



**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 :- NASIK THERMAL POWER PROJECT-(5X 270 MW)

BHEL CUSTOMER Nos : 7104,7105,7106,7107,7108.

QPN0 : 7104:QPC:12

REV.NO : 00

Date : 01.12.2010

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 and REVIEWED BY : VIVEKANANDA YELLU, Engr / QA.

APPROVED BY: G.PANNEER SELVAM, DGM / QA.



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PAINTING SCHEME FOR LP PIPING
(CW / ACW / ECW / Plant water, Air Piping, etc.,)

PROJECT NAME : - AMRAVATI THERMAL POWER PROJECT - (5X 270 MW)
BHEL CUSTOMER Nos : 7109, 7110, 7111, 7112, 7113.

QPN0 : 7109:QPC:12
REV.NO : 00
Date : 01.12.2010

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:

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PREPARED and REVIEWED BY : VIVEKANANDA YELLU, Engr / QA.

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