suitable for following climatic conditions,

1. Maximum altitude above sea level	1,000m
2. Maximum ambient air temperature	50°C
3. Maximum daily average ambient air temperature	35°C
4. Minimum ambient air temperature	0°C
5. Maximum relative humidity	95%
6. Average number of thunderstorm days per annum (isokeraunic level)	70
7. Average number of rainy days per annum	120
8. Average annual rainfall	150cm
9. Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of 0.3g	

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10. Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)

11 .Wind velocity: 300 km/hr, 200 km/hr and 160 km/hr.

Environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas.

Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere.

The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1 g.

4. GENERAL TECHNICAL REQUIREMENTS:


SI.NO	TECHNICAL PARTICULARS	DESIRED VALUE
1	Length of Joist in mtr.	9mtr
2	Make	SAIL/TATA/ RINL/JINDAL (Billet with re rolling not allowed)
3	Weight in kg/m with $\pm 2.5\%$ Tolerance	30.44
4	Sectional Area (cm ²)	38.8
5	Flange slope in deg	90
6	Cutting length tolerance	100 (no negative tolerance)
7	Depth(D) of Section (mm) with ± 3.0 mm Tolerance	152
8	Width(B) of Flange (mm) with ± 0.7 mm Tolerance	160
9	Thickness of Flange (Tf) (mm) with ± 1.5 mm Tolerance	9
10	Thickness of Web (Tw) (mm) with ± 0.7 mm Tolerance	6
11	Corner Radius of fillet or root (R1) (mm)	15
12	Moment of Inertia	
a	Ixx (cm ⁴)	1673
b	Iyy (cm ⁴)	615.6
13	Radius of Gyration (cm)	
a	Rxx	6.57

TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
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SI.NO	TECHNICAL PARTICULARS	DESIRED VALUE
b	Ryy	3.98
14	Modulus of Section Zxx (cm ³)	
a	Zyy (cm ³)	220.1
b	Zxx(cm ³)	76.9
15	GI Base Plate in mm	300 x 300 x 12
16	GI Stiffener Flange in mm	150 x 60 x 6
17	GI Stiffener Web in mm	150 x 100 x 6
18	Mechanical Properties	
a)	Grade	E-350A
b)	Yield stress in Mpa	350 Min
c)	Tensile stress in Mpa	490 min
d)	Lo= (5.65 So) Elongation %	22 min
e)	Bend test	Shall not crack
19	Chemical properties	
a)	Grade	E 350A
b)	Carbon	0.2 % Max
c)	Manganese	1.55 % max
d)	Sulphur	0.045 % max
e)	Phosphorous	0.045 % max
f)	Silicon	0.45 % max
g)	Carbon equivalent	0.47 % max
h)	De oxidation method	Semi killed or killed
20	Supply condition	Hot rolled
21	Galvanizing standard	IS 2633, IS 2629
22	The zinc coating (705 gms per sq.mt / 100Micron) shall be smooth, continuous and uniform. It shall be free from acid spot and shall not scale, blister or be removable by handling or packing. Zinc Coating shall withstand for 6 dips(min) in Dip Test process for WPB Pole	705 gms per sq.mt / 100 Micron with 6 Dips(min)

5. GENERAL CONSTRUCTION:

The Wide Parallel Beam support structures shall be fabricated from mild steel, grade A and in lengths dictated by design parameters. Supplier has to supply Baseplate with dimension 300mm x 300mm x 12mm thickness along with Stiffener 150 x60x6 (flange) & 150x100x6 (web). Complete fabrication drawing shall be submitted for approval. Holes should be as per GA drawing provided by TPSODL. Arc welding to be used for fabrication / jointing of Base plate & stiffener to the pole. However, in case of any discrepancy between the above data & the relevant IS, the values indicated in the IS shall prevail. All the acceptance Tests / routine tests shall be carried out as per relevant IS. The approved makes are SAIL, JINDAL, RINL & TATA (Billet with re rolling not allowed).

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5.1 Galvanization:


WPB Pole shall be hot dip galvanized, are as following:

- a) All galvanizing shall be carried out by the hot dip process, in accordance with Specification IS 2629. However, high tensile steel nuts, bolts and spring washer shall be electro galvanized.
- b) The zinc coating (705 gms per sq.mt / 100Micron) shall be smooth, continuous and uniform. It shall be free from acid spot and shall not scale, blister or be removable by handling or packing.
- c) There shall be no impurities in the zinc or additives to the galvanic bath which could have a detrimental effect on the durability of the zinc coating. Purity of zinc shall be Zn 99.95% or better.
- d) In the event of damage to the galvanizing the method used for repair shall be subject to the approval of the Engineer in Charge or that of his representative. Repair of galvanization at site will not be permitted in any situation.
- e) The threads of all galvanized bolts and screwed rods shall be cleared of spelter by spinning or brushing. A die shall not be used for cleaning the threads unless specifically approved by the Engineer in Charge. All nuts shall be galvanized. The threads of nuts shall be cleaned with a tap and the threads oiled.
- f) Partial immersion of the work shall not be permitted and the galvanizing tank must therefore be sufficiently large to permit galvanizing to be carried out by one immersion.
- g) After galvanizing no drilling or welding shall be performed on the galvanized parts of the equipment excepting that nuts may be threaded after galvanizing. To avoid the formation of white rust galvanized materials shall be stacked during transport and stored in such a manner as to permit adequate ventilation. Sodium dichromate treatment shall be provided to avoid formation of white rust after hot dip galvanization. The galvanized steel shall be subjected to test as per IS-2633.
- h) Quality of Hot Dip Galvanization should comply with IS 2629, ISO1461 & should be guaranteed for any type of damage due to harsh climatic condition for 5 Years. These poles are to be used in coastal areas of Odisha where climate is hot, humid & saline. These areas are prone to flood & frequent rainfall.

6. MARKING:

Following distinct non-erasable embossing is to be made on each WPB Poles to be supplied to TPSODL under this Tender.

- a) ISI Mark
- b) WPB 160
- c) E-350 A
- d) Manufacturer Name/ Trade Mark

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Engraved Marking (Punching before galvanization)

- a) "TPSODL"
- b) P.O No and Date of Manufacturing

7. TESTS:

The bidder shall be required to submit complete set of the following test reports along with the offer: -

7.1 ACCEPTANCE TESTS

- i) Chemical Composition
- ii) Mechanical Properties
- iii) Dimension Test & Weight (kg/M) Visual Examination,
- iv) Test in respect of Hot Dip Galvanization i.e. Thickness of zinc coating in microns

7.2 ROUTINE TESTS

Same as Acceptance Test

7.3 TYPE TESTS


- i) Chemical Composition
- ii) Mechanical Properties
- iii) Test in respect of Hot Dip Galvanization i.e. thickness of zinc coating in microns

8. TYPE TEST CERTIFICATES:

The Bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at **CPRI/ERDA/Other Government Labs** as per relevant IS. Type tests should have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to TPSODL.

9. PRE-DISPATCH INSPECTION:

The material shall be subject to inspection by a duly authorized representative of the TPSODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to TPSODL's representatives at all times when the work is in progress. Inspection by the TPSODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the

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specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPSODL.

Following documents shall be sent along with material.

- a) Test reports
- b) MDCC issued by TPSODL
- c) TPSODL Invoice in duplicate
- d) Packing list
- e) Drawings & catalogue
- f) Guarantee / Warrantee card
- g) Delivery Challan
- h) Other Documents (as applicable).


10. INSPECTION AFTER RECEIPT AT STORE:

The material received at TPSODL, Odisha store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering department.

11. GUARANTEE:

Bidder shall stand guarantee towards design, materials, workmanship & quality of process/ manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of 54 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs. within mutually agreed timeframe, and to the entire satisfaction of the Company, failing which the Company will be at liberty to get it replaced/rectified at supplier's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the supplier or from the "Security cum Performance Deposit" as the case may be.

Galvanization Guarantee- Quality of Hot Dip Galvanization should be guaranteed for any type of damage due to harsh climatic condition for 5 Years.

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12. PACKING:

Supplier shall ensure that all material covered by this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The bidder shall provide instructions regarding handling and storage precautions to be taken at site.

13. TENDER SAMPLE:

Not Applicable

14. QUALITY CONTROL:

The bidder shall submit QAP indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

15. TESTING FACILITIES:

Supplier/ Manufacturer shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant Indian standards.

16. MANUFACTURING FACILITIES:

The successful bidder shall submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer.


17. SPARES, ACCESSORIES AND TOOLS

Not applicable.

18. DRAWINGS AND DOCUMENTS:

Following drawings and documents shall be submitted in line with the requirement of Tender specifications:

- a) Completely filled in Schedule "A" Guaranteed Technical Particulars & Schedule "B" Deviations
- b) Work Experience details
- c) Type test certificates.
- d) Drawing 1 set of Hard Copy & Soft copy PDF File containing complete information about

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manufacturing.

19. SCHEDULE- "A" GUARANTEED TECHNICAL PARTICULARS:

SI.NO	TECHNICAL PARTICULARS	TO BE FURNISHED BY BIDDER
1	Length of Joist in mtr.	
2	Make	
3	Weight in kg/m with $\pm 2.5\%$ Tolerance	
4	Sectional Area (cm ²)	
5	Flange slope in deg	
6	Cutting length tolerance	
7	Depth(D) of Section (mm) with ± 3.0 mm Tolerance	
8	Width(B) of Flange (mm) with ± 0.7 mm Tolerance	
9	Thickness of Flange (Tf) (mm) with ± 1.5 mm Tolerance	
10	Thickness of Web (Tw) (mm) with ± 1.0 mm Tolerance	
11	Corner Radius of fillet or root (R1) (mm)	
12	Moment of Inertia	
a	Ixx (cm ⁴)	
b	Iyy (cm ⁴)	
13	Radius of Gyration (cm)	
a	Rxx	
b	Ryy	
14	Modulus of Section Zxx (cm ³)	
a	Zyy (cm ³)	
b	Zxx(cm ³)	
15	GI Base Plate in mm	
16	GI Stiffener Flange in mm	
17	GI Stiffener Web in mm	
18	Mechanical Properties	
a)	Grade	
b)	Yield stress in Mpa	
c)	Tensile stress in Mpa	
d)	Lo= (5.65 So) Elongation %	
e)	Bend test	
19	Chemical properties	
a)	Grade	
b)	Carbon	
c)	Manganese	
d)	Sulphur	
e)	Phosphorous	
f)	Silicon	
g)	Carbon equivalent	
h)	De oxidation method	

TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
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SI.NO	TECHNICAL PARTICULARS	TO BE FURNISHED BY BIDDER
20	Supply condition	
21	Galvanizing standard	
22	The zinc coating (705 gms per sq.mt / 100Micron) shall be smooth, continuous and uniform. It shall be free from acid spot and shall not scale, blister or be removable by handling or packing. Zinc Coating shall withstand for 6 dips(min) in Dip Test process for WPB Pole	

20. SCHEDULE "B" DEVIATIONS:

(TO BE ENCLOSED WITH TECHNICAL BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:


SL. No	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
	TECHNICAL SPECIFICATION	
Doc. Title	Specification for GI RS Joist Poles (125x70 mm)	
Doc. No	ENG-LV-GI RS Joist Poles (125x70 mm)	Eff. Date:02.09.2022
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- 20.0 SCHEDULE OF DEVIATIONS

Initiator		HOG (Engineering)		HOD (Engineering)	
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TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
	TECHNICAL SPECIFICATION	
Doc. Title	Specification for GI RS Joist Poles (125x70 mm)	
Doc. No	ENG-LV-GI RS Joist Poles (125x70 mm)	Eff. Date:02.09.2022
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Prepared By: Ranjan Kumar Sahoo	Reviewed By: Priya Kumar Sharma	Approved & Issued By: Shirish Sharad Dikay

1.0 SCOPE:

This specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at store/site and performance GI RS Joist Poles (125 x 70mm) with all accessories for trouble free and efficient operation.

2.0 APPLICABLE STANDARDS:-

The equipment covered by this specification shall unless otherwise stated, be designed, constructed and tested in accordance with latest revisions of relevant Indian Standards and shall conform to the regulations of local statutory authorities.

The GI RS JOISTS shall comply with the requirements of latest issue of IS – 2062:2006, Grade – A , IS : 808 / 1989 / 2001 , IS : 1608 / 1995 & IS : 12777 / 1989 & their latest amendments if any.

3.0 CLIMATIC CONDITIONS OF THE INSTALLATION:

The material shall be suitable for following climatic conditions,

1. Maximum altitude above sea level	1,000m
2. Maximum ambient air temperature	50°C
3. Maximum daily average ambient air temperature	35°C
4. Minimum ambient air temperature	0°C
5. Maximum relative humidity	95%
6. Average number of thunderstorm days per annum (isokeraunic level)	70
7. Average number of rainy days per annum	120
8. Average annual rainfall	150cm
9. Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of	0.3g
10. Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of	0.15g
(g being acceleration due to gravity)	
11 .Wind velocity:	300 km/hr, 200 km/hr and 160 km/hr.

Environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas.

Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere.

The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1 g.

4.0 GENERAL TECHNICAL REQUIREMENTS & GENERAL CONSTRUCTIONS:

Rolled Steel Joints

- The Rolled Steel joist (RSJ) support structures shall be fabricated from mild steel, grade A and in lengths dictated by design parameters. The joists, may include, but shall not be limited to the following sizes:

Dimensions, GTP and Properties

Initiator		HOG (Engineering)		HOD (Engineering)	
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TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR	
	TECHNICAL SPECIFICATION	
Doc. Title	Specification for GI RS Joist Poles (125x70 mm)	
Doc. No	ENG-LV-GI RS Joist Poles (125x70 mm)	Eff. Date:02.09.2022
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Sr. No.	Particulars	Material	To be provided by Bidder
1.	Designation (DxB) (mm x mm)	RSJ 125x70	
2.	Length of joist-Meter with with +100mm/-0% Tolerance	8m	
3.	Weight (kg/M)	13.3	
4.	Sectional area (A) (Sq.cm.)	17.0	
5.	Depth of section (D) (mm)	125	
6.	Width of flange (B) (mm)	70	
7.	Thickness of flange (Tf) (mm)	8	
8.	Thickness of Web(Tw) (mm)	5	
9.	Radius of fillet or root (R ₁)(mm)	9	
10.	Radius of tow (R ₂) (mm)	4.5	
11.	Moment of Inertia (i) I _{xx} (cm ⁴)	445	
	(ii) I _{yy} (cm ⁴)	38.5	
12.	Radius of Gyration GR _{xx} (cm)	5.16	
13.	Modulus of Section (i) Z _{xx} (cm ³)	71.2	
	(ii) Z _{yy} (cm ³)	11	
14.	Tolerance in dimensions	AS PER IS: 1852	
15.	Make	SAIL/TATA/ RINL/JINDAL (Billet with re rolling not allowed)	
17	Galvanization	705 gms per sq.mt / 100 Micron with 6 Dips(min)	

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18	Supply of GI Base plate with Stiffener	300X300X12 mm	
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Mechanical Properties:

Tensile Test :	Requirement as per IS:2062/1999 Grade-A
Yeild Stress(Mpa)	Min 250
Tensile Strength(Mpa)	Min 410
Lo=(5.65 So)Elongation%	Min 23
Bend Test	Shall not Crack

Chemical Properties:

Chemical Composition	Requirement as per IS:2062/1999 Grade-A	Permissible variation over Specified
Grade	A	-
Chemical Name	Fe-410W A	-
Carbon(%Max.)	0.23	0.02
Manganese(%Max.)	1.5	0.05
Sulphur(%Max.)	0.050	0.005
Phosphorous(%Max.)	0.050	0.005
Silicon(%Max.)	0.40	0.03
Carbon Equivalent(%Max.)	0.42	-
Deoxidation Mode	Semi-killed or killed	-
Supply condition	As rolled	-

However, In case of any discrepancy between the above data & the relevant ISS, the values indicated in the IS shall prevail.

The Acceptance Tests shall be Carried out as per Relevant ISS.

125x70 mm GI RS Joists:

RS Joists of Specific Weight 13.3 kg/mtr with length of each type of pole being 8 mtrs long and each pole weighing 106.4 Kg respectively for specified number of poles with specified weight in MT as given in the NIT table given above shall have to be supplied as per IS:2062;2006 Grade"A", IS:808;1989/2001, IS1608:1995 & IS:12779-1989 and their latest amendment if any complying the required Dimension, Weight, Chemical & Mechanical properties confirming to the relevant IS, as per the Tolerance given Below


The approved makes are SAIL, JINDAL, RINL & TATA (Billet with re rolling not allowed).

After galvanizing no drilling or welding shall be performed on the galvanized parts of the equipment excepting that nuts may be threaded after galvanizing. To avoid the formation of white rust galvanized materials shall be stacked during transport and stored in such a manner as to permit adequate ventilation. Sodium dichromate treatment shall be provided to avoid formation of white rust after hot dip galvanization.

The galvanized steel shall be subjected to test as per IS-2633.

5.0 NAME PLATE AND MARKING:

Initiator		HOG (Engineering)		HOD (Engineering)	
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Embossing on each GI R.S JOIST :

Following distinct non-erasable embossing is to be made on each R.S Joists to be supplied to TPSODL under this Tender.

Name of the Owner – TPSODL

B.I.S Logo (ISI Mark).

Size of the R.S Joist : Name of manufacture: WO No & Dt.

6.0. INSPECTION, DESPATCH, Acceptance & TESTING:

(a) INSPECTION:

The supplier shall submit their offer for inspection of materials at least 10 days before actual date of inspection proposed at their factory premises. The Inspectors duly authorized by the purchaser shall be deputed to conduct the Inspection & Testing of R S Joists at the suppliers' works before dispatch, on receipt of offer for inspection from the supplier. The purchaser at his discretion may engage a third party for above inspection. The Pre-dispatch inspection shall be carried out as per relevant ISS / Tender Specification / GTP enclosed in the Purchase Order. The supplier shall extend all necessary assistance / co-operation to the authorized inspectors of the buyers.

(b) DESPATCH INSTRUCTION: The authorized inspectors shall furnish their Inspection Report to the undersigned for approval. On receipt of successful Pre dispatch inspection, the undersigned shall issue dispatch instruction to the supplier. On receipt of such dispatch instruction the materials shall be dispatched by the supplier to the consignee.

(C)ACCEPTANCE OF MATERIALS: However the lot of materials dispatched as above shall be accepted after due physical verification at our Stores in respect to dimensions & weight as per our GTP. 23

(d) RANDOM TESTING OF MATERIALS SUPPLIED AFTER DELIVERY / ACCEPTANCE: In case any doubt arises in the quality of materials supplied, the authority reserves the Right to take out a Sample Test Piece of the RS Joists from a lot delivered at our Stores, for relevant tests in the Govt. approved Testing Laboratory of their choice for confirmation of the Chemical & Mechanical properties of the materials supplied as per IS. The sample test piece so collected by the authorized representative of CESU shall be done in presence of the authorized representative of the supplier. If the materials fail to confirm the specified tests given in the relevant IS, the entire lot of the supplied materials shall be rejected & the financial loss incurred by the purchaser as ascertained by the authority shall be recovered from the supplier.


7.0 REJECTION OF MATERIALS:

In the event, any of the materials / equipment supplied by the Contractor is found defective due to faulty design, bad workmanship, bad materials used or otherwise not in conformity with the requirements of the Specification, the Purchaser shall either reject the materials / equipment or ask the Contractor in writing to rectify the same. The Contractor on receipt of such notification shall either rectify or replace the defective equipment free of cost to the Purchaser. If the Contractor fails to do so, the Purchaser may :

- a) At its option replace or rectify such defective equipment and recover the extra costs so involved from the Contractor plus fifteen percent and / or.
- b) Terminate the contract for balance work / supplies with enforcement of penalty Clause as per contract for the un-delivered goods and with forfeiture of Performance Guarantee/ Composite Bank Guarantee.
- c) Acquire the defective equipment / materials at reduced price considered equitable under the circumstances.

8.0 INSPECTION AFTER RECEIPT AT STORE:

Initiator		HOG (Engineering)		HOD (Engineering)	
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The material received at the Purchaser store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Project Engineering department.

9.0 Guarantee:

The bidder shall guarantee for satisfactory operation of the equipment for a minimum period of 12 months from the date of Commissioning or 18 months from the date of receipt of last consignment whichever is earlier. In the event of any defect in the equipment/ materials arising out of faulty design, inferior quality of raw material used or bad workmanship within the guarantee period, the Seller shall guarantee to replace/ repair to the satisfaction of the purchaser the defective equipment's free of cost. Should however, the manufacturer fails to do so within a reasonable time, the purchaser reserves the right to recover the amount from the seller either from the bills pending or may recover from the Performance Guarantee submitted by the firm.

If during the defect liability period any services performed found to be defective, these shall be promptly rectified by seller at its own cost (including the cost of dismantling and reinstallation) on the instruction of Purchaser.

10.0 PACKING:

Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit. The material used for packing shall be environmentally friendly.

11.0 Tender Sample:

NA

12.0 QUALITY CONTROL:

The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

13.0 Minimum Testing Facilities:

Bidder shall have adequate in house testing facilities for carrying out all routine tests, acceptance tests as per Indian /International standards.

14.0 Manufacturing Activities:

The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.

15.0 Spares, Accessories and Tools :


Not applicable

16.0 Drawing And Documents:

Following drawings and documents shall be prepared based on TPSODL specifications and statutory requirements and shall be submitted with the bid:

- a) Completely filled in Technical Particulars
- b) General description of the equipment and all components including brochures.
- c) General arrangement
- d) Experience List

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e) Type test certificates

After the award of the contract, four (4) copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval.

Sr. No.	Description	For Approval	For Review Information	Final Submission
1	Technical Parameters	√		√
2	GA Drawing	√		√
3	Installation Instruction			√
4	Manual/Catalogues		√	
5	QA & QC Plan	√		
6	Test Certificates	√	√	√

Bidder shall subsequently provide four (4) complete sets of final drawings. Soft copy (Compact Disk CD) of all the drawing, GTP, Test certificates shall be submitted after the final approval of the same to purchaser.

All the documents & drawings shall be in English language.

Instruction Manuals: Bidder shall furnish two softcopies (CD) and four (4) hard copies of nicely bound manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.

17.0 Guaranteed Technical Particulars:

Bidder shall submit guaranteed technical particulars.

18.0 Schedule of Deviation:

The bidders shall set out all deviations from this specification, Clause by Clause in this schedule. Unless **specifically** mentioned in this schedule, the tender shall be deemed to confirm the purchaser's specifications.

(TO BE ENCLOSED WITH THE BID)

All deviations from this specification shall be set out by the bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

S. No.	Clause No.	Details of deviation with justifications
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Initiator		HOG (Engineering)		HOD (Engineering)	
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We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature:

Designation:

Initiator		HOG (Engineering)		HOD (Engineering)	
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