

D E S E I N
DESEIN PRIVATE LIMITED
CONSULTING ENGINEERS
102, First Floor, My Home Sarovar Plaza,
Secretariat Road, Hyderabad 500 063

Phones : 91-40-23232695

Ref: D-0413/VC-20/BHEL (Piping)/264
14th July 2015

Mrs. Vishnu Jyothi,
Deputy Manager
BHARAT HEAVY ELECTRICALS LTD
PIPING CENTRE ,
#80, GN CHETTY ROAD,
T-NAGAR, CHENNAI-600017

Subject : Job # D-0413-TSGENCO Ltd – Bhadradri Thermal Power Station, Units
1 to 4 (4 X 270 MW) – Painting

Reference : Your Letter 7259:QPC:011 dated 14.07.2015

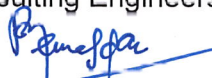
Gentlemen :

Approval/comments on the drawings listed in the attached sheet are enclosed. The column against each drawing refers to the remarks applicable to the particular drawing as indicated below

REMARKS

- A* - Document as submitted approved, proceed with fabrication.
- B - Document approved subject to comments noted; proceed with fabrication, considering our comments. Correct as necessary and resubmit for record.
- C - See attached memo.
- D - Correct your original drawing incorporating our comments and resubmit for approval.
- E - Information furnished is noted.

Very truly yours,
DESEIN PRIVATE LIMITED
Consulting Engineers



B. Hema Sundar
EXECUTIVE DIRECTOR

cc: CE (TPC), TSGENCO, Hyderabad

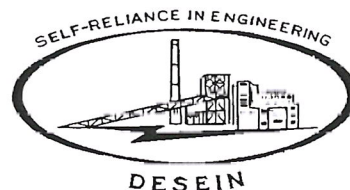


ISO 9001:2008 Registered Company
Certificate No. 10692

CIN : U74899DL1970PTC005474

A Development Service for Industries & Utilities

CIN: U74899DL1970PTC005474



Letter: HYD/264

Dated: 14.07.2015

S. No.	Drg/Doc No.	Title	Remarks
1	7259:QPC:11 Rev 1	Painting scheme for Piping	A
2	7259:QPC:12 Rev 1	Painting scheme for LP Piping	A

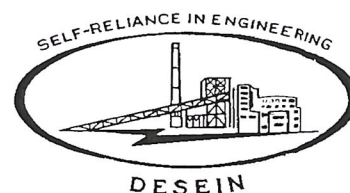


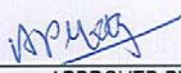
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 BHARAT HEAVY ELECTRICALS LIMITED PIPING CENTRE, CHENNAI- 17 QUALITY ASSURANCE & CONTROL DEPT.			PAINTING SCHEME FOR LP PIPING (CW / ACW / ECW / Plant water, Air Piping, etc...,) PROJECT NAME : - TSGENCO BHADRADRI TPS-4X270 MW BHEL CUSTOMER Nos : 7259, 7260, 7261, 7262, 7279								QPNo: 7259:QPC:12 REV.NO: 01 Dt : 10.07.2015		
Sl. NO	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat			Finish coat			Total DFT Microns (Min.)	REMARKS	
			Primer	No of coats	Paint	No of coats	Shade	Paint	No of coats	Shade			
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	(a) Internal Surface - CW Pipe (for pipe dia - 1000 mm and above)	Blast Cleaning SSPC SP-10 SA 2½ (Refer Note 1)	Epoxy based Zinc rich Primer (Refer Note 2)	1 (50 Microns Min. per coat)	-----	-----	-----	Coal tar epoxy (Refer Note 2)	2 (75 Microns Min. per coat)	-----	200 Microns (Refer Note 3)		
	(b) Holiday test (Refer Note 3)	Holiday testing by low voltage (75 Volts Min.) wet sponge Holiday detector or by High voltage (Voltage per micron of DFT is as recommended by Paint Manufacturer subjected to minimum of 5V / Micron). Holiday test Equipment to be calibrated before testing.											
2	External Surface of CW --Buried Piping / Encased in concrete (For pipe dia- 1000 mm and above) (Temporary Protection for transportation from works to site). **Further protection to be done by BHEL Erection Group as per Contract requirement.	SSPC-SP3 / Power Tool Cleaning	Red Oxide Zinc Phosphate (Alkyd base to IS 12744)	1 (30 Microns per coat)	-----	-----	-----	-----	-----	-----	30 Microns		
3	External Surface (over ground piping) of CW, ACW. (For all diameters)	SSPC-SP3 / Power Tool Cleaning	Red Oxide - Zinc Phosphate (Alkyd base to IS: 12744)	2 (25 Microns per coat)	-----	-----	-----	Synthetic enamel Long oil Alkyd to IS: 2932	3 ** (35 microns per coat) (2 at shop + 1 at site)	Smoke Grey (Shade No. 692 of IS: 5)	120 at shop + 35 at site	** 1 coat of DFT- 35 microns finish coat at site	
4	External Surface of ECW, Plant water (For all diameters)	SSPC-SP3 / Power Tool Cleaning	Red Oxide - Zinc Phosphate (Alkyd base to IS: 12744)	2 (25 Microns per coat)	-----	-----	-----	Synthetic enamel Long oil Alkyd to IS: 2932	3 ** (35 microns per coat) (2 at shop + 1 at site)	Smoke Grey (Shade No. 692 of IS: 5)	120 at shop + 35 at site	** 1 coat of DFT- 35 microns finish coat at site	
5	Galvanised and Stainless steel Piping	No painting											
Notes: 1. Blast cleaning to near white metal to obtain roughness as per epoxy paint data sheet. 2. Application of Epoxy based Zinc rich Primer, Coal Tar Epoxy shall be done as per manufacturer's data sheet / recommendation, meeting the thickness requirements as per this document. 3. Witness by BHEL / BHEL nominated inspection agency.													
 PREPARED BY : VIVEKANANDA YELLU SQE / QA.			 APPROVED BY: AP MADHAVANKUTTY, AGM / Q.			For Customer use :							