

1X660MW BHUSAWAL TPS
BOQ CUM PRICE SCHEDULE OF LIGHTING POLES


S. No.	ITEM CODE	DESCRIPTION	UNIT	QUANTITY
1	558-14011-A	POLES TYPE PS1 (PAINTED)	NOS	110
2	558-14012-A	POLES TYPE PS2 (PAINTED)	NOS	200
3	558-14010-A	POLES TYPE PF2 (PAINTED)	NOS	65

GEM PARAMETERS FOR LIGHTING POLES

		For BOQ Item Code 558-14011-A POLES TYPE PS1 (PAINTED)	For BOQ Item Code 558-14012-A POLES TYPE PS2 (PAINTED)	For BOQ Item Code 558-14010-A POLES TYPE PF2 (PAINTED)
1	Designation of Tubular steel poles as per table 2 of IS 2713/80 Part-2 with amdt No 1	410SP-51	410SP-67	410SP-51
2	Length of Tubular steel poles (Metre)	11	13	11
3	Coating on the tubular steel poles	Bitumen coated as per Clause 13.1 of IS 2713 part1/1980		
4	Type of steel poles	Swaged (SP)	Swaged (SP)	Swaged (SP)
5	BIS Marked	Yes		

ADDITIONAL PARAMETERS

		For BOQ Item Code 558-14011-A POLES TYPE PS1 (PAINTED)	For BOQ Item Code 558-14012-A POLES TYPE PS2 (PAINTED)	For BOQ Item Code 558-14010-A POLES TYPE PF2 (PAINTED)
1	Tubular steel poles shall be conforming to IS 2713/80 (Part-1&2) with amdt No-1 latest	Yes		
2	Grade of steel tube	YST 240 as per IS 1161/ 1998		
3	Base plates	Base plates- Required, Base Plate shall be as per clause 15 of IS 2713(Part-1)/1980		
4	Bracket Arm	Street Lighting Pole for one luminaire with 1200mm bracket arm	Street Lighting Pole for one luminaire with 1800mm bracket arm	Flood Lighting Pole with suitable mounting arrangement for two flood light luminaires
5	i) Availability of Type Test Reports of the product from Central Govt/NABL/ILAC accredited Lab showing compliance to the specification ii) Test report and approvals to be furnished to the buyer on demand	i) Yes ii) Yes		
6	Junction Box: - i) Enclosure Material ii) Enclosure Thickness iii) Degree of Protection iv) Surface Treatment	Junction Box: External i) Enclosure Material: CRCA ii) Enclosure Thickness: 2 mm iii) Degree of Protection: IP-55 (Weather proof) iv) Surface Treatment : Hot Dip Galvanised (Zn coating 460gm/m ² min Wt, 70 Micron Average Thickness)		
7	i) Cable Gland of Nickel Plating, Brass, Double Compression Type ii) Size Suitable for Cable Size: iii) Cable lugs of Tinned Copper, Crimping Type	i) Cable Gland of Nickel Plating, Brass, Double Compression Type: Yes ii) Size Suitable for Cable Size: 3.5Cx25 Sq.mm Al Armoured iii) Cable lugs of Tinned Copper, Crimping Type : Yes		
8	Painting & Coating	The pole shall be coated with bituminous preservative paint on inside as well as embedded outside surface. Exposed surface shall be coated with two coats of metal primer (comprising red oxide and zinc chromate in synthetic medium)		

	MANUFACTURER / BIDDER / SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-RC-999-558-E004, R0	DATE:
		CUSTOMER :		QP NO.: PE-QP-999-558-E004, REV.01	DATE: 20.03.2021
		PROJECT:		PO NO.:	DATE:
		ITEM: POLE (SWAGED/STEPPED)	SYSTEM: POLES & MAST	SECTION:	SHEET 1 OF 4

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY				REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	


1.0 RAW MATERIAL

1.1	Steel Tube	(a) Chemical composition	Major	Chemical Analysis	Sample: IS-4711, Annex-A	same as 6M	IS-2713, IS:228	IS-2713,IS:228	INSPN REPORT, TEST CERTIFICATES	√	P	V	V	
1.2		(b) Physical Properties	Major	Physical tests	Sample: IS 4711, Table-2	same as 6M	IS- 2713, IS:1161 & IS : 1608	IS- 2713, IS : 1161 & IS : 1608	INSPN REPORT, TEST CERTIFICATES	√	P	V	V	COLD BEND TEST NEED NOT BE CARRIED OUT

2.0 IN PROCESS INSPECTION

2.1	Galvanization	Temperature of bath	Major	Measurement	Continuous	-	IS-2629	IS-2629	QC Record		P/V	-	-	
2.2		Dross	Major	Visual	Periodic	-	IS-2629	IS-2629	QC Record		P/V	-	-	
2.3		Rate of immersion	Major	Visual	100%	-	IS-2629	IS-2629	QC Record		P/V	-	-	
2.4		Surface finish	Major	Visual	100%	-	IS-2629	Free from burrs, roughness, slag flux, stain etc.	QC Record		P/V	-	-	

BHEL						BIDDER/ SUPPLIER		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
Prepared by:	Sign & Date	Name	Checked By:	Sign & Date	Name	Seal			Sign & Date	Name	Seal
HARI CHAND		Hari Chand	Suman Nakwal		Suman Nakwal						
Reviewed by:			Reviewed By:					Reviewed by:			
PRAVEEN DUTTA		Praveen Dutta	Ritesh Kumar Jaiswal		Ritesh Kumar Jaiswal			Approved by:			


	MANUFACTURER / BIDDER / SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-RC-999-558-E004, R0	DATE:
		CUSTOMER :		QP NO.: PE-QP-999-558-E004, REV.01	DATE: 20.03.2021
		PROJECT:		PO NO.:	DATE:
		ITEM: POLE (SWAGED/STEPPED)	SYSTEM: POLES & MAST	SECTION:	SHEET 2 OF 4

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY				REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	

3.0 FINAL INSPECTION


3.1	Lighting Pole	Workmanship & Finish	Major	Visual	Sample: 20%	same as 6M	BHEL Approved Drawing/ IS:2713, IS 1161	BHEL Approved Drawing/ IS:2713, IS 1161	Inspection Report	√	P	W	W	
3.2		Dimensions	Major	Visual & Measurement	Sample: 20%	same as 6M	BHEL Approved Drawing/ APPD DRG/ APPD DATASHEET/ IS-2713	BHEL Approved Drawing/ APPD DRG/ APPD DATASHEET/ IS-2713	Inspection Report	√	P	W	W	
3.3		Weight	Major	Visual & Measurement	Sample: 20%	same as 6M	BHEL Approved Drawing/ APPD DRG/ APPD DATASHEET/ IS-2713	BHEL Approved Drawing/ APPD DRG/ APPD DATASHEET/ IS-2713	Inspection Report	√	P	W	W	
3.4		Tests as per IS-2713 Cl. No 10.0 a) Tensile test and chemical analysis for	Critical	Physical Tests	Sample: IS-2713	same as 6M	IS-2713	IS-2713	Inspection Report	√	P	W	W	

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ENGINEERING			QUALITY			Sign & Date		Doc No:			
	Sign & Date	Name		Sign & Date	Name	Seal			Sign & Date	Name	Seal
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								Reviewed by:			
								Approved by:			

	MANUFACTURER / BIDDER / SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-RC-999-558-E004, R0	DATE:
		CUSTOMER :		QP NO.: PE-QP-999-558-E004, REV.01	DATE: 20.03.2021
		PROJECT:		PO NO.:	DATE:
		ITEM: POLE (SWAGED/STEPPED)	SYSTEM: POLES & MAST	SECTION:	SHEET 3 OF 4

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY				REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	
		Sulphur and phosphorus, b) Deflection test, c) Permanent set test, and d) Drop test.												
3.5		Galvanizing (as applicable)	Major	Measurement	Sample: IS4759 (Table-2)	Random	BHEL Approved Drawing/ data sheet/IS2629,2633,4759	BHEL Approved Drawing/ data sheet/IS2629,2633,4759	Inspection Report	√	P	W	W	
3.6		a. Paint shade (painting as applicable)	Major	Visual	Sample: 20%	same as 6M	BHEL Specification	BHEL Specification	Inspection Report	√	P	W	W	
		b. Painting thickness(painting as applicable)	Major	Visual	Sample : 20%	same as 6M	IS 2713 Cl. 13	IS 2713 Cl.13	Inspection Report	√	P	W	W	
3.7		Marking	Major	Visual	Sample: 20%	same as 6M	IS-2713	IS-2713	Inspection Report	√	P	W	W	
4.0	Accessories (including Steel Pole Junction boxes, MS plate, fixing brackets, pipe reducer, Cable glands,	Physical	MA	Visual	1 Lot	--	Approved datasheet/ Dwg.	Approved datasheet/ Dwg.	Inspection Report	√	P	V	-	Witness of Quantity as per BOQ

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	Sign & Date	Name		Sign & Date	Name	Seal			Sign & Date	Name	Seal
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Reviewed by:	PRAVEEN DUTTA <small>Digitally signed by Praveen Kumar Jaiswal DN: cn=Praveen Kumar Jaiswal, o=BHEL, ou=Quality & IE, email=praveen@bhel.com, c=IN Date: 2023.04.11 11:08:39 +05'30'</small>	Praveen Dutta	Reviewed By:	Ritesh Kumar Jaiswal <small>Digitally signed by Ritesh Kumar Jaiswal DN: cn=Ritesh Kumar Jaiswal, o=BHEL, ou=Quality & IE, email=ritesh@bhel.com, c=IN Date: 2023.04.11 11:08:39 +05'30'</small>	Ritesh Kumar Jaiswal			Approved by:			

	MANUFACTURER / BIDDER / SUPPLIER NAME & ADDRESS	STANDARD QUALITY PLAN		SPEC. NO : PE-RC-999-558-E004, R0	DATE:
		CUSTOMER :		QP NO.: PE-QP-999-558-E004, REV.01	DATE: 20.03.2021
		PROJECT:		PO NO.:	DATE:
		ITEM: POLE (SWAGED/STEPPED)	SYSTEM: POLES & MAST	SECTION:	SHEET 4 OF 4

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY				REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/N				D	M	C	N	
	cable lugs, gland plates, Foundation bolts, PVC grommet & rubber for wiring hole, nuts, bolts, screws etc.													
5.0	Packing	Soundness of packing & Labelling with packing list	MA	Visual	100%	100%	BHEL Spec	BHEL Spec	Log book/ Packing list	√	P	W	-	Applicable for all accessories items supplied as loose items.


Notes:

1. BHEL reserves the right for conducting repeat test, if required.
2. In case of foreign supplier, all test certificates shall be furnished by the supplier, duly witnessed/ verified by supplier's TPI.
3. Project specific Quality Plan to be developed based on customer requirement.
4. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) indicated in QP shall be referred.
5. Material shall be packed suitably in order to avoid damage during transit and also during storage at site in tropical climate conditions.
6. For export job, packing shall be as per BHEL seaworthy packing specification.
7. Photographs of items duly placed inside the box just before the final packing and photographs of the box just before dispatch to be sent to BHEL purchase group for review before issuing MDCC.

LEGENDS:


*RECORDS, IDENTIFIED WITH "TICK"(√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,
 ** **M**: SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C**: MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N**: CUSTOMER,
P: PERFORM, **W**: WITNESS, **V**: VERIFICATION, AS APPROPRIATE
MA: MAJOR, **MI**: MINOR, **CR**: CRITICAL

BHEL						BIDDER/ SUPPLIER		FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING			QUALITY			Sign & Date		Doc No:			
	Sign & Date	Name		Sign & Date	Name	Seal			Sign & Date	Name	Seal
Prepared by:	HARI CHAND	Hari Chand	Checked By:	Suman Nakwal	Suman Nakwal			Reviewed by:			
Reviewed by:	PRAVEEN DUTTA	Praveen Dutta	Reviewed By:	Ritesh Kumar Jaiswal	Ritesh Kumar Jaiswal			Approved by:			

	PRE-QUALIFICATION REQUIREMENTS FOR POLES & HIGH MASTS	PE-PQ-999-558-E004
		REVISION NO. 01 DATE 18/03/2017
		SHEET NO. 1 OF 1

ITEMS : POLES & HIGH MASTS	
SCOPE : Supply : YES; Erection & Commissioning : NO	
A.	For Poles
1.0	<p>Vendor should be a manufacturer of lighting poles as per relevant IS. In case the vendor is not a manufacturer, the vendor to furnish the following documents:</p> <p>a) Undertaking / agreement from OEM of offered make for support in design, manufacture, inspection & testing of poles. b) Credentials of the manufacturer of offered make to meet the PQR requirements of S. no. A-2.0 to 4.0 below. c) Vendor's Credentials to meet S. no. A-5.0.</p>
2.0	Availability of test reports of lighting poles conducted at Govt. Lab/ Govt. approved Independent lab or witnessed by third party as per relevant IS.
3.0	Capacity of manufacturing 50 lighting poles per month.
4.0	Manufactured and supplied at least 100 lighting poles in one or more orders.
5.0	Minimum two (2) nos. purchase orders for lighting poles shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno- commercial bid opening (as applicable) for establishing continuity in business.
B.	For High Masts
1.0	<p>Vendor should be a manufacturer of high masts as per relevant IS. In case the vendor is not a manufacturer, the vendor to furnish the following documents:</p> <p>a) Undertaking / agreement from OEM of offered make for support in design, manufacture, inspection & testing of masts. b) Credentials of the manufacturer of offered make to meet the PQR requirements of S. no. B-2.0 to 3.0 below. c) Vendor's Credentials to meet S. no. B-4.0.</p>
2.0	Availability of test reports of high masts conducted at Govt. Lab/ Govt. approved Independent lab or witnessed by third party as per relevant IS.
3.0	Manufactured and supplied at least 5 nos. high masts in one or more orders.
4.0	Minimum two (2) nos. purchase orders for high masts shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno- commercial bid opening (as applicable) for establishing continuity in business.

PREPARED BY <i>Devendra Singh</i> 18-03-2017	REVIEWED BY <i>Boyal R. A. Y. M.</i> 18/3/17	APPROVED BY <i>Meena Keshi</i> 18-03-17
NAME: DEVENDRA SINGH	NAME: Boyal R. A. Y. M.	NAME: Meena Keshi
DESIGNATION: SR. ENGINEER	DESIGNATION: Asst. Engr	DESIGNATION: GM

	PRE-QUALIFICATION REQUIREMENTS FOR POLES & HIGH MASTS	PE-PQ-999-558-E004
		REVISION NO. 01 DATE 18/03/2017
		SHEET NO. 1 OF 1

NOTES:

1. For cases involving both lighting poles and high masts, the vendor can offer lighting poles of one make and high masts of another make meeting criteria above and accordingly furnish documents for credentials to meet PQR as at S.no. A & B.
2. For cases involving only lighting poles, PQR as at S.no. A (and not B) only are applicable. For cases involving only high masts, PQR as at S.no. B (and not A) only are applicable.
3. Consideration of offer shall be subject to customer's approval of bidders, if applicable.
4. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
5. Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
6. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
7. After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY <i>Devendra Singh</i> 18-03-2017	REVIEWED BY <i>R. Goyal</i> 18/3/17	APPROVED BY <i>Meena Kesri</i> 18-03-17
NAME: DEVENDRA SINGH	NAME: R. GOYAL	NAME: Meena Kesri
DESIGNATION: SR. ENGINEER	DESIGNATION: AGM	DESIGNATION: GM

ANNEXURE – I

PROJECT SPECIFIC CRITERIA AGAINST ENQUIRY

PROJECT: 1x660MW BHUSAWAL TPS

1. Bidder should have supplied/provided **LIGHTING POLES** for at least one thermal power plant of 500 MW or above capacity which has completed one year of commercial operation and the equipment supplied should have completed the contractual guarantee period or should have supplied **LIGHTING POLES** of rating/type/size as required under the contract to any power plant.
2. **LIGHTING POLES** shall be in successful operation for similar duty condition and similar application for minimum one (1) year as on 06.08.2018.
3. In support of above criteria, along with bid, bidder to submit credentials for scrutiny & approval.
4. In case of any conflict of project specific PQR with main PQR, vendor to furnish document meeting the stringent requirement between the main PQR and project specific PQR.

Rahul Kumar Shrivastava
[Dealing Engineer]

Kanhaiya Kumar
[Controlling Officer]

Omkar Kumar
[Section Head]

Debasisa Rath
[DH-Electrical]

Maharashtra State Power Generation Company Limited			
Bhusawal Project (1x660MW)			
Proforma of Vendor Approval			
Sr. No.	Information/ Particulars required	Details furnished along with documents thereof	Remarks if any
1	Name of System /Package/Item:		
2	Name of agency on whom order for the main work is placed		
3	Approval for (Name of construction material)		
4	Name of the vendors specified in contract document for this material		
5	Name of the proposed Sub Contractor(Vendor)		
6	Reasons for asking new vendor		
7	Details of supporting documents in lieu of above reasons		
8	Specific requirement of material in terms of dia, size, quantity etc.		
9	When the material is required & for which structure		
10	Whether vendor is Partnership/ Pvt./Public Ltd. Company		
11	Particular of registration with Government		
	i) GST registration No.		
	ii) Company registration No. & Incorporation Certificate		
	iii) PF & ESIC Certificate.		
	iv) Pan No.		
12	Address of vendor's factory		
13	Contact No. of vendor's representative for additional information		
14	Production Business Area		
16	Average annual turnover for last three years as per CA's Certificate		
17	Name of Companies where the vendor is registered		
18	Details of orders completed last 3 years (Quantity & amount)		
19	Details of orders in hand (Quantity & amount)		
20	Maximum value & quantity of work executed during last 3 years		
21	Name of the reputed, well known clients to whom the vendor has supplied the material		
22	End users Performance Certificate (Name & documents) along with the relevant PO.		
23	Any additional information		
24	Recommendation		

M/s BHEL

Sub-Contractor

An undertaking regarding Model Clauses (To be provided alongwith bid)

Reference:

RA/Bid no:

Item: LIGHTING POLES

Project: 1x660 MW PANKI TPP

TO WHOM SO IT MAY CONCERN

This is with reference to Ministry of Finance circular dated 23.07.20 reg. restriction under rule 144 (xi) of GFR.

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I hereby certify that M/sis not from such a country and is eligible to be considered against Bid/RA no:”

Sign & Signature

Date: 15.05.2021

Place: