

Technical Specification of Back Clamp for LT Cross Arm (MS)

Back clamp for LT Cross Arm made out of 50 x 6mm MS Flat suitable for 8m X 300 Kg PSC poles. After fabrication the cross arm shall be painted with two coats of Red Oxide primer, conforming to REC construction standard & drawing and shall be suitably designed to fit the 'LT Cross arm as well as pole.

GURANTEED TECHNICAL PARTICULARS OF BACK CLAMP FOR LT CROSS ARM

Sl. No.	Description	Unit	Bidder's offer
1	Type of Clamp		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of Construction standard		
10	Details of galvanizing method utilized and standard/ specification confirming to		
11	Whether drawing has been submitted with the bid		

Technical Specification of 11 KV V-Cross Arm (MS)

11 KV V-Cross arm made out of 75x40x6mm M.S Channel as per REC Standard A-6. The cross arm shall be fabricated out of 75x40x5mm size channel having 5.7 Kg/mtr. with 50mm x 6mm flat on top & bottom flange of the channel where the insulator pin is to be mounted. After fabrication the cross arm shall be painted with two coats of Red Oxide primer, conforming to REC construction standard & drawing.

GURANTEED TECHNICAL PARTICULARS OF 11 KV V-CROSS ARM

Sl. No.	Description	Unit	Bidder's offer
1	Type of cross arm		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard.		
5	Dimensions.	Mm	
6	Steel section utilized.		
7	Steel tensile strength.	N/cm ²	
8	Working load.	Kg	
9	Details of Construction standard.		
10	Details of galvanizing method utilized and standard/ specification confirming to		
11	Whether drawing has been submitted with the bid.		

Technical Specification of Back Clamp for 11 KV 'V'-Cross Arm (MS)

Back clamp for 11 KV 'V' - Cross arm made out of 50 x 8mm MS Flat suitable for 9m X 300 Kg PSC poles. After fabrication the cross arm shall be painted with two coats of Red Oxide primer, conforming to REC construction standard & drawing and shall be suitably designed to fit the 'V' -Cross arm as well as pole.

GURANTEED TECHNICAL PARTICULARS OF BACK CLAMP FOR 11 KV "V"- CROSS ARM

Sl. No.	Description	Unit	Bidder's offer
1	Type of Clamp		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of Construction standard		
10	Details of galvanizing method utilized and standard/specification confirming to		
11	Whether drawing has been submitted with the bid		

Technical Specification of 11KV F-Clamp (Pole Top Bracket) (MS)

11 KV line pole top bracket (F Clamp) made out of 50x8 mm M.S Flat with two coat of red-oxide primer, confirming to REC Construction Standard.A-7 & drawing and suitable designed to fit 8mtr, 9mtr, 11mtr and 13mtr PSC and Joist Pole.

GURANTEED TECHNICAL PARTICULARS OF 11KV F-CLAMP (POLE TOP BRACKET)

Sl. No.	Description	Unit	Bidder's offer
1	Type of cross arm		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of Construction standard		
10	Details of galvanizing method utilized and standard/specification confirming to		
11	Whether drawing has been submitted with the bid		

Technical Specification of 33 KV ‘V’-Cross Arm (MS)

33 KV ‘V’-Cross arm made out of 100x50x6.4 mm M.S Channel as per REC Standard M-1. The cross arm shall be fabricated out of 100x50x6 mm size channel having 7.9Kg/mtr. After fabrication the cross arm shall be painted with two coats of Red Oxide primer, conforming to REC construction standard & drawing

GURANTEED TECHNICAL PARTICULARS OF 33 KV V-CROSS ARM

Sl. No.	Description	Unit	Bidder’s offer
1	Type of cross arm		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of Construction standard		
10	Details of galvanizing method utilized and standard/ specification confirming to		
11	Whether drawing has been submitted with the bid		

Technical Specification of Back Clamp for 33 KV ‘V’- Cross Arm (MS)

Back clamp for 33 KV ‘V’-Cross arm made out of 50x8 mm MS Flat. After fabrication the cross arm shall be painted with two coats of Red Oxide primer, conforming to REC construction standard & drawing and shall be suitably designed to fit the ‘V’-Ccross arm as well as pole.

GURANTEED TECHNICAL PARTICULARS OF BACK CLAMP FOR 33KV ‘V’ CROSS ARM

Sl. No.	Description	Unit	Bidder’s offer
1	Type of Clamp		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of galvanizing method utilized and standard/ specification conforming to?		
10	Details of galvanizing method utilized and standard/ specification confirming to		
11	Whether drawing has been submitted with the bid		

Technical Specification of 33 KV F-Clamp (Pole top Bracket) (MS)

33 KV line pole top brackets made out of 65x65x6 mm M.S Angle and 100x50x6.4 M.S Channel welded together as per REC Standard M-4, after fabrication the cross arm shall be painted with two coats of Red Oxide primer, confirming to REC Construction Standard & drawing and suitable designed to fit 8mtr, 9mtr, 11mtr and 13mtr PSC and Joist Pole.

GURANTEED TECHNICAL PARTICULARS 33KV F-CLAMP (POLE TOP BRACKETS)

Sl. No.	Description	Unit	Bidder's offer
1	Type of cross arm		
2	Grade of steel		
3	Steel standard		
4	Fabrication Standard		
5	Dimensions	Mm	
6	Steel section utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Details of Construction standard		
10	Details of galvanizing method utilized and standard/ specification confirming to		
10	Whether drawing has been submitted with the bid		

Technical Specification of HT & LT Stay Set

1. SCOPE:-

This specification covers design, manufacture, testing and dispatch of LT Stay Sets of 16 mm and HT stay sets 20 mm dia.

2. GENERAL REQUIREMENTS:-

A. 16 MM Dia Stay sets (Galvanized) – LT Stay Set

This stay sets (Line Guy set) will consist of the following components:-

i. Anchor Rod with one washer and Nut

Overall length of rod should be 1800 mm to be made out of 16 mm dia GI Rod, one end threaded up to 40 mm length with a pitch of 5 threads per cm and provided with one square GI washer of size 40X40x1.6mm and one GI hexagonal nut conforming to IS:1367:1967 & IS:1363:1967. Both washer and nut to suit threaded rod of 16 mm dia. The other end of the rod to be made into a round eye having an inner dia of 40mm with best quality welding.

ii. Anchor Plate Size 200 x 200 x6 mm

To be made out of GI plate of **6 mm thickness**. The anchor plate should have at its centre 18 mm dia hole.

iii. Turn Buckle

(a) Eye Bolt with 2 Nuts:- To be made of 16 mm dia GI Rod having an overall length of 450mm, one end of the rod to be threaded up to 300 mm length with a pitch of 5 threads per cm and provided with two GI Hexagonal nuts of suitable size conforming to IS:1363:1967 & IS:1367:1967. The other end of rod shall be rounded into a circular eye of 40mm inner dia with proper and good quality welding.

(b) Bow with Welded Angle:- To be made out of 16mm dia GI rod. The finished bow shall have an overall length of 995 mm and eight of 450 mm, the apex or top of the bow shall be bent at an angle of 10 R. The other end shall be welded with proper and good quality welding to a GI angle 180 mm long having a dimension of 50x50x6mm. The angle shall have 3 holes of 18 mm dia each.

iv. Thimble- 2nos.

To be made on 1.5 mm thick GI sheet into a size of 75x22x40mm and shape as per standard shall be supplied.

v. Welding:

The minimum strength of welding provided on various components of 16mm dia. stay sets shall be 3100kg. Minimum 6mm fillet weld or its equivalent weld area should be deposited in all positions of the job i.e. at any point of the weld length. The welding shall be conforming to relevant IS: 823/1964 or its latest amendment.

vi. Threading:

The threads on the Anchor Rods, Eye Bolts and Nuts shall be as per specification IS; 4218:1967 (ISO Metric Screw Threads). The Nuts shall be conforming to the requirements of IS: 1367:1967 and have dimension as per IS 1363:1967. The mechanical property requirement of fasteners shall conform to the properly clause 4.6 each for anchor rods and Eye bolt and property clause 4 for nuts as per IS: 1367:1967.

Average Weight of Finished 16mm Stay Sets shall be at least 7.702 KG (Minimum)
(Excluding Nuts Thimbles and Washer): 8.445 Kg. (Maximum)

B. 20 mm Dia Stays Sets for 11KV/ 33KV Lines (Galvanized)-HT Stay Set

The Stay Set (Line Guy Set) will consist of the following components:

i. Anchor Rod with one Washer and Nut

Overall length of Rod should be 1800mm to be made out of 20 mm dia GI rod one end threaded up to 40 mm length with a pitch of threads per cm. And provided with one square G.I Washer of Size 50x50x1.6mm and one GI Hexagonal nut conforming to IS: 1363:1967 & IS:1367:1967. Both washer and nut to suit the threaded rod of 20mm. The other end of the rod to be made into a round eye having an inner dia of 40mm with best quality of welding. Dimensional and other details are indicated and submitted by bidders for owner's approval before start of manufacturing.

ii. Anchor Plate Size 300 x 300 x 8 mm

To be made out of G.S. Plate of **8 mm thickness**. The Anchor plate to have at its centre 22mm dia. hole.

iii. Turn Buckle

(a) **Eye Bolt with 2 Nuts**:- To be made of 20 mm dia G.S Rod having an overall length of 450 mm. One end of the rod to be threaded up to 300 mm length with a pitch of 4 threads per cm. The 20 mm dia bolt so made shall be provided with two G.I Hexagonal nuts of suitable size conforming to IS: 1363:1967 & IS:1367:1967. The other end of the rod shall be rounded into a circular eye of 40mm inner dia with proper and good quality of welding.

(b) **Bow with Welded Channel**:- To be made out of 20mm dia G.S Rod. The finished bow shall have an overall length of 995 mm and height of 450 mm. The apex or top of the bow shall be bent at an angle of 10 R. The other end shall be welded with proper and good quality welding to a G.S Angle 200 mm long having a dimension of 100x50x4.7 mm. The Channel shall have 3 holes of 22mm dia hole at its centre.

iv. Thimble- 2 Nos.

To be made of 1.5 mm thick G.I sheet into a size of 75x22x40mm and shape as per standard.

v. Galvanizing

The complete assembly shall be hot dip galvanized.

vi. Welding

The minimum strength of welding provided on various components of 20mm dia. stay sets shall be 4900kg. Minimum 6mm fillet weld or its equivalent weld area should be deposited in all positions of the job i.e. at any point of the weld length. The welding shall be conforming to relevant IS: 823/1964 or its latest amendment.

vii. Threading

The threads on the Anchor Rods, Eye Bolts and Nuts shall be as per specification IS; 4218:1967 (ISO Metric Screw Threads). The Nuts shall be conforming to the requirements of IS: 1367:1967 and have dimension as per IS 1363:1967. The mechanical property requirement of fasteners shall conform to the properly clause 4.6 each for anchor rods and Eye bolt and property clause 4 for nuts as per IS: 1367:1967.

Average Weight of finished 20mm Stay Sets shall be at least 14.523Kg. (Minimum)

(Excluding Nuts Thimbles and Washer): 15.569 Kg. (Maximum)

3. TESTS

The contractor shall be required to conduct testing of materials at Govt. /Recognized

testing laboratory during pre-dispatch inspection for Tensile Load of 3100 Kg/4900Kg. applied for one minute on the welding and maintained for one minute for 16 mm and 18mm dia stay sets respectively.

4. IDENTIFICATION MARK

All stay sets should carry the identification mark of the Purchaser (WESCO) applicable.

This should be engraved on the body of stay rods to ensure proper identification of the materials. The nuts should be of a size compatible with threaded portion of rods and there should be not play or slippage of nuts.

Welding wherever required should be perfect and should not give way after erection.

5. TOLERANCES

The tolerances for various components of the stay sets are indicated below subject to the condition that the average weight of finished stay sets of 16mm dia excluding nuts, thimbles and washers shall not be less than the weight specified above:-

Guaranteed Technical Particulars of HT & LT Stay Set

(To be submitted along with Offer)

Sl No	Item Description	Specified Parameters			Bidder's Offer
		Section Tolerances	Fabrication Tolerances	Material	
1	Anchor Plate	6mm thick +12.5%- 5%	200x200mm+1%	GI Plate 6mm thick	LT Stay Set
		8mm thick +12.5%- 5%	300x300mm+1%	GI Plate 8mm thick	HT Stay Set
2	Anchor Rod	16mm dia. +5%-3%	Length 1800mm+0.5% Rounded Eye- 40mm inside dia. + 3% Threading-40mm +11%-5%	GI Round 16mm dia	LT Stay Set
		20mm dia. +3%-2%	Length 1800mm+0.5% Round Eye-40mm inside dia. +3%. Threading-40mm +11%-5%	GI Round 20mm dia.	HT Stay Set
3	Turn Buckle Bow	16mm dia. +5%-3%	Length 995mm+1%	GI Round- 16mm dia.	LT Stay Set
			Length 180mm+1%	GI Angle 50X50X6mm	
		20mm dia. +5%-3%	Length 995mm+1%	GI Round 20mm dia	HT Stay Set
		Length 200mm + 1%	GI Channel 100x50x4.7mm		

4	Eye Bolt Rod	16mm dia. +5% - 3%	Length 450mm + 1% Threading 300mm+1% Round Eye-40mm inside dia.+3%	GI Round 16mm dia	LT Stay Set	
		20mm dia. +3% - 2%	Length-450mm+ 1% Threading 300mm+1% Round Eye- 40mm inside dia.+3%	GI Round 20mm dia.	HT Stay Set	
5	Galvanization thickness	All galvanization shall be carried out in accordance with IS: 2629.The weight of Zinc deposited shall be in accordance with IS:2629 and shall not less than 0.61Kg/m2 with a minimum thickness of 86 micron for items of thickness more than 5mm,0.46Kg/m2(64 micron)for items of thickness between 2mm & 5mm and 0.33Kg/m2(47 microns)for items less than 2mm thickness.				
A	Anchor Plate					
B	Anchor Rod					
C	Turn Buckle					
D	Eye Bolt Rod					
6	Thimble	2 nos to be made of 1.5 mm thick G.S Sheet in to a size 75x22x40 mm and shape as per standard.				
7	Nut & Washer	One G.S Hexagonal Nut conforming to IS:1363 & 1367 with one square washer of size 50x50x6 mm (G.S) along with Anchor Rod				
8		Two G.S Hexagonal Nuts of suitable size along with Eye Bolt Rod				

Technical Specification of HT Stay Clamp

HT stay clamp suitable for PSC poles made out of 50x8 mm M.S Flat, confirming to latest IS Specification. After fabrication the clamp for HT stay clamp shall be painted with two coats of Red Oxide, conforming to REC construction standard and drawing.

1. Scope:

The HT Stay Clamp shall be made out of 50 x 8 M.S Flat as per Drawing and shall be suitably designed to fit 9 Mtr x 300 Kg / 8 Mtr x 200 Kg PSC Poles

GURANTEED TECHNICAL PARTICULARS OF HT STAY CLAMP

Sl. No.	Description	Unit	Bidder's offer
1	Type of Clamp		
2	Grade of steel		
3	Steel standards		
4	Fabrication Standards		
5	Dimensions	mm	
6	Steel sections utilized		
7	Steel tensile strength	N/cm ²	
8	Working load	Kg	
9	Weight of stay Clamp	Kg	
10	Whether drawing has been submitted with the bid	Conforming to REC standard	

TECHNICAL SPECIFICATIONS OF (7/10 SWG), (7/12 SWG) & (7/8 SWG) G.I. STAY WIRE

1. Application Standards:-

Except when they conflict with the specific requirements of this specification, the G.I Stay Stranded Wires shall comply with the specific requirements of IS: 2141-1979. IS: 4826-1979 & IS: 6594-1974 or the latest versions thereof.

2. Application and Sizes:-

The G.I. stranded wires covered in this Specification are intended for use on the overhead power line poles, distribution transformer structures etc.

The G.I stranded wires shall be of 7/8SWG (7/4 mm) for 33KV lines, 7/10SWG (7/3.15 mm) for 11KV lines and 7/12 SWG (7/2.5 mm) for LT lines standard sizes.

3. Materials:-

The wires shall be drawn from steel made by the open hearth basic oxygen or electric furnace process and of such quality that when drawn to the size of wire specified and coated with zinc, the finished strand and the individual wires shall be of uniform quality and have the properties and characteristics as specified in this specification. The wires shall not contain sulphur and phosphorus exceeding 0.060% each.

Tensile Grade

The wires shall be of tensile grade 4, having minimum tensile strength of 700 N/mm² conforming to IS:2141.

General Requirements

The outer wire of strands shall have a right-hand lay.

The lay length of wire strands shall be 12 to 18 times the strand diameter.

Minimum Breaking Load

The minimum breaking load of the wires before and after stranding shall be as follows:

No. of Wires & Const.	Wire Dia (mm)	Min. breaking load of the Single wire before stranding (KN)	Min. breaking load of the standard wire (KN)
7 (6/1)	2.5	3.44	21.40
7 (6/1)	3.15	5.46	34.00
7 (6/1)	4.0	8.80	54.9

4. Construction

The galvanized stay wire shall be of 7-wire construction. The wires shall be so stranded together that when an evenly distributed pull is applied at the ends of completed strand, each wire shall take an equal share of the pull. Joints are permitted in the individual wires during stranding but such joints shall not be less than 15 meters apart in the finished strands.

The wire shall be circular and free from scale, irregularities, imperfection, flaws, splits and other defects.

5. Tolerances

A tolerance of (+) 2.5% on the diameter of wires before stranding shall be permitted.

6. Sampling Criteria

The sampling criteria shall be in accordance with IS :2141.

7. Tests on Wires before Manufacture

The wires shall be subjected to the following tests in accordance with IS: 2141.

Ductility Test Tolerance on Wire Diameter

Tests on Completed Strand

The completed strand shall be tested for the following tests in accordance with IS: 2141.

Tensile and Elongation Test: The percentage elongation of the stranded wire shall not be less than 6%.

Chemical analysis Galvanizing Test

The Zinc Coating shall conform to "Heavy Coating" as laid down in IS:4826

8. Marking

Each coil shall carry a metallic tag, securely attached to the inner part of the coil bearing the following information:

- a) Manufacturers name or trade mark
- b) Lot number and coil number
- c) Size
- d) Construction
- e) Tensile Designation
- f) Lay
- g) Coating
- h) Length
- i) Mass
- j) ISI certification mark, if any

9. Packing

The wires shall be supplied in 75-100 Kg. coils. The packing should be done in accordance with the provisions of IS:6594

GURANTEED TECHNICAL PARTICULARS OF (7/10 SWG), (7/12 SWG) & (7/8 SWG)

GI STAY WIRE

(To be submitted along with offer)

Sl. No.	Description of Technical Particulars	Bidder's Offer		
		7/10SWG	7/12 SWG	7/8 SWG
1	Nominal diameter of wire			
2	Tolerance in diameter			
3	Sectional Area (In Sq. mm.)			
4	Tensile strength			
a.	Min. N/mm ²			
b.	Max. N/mm ²			
5	Minimum breaking load (KN)			
6	Type of coating Heavy/Medium/Light			

7	Variety Hard/Soft			
8	Weight of Zinc coating (Gms/Sq. Mtr.) Min.			
9	No. of dips the coating is able to withstand as $18 \pm 20^{\circ}\text{C}$			
10	Adhesion Test (Wrap Test at 1 turn per second coiling while stress not exceeding % nominal tensile strength)			
a.	Min. complete turn of wrap			
b.	Dia. of mandrel on which wrapped			
11	Bend Test			
a.	Angle			
b.	Dia. round a format to be bent			
12	Freedom from defect			
13	Chemical composition the MS Wire used shall not exceed			
a.	Sulphur- 0.060%			
b.	Phosphorous- 0.065%			

TECHNICAL SPECIFICATIONS OF No.-6 & No.-8 G.I. Wire for Earthing

1. SCOPE:-

The specification covers manufacture, testing and supply of hot dip galvanized MS solid wire of sizes 6 SWG (5 mm) & 8 SWG (4 mm).

2. Applicable Standards Zinc:-

Zinc shall conform to grade Zen 98 specified in IS 209 & IS 4826-1979 with up to date amendments.

Zinc Coating

Zinc coating shall be in accordance with IS: 4826-1979 for heavily coated hard quality.

Galvanizing

Galvanizing shall be as per IS: 2629-1966, IS 4826-1979 with up to date amendments.

Uniformity of Zinc Coating

Uniformity of zinc coating shall be as per IS: 2633-1972 with up to date amendments.

Tensile Properties

The tensile strength of wire after galvanizing shall be between 55-95Kg/ sq.mm ensuring MS wire mechanical properties as per IS-28:1972, 8.1 to 8.3

Freedom from Defects

As per IS: 2629-1966 & 4826-1979 & with up to date amendments be ensured.

3. TESTS:-

During the process of manufacturer/fabrication and all tests for chemical, mechanical, galvanizing as per IS: 280-1979, IS: 1521-1972, IS: 755-1961, IS: 6745-1972 & IS: 4826-1979 shall be carried out. The certificate towards chemical composition shall be submitted for each lot offered for inspection.

The following tests shall be conducted in presence of the representative of the purchaser:

- a) Visual physical inspection and measurement of specified dimension
- b) Coating test as per IS: 1755-1961, IS 2629-1966, IS: 2633-1972, IS: 4826-1969
- c) Adhesion test as per IS: 1755-1961, IS: 2629-1966, IS: 2633-1972, IS: 4826-1969 & IS: 6745-1972
- d) Tensile strength and breaking load and elongation determined as per IS: 1521-1972 with up to date amendments

4. Packing & Marking

Packing shall be as per IS: 280-1979 and each coil shall be between 50-100kg. Marking shall be as per IS: 280-1972.

GURANTEED TECHNICAL PARTICULARS OF No.-6 & No.-8 G.I. Wire for Earthing

Sl. No.	Description	Bidder's Offer	
		No.-6 SWG	No.-8 SWG
1)	Nominal diameter of wire		
2)	Tolerance in diameter		
3)	Sectional Area (In Sq. mm.)		
4)	Tensile strength		
a)	Min. N/mm ²		

b)	Max. N/mm ²		
5)	Minimum breaking load (KN)		
6)	Type of coating Heavy/Medium/Light		
7)	Variety Hard/Soft		
8)	Weight of Zinc coating (Gms./Sq. Mtr.) Min.		
9)	No. of dips the coating is able to withstand as 18 ± 20°C		
10)	Adhesion Test (Wrap Test at 1 turn per second coiling while stress not exceeding % nominal tensile strength) exceeding % nominal tensile strength)		
a)	Min. complete turn of wrap		

TECHNICAL SPECIFICATIONS OF PIPE EARTHING 40 MM GI PIPE

1. **SCOPE:-** This specification provides for design, manufacturing, testing before dispatch, supply & delivery of Earthing Device (Heavy Duty) (for use in Sub-station earthing).
2. **DESCRIPTION OF THE MATERIALS & APPLICABLE STANDARD:-**

The Earthing Device must be made out of 40 mm nominal Bore & 3.2 mm (Medium Gauge with no negative Tolerance allowed) wall thickness Hot Dip G.I. Pipe (as per IS: 1239 (Part-1) 1990 & REC construction Standard: J-2), ISI marked of reputed Make & 2.5 mtrs length tapered finished smooth at one end for a length of 75 mm & Clamp at the other end. Staggered drills hole of 12 mm Dia. of interval of 150 mm shall be made before galvanization.

The GI Earthing Clamp/ Strip (C- Clamp Type) is to be of 50 mm width, 6 mm thickness & flange length of 65 mm in each side. This should be suitable for termination of 4 nos. of GI No. 6 SWG wire earth electrodes. The Clamp/ Strip & Earthing pipe after fabrication will be hot dip galvanized with a minimum thickness of 80 micron confirming to IS: 2629/85 with latest amendments. The clamp shall have two holes in both sides suitable for 5/8 x 2" Bolt & provided with two GI bolts & Nuts in each side of 5/8 x 2" long half threaded with spring washer as per IS: 3043/1982. The galvanization tests are to be conducted as per IS: 2633/72 & IS: 6745/72 & its latest amendments.

GURANTEED TECHNICAL PARTICULARS OF PIPE EARTHING 40 MM GI PIPE

Sl. No.	Description	Requirement as per Tender norms	Bidder's Offer
1)	Location of Factory or Place of Manufacture		
2)	Maker's Name, Address & Country		
3)	Size of:		
a.	Pipe	40 mm (minimum)	
b.	Earthing Strips	MS Pipe	
4)	Length	50 x 6	
5)	Thickness of Pipe	3.2 mm (minimum)	
6)	Galvanization Process	7 Tank Process with Hot Dip	
7)	Galvanization thickness:	86 micron (minimum)	
a.	For Earthing device	610 gm/m sq (minimum)	
b.	For Connecting No. 6 SWG Wire.		
8)	Galvanization tests to be conducted as per ISS	IS:2633/72 & IS:6745/72	
9)	Any other Particulars (like details of Clamp/G.I. Bolts)		
10)	Details of Drawings to be submitted		