

	PGMA WISE PAINTING SCHEME FOR APH, ESP, FANS, GATES& DAMPER, PHS FOR MAITREE STPP (2X660MW)	Doc no	PS:MAIT:PG:R676&R4R5
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MAITREE STPP (2 X 660 MW) - EPC PACKAGE

**PGMA WISE PAINTING SCHEDULE FOR APH, FAN,
GATE&DAMPER, ESP &CHIMNEY(AUX.BLR)**

CONTRACT NO:

**BIFPCL/EPC-MAIN PLANT/NOA/2016/215 DTD.
31.01.2016**

**RANIPET CUSTOMER NOS:
R676& R677, R4N2, R4R5- R4R6
RECORD OF REVISION**

REV.NO	DATE	DESCRIPTION
Rev.00	30.01.2018	Original issue
Rev.01	05.03.2018	Revised issue- Powerhouse structures PGMA included
Rev.02	07.06.2018	Revised Issue- Surface preparation indicated for ESP Foundation bolts based on CQ feedback
Rev.03	20.06.2018	Painting for running meter items indicated in the Notes section
Rev.04	17.09.2018	Revised Issue- Bunkers PGMA included
Rev.05	15.12.2018	Updated
Rev.06	07.01.2019	Revised Issue- FGD, AH- CHP, BOP PGMA included (Extracted from MAITREE-0-BFA-FF-100000-GEN, Rev.03)
Rev.07	15.06.2019	Revised Issue- Updations in FGD system based on feedback from OS.
Rev.08	23.07.2019	Revised Issue- Updations in FGD system based on feedback from Engg.

Prepared & Reviewed By

(Rajamanickam.M)

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
A	AIR PRE- HEATERS									
01	Heating element baskets- HE, HIE (without elements) 52010	Power Tool cleaning	Red oxide Zinc phosphate primer to IS 12744	02/ DFT=60μ/ coat	--	--	--	--	--	60
02	Heating element baskets- HE, HIE (with elements) 52010	--	Temporary rust preventive oil non dry type (*) (Dipping)	--	--	--	--	--	--	--
03	Rotor post assembly machined items of (52011), Pin rack assembly (52012), Seals (52013, 52054, 52055), sector plates (52041, 52042) and machined components of APH	--	Temporary rust preventive oil dry type (**)	40	--	--	--	--	--	40
04	Components in flue gas path and insulated Rotor post assy (52011), T bars (52013), Rotor housing assy (52030), Hot and cold connecting plate assy (52041,52042), Module Assy (52010)	Blast cleaning to SA 2½	Epoxy Zinc phosphate to IS 13238	01/ DFT=80μ/ coat	--	--	--	--	--	80

(*) Specification as per PRQA 522/ Rev 00

(**) Specification as per PRQA 524/ Rev 00 (Sea worthy rust preventive oil);

For CE coil- TEP/AQCS/RP (Latest)

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
05	Components exposed to atmosphere Rotor drive assy (52100), Access door (52220), Air seal piping (52211), observation port other than glass part (52220), Rotor stoppage alarm other than aluminium (52220), Loose items of air receiver (52220), Tools & Tackles (52000), Guide bearing assy (52261), Support bearing assy (52262), Oil piping GB, SB (52271, 52272), Oil circulation unit (52274), Deluge and wash pipe assy (52301, 52302), Cleaning device assy (52326, 52339, 52340), Thermocouple pipe assy other than SS	Blast cleaning to SA 2½	Epoxy Zinc phosphate to IS 13238	01/ DFT= 80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02 coats, DFT= 80 μ /coat Total- 160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213	01/ DFT = 50 μ /coat	Winds grey (RAL 7040)	290
06	Commissioning spares (52988)	As per respective items as above mentioned in this painting scheme								

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Sl no	PGMA/Description	Surface preparation n & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
B	FANS									
01	Foundation materials 55 011 55 021, 55 031, 56 011	Power tool cleaning to St-3 (SSPC SP3)	Temporar y rust preventive oil (**)	40	--	--	--	--	--	--
02	Foundation Material of FD, ID & PA Fans – Packer Plates (55 011, 55 021, 55 031) Seal Air Fan Motor Base Frame / Plate& FD Fan Bearing Pedestal (56 670, 56 114) Base Frame for Actuators of FD, ID & PA Fans (55216, 55227, 55 334) Coupling & coupling guard (55810,55820, 55830,56810, 56870, 56890) Lub oil system (55910, 55920, 55930) Radial penthouse ventilation fan (56161), ID Sealing/ cooling fans (55024) Bearings- Non- Machined and Outside surfaces (56313, 56373)	Blast cleaning to SA 2½	Epoxy Zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02 coats, DFT= 80 μ/ coat Total 160μ	2 component t Aliphatic acrylic polyuretha ne paint to IS 13213	01/ DFT = 50 μ/ coat	Wind ows grey (RAL 7040)	290

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
03.	FD fan (55216, 55516, 56113, 56413), ID Fan (55328, 55628), PA Fan (55335, 55635) Static & Rotating parts, Silencer for FD& PA fan (55911,55931, 56911), Seal air fan (56173, 56473), BAC 1 suction Miscellaneous fan (56193), FOR 1, 2 suction Miscellaneous fan (56393, 56493),	Blast cleaning to SA 2½	Epoxy based zinc phosphate primer to IS 13238	01/ DFT= 80 μ /coat	--	--	--	--	--	80
04	All machined surfaces shall be applied with rust preventive. (**)									

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
C	ELECTROSTATIC PRECIPITATOR									
01	GD drive arrangement (78 910), Drive arrangement for emitting system (78 917), Inspection doors (78 923), Drive arrangement for CE rapping (78926), Outer roof (78 942), Other items of ESP Penthouse (78 955), ESP test equipment (78961), Water washing system (78 966), ESP columns (78 981), Hopper Approach platform (78 965), Tools & Tackles (78 996), Lifting beam (78 920), Stair stringer channels, Bracket, Supp bracket, frames, Loose channels, Toe plates, Stiffener plates and Angles for EP galleries, Stair& Walk way (78 965, 89 610)	Blast cleaning to Sa 2½	Epoxy based zinc phosphate primer to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213	01/ DFT= 50 μ/ coat;	Windows grey (RAL 7040)	290
02	Hand rail post, Bend, ERW tubes, step treads, Floor grills (78965, 89 611,612,613)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
03	Insulator housing assy (78 906), Ridges (78 943), Hopper upper, lower & middle part (78 944, 945), Insulator support panel (78 946), Roof panel assy (78 947) Casing structure (78 928, 948), Casing shell (78 949, ESP funnel (78 950), Shock bars (78 924)	Blast cleaning to Sa 2½	Epoxy Zinc phosphate primer to IS 13238	01/ DFT= 80 μ / coat	--	--	--	--	--	80

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
04	EE (78 915) (EE hook), CE (78 920), Foundation material for ESP structures & ducts (78 980)	Power Tool cleaning for Foundation material for ESP Structures & ducts	Temporary rust preventive oil dry type (**)	40	--	--	--	--	--	40
05	Gas screening (78 911), Emitting system suspension (78 913), Emitting Electrode rapping (78 916), Suspension arrangement for CE (78 919), Frame of Emitting system Top, middle& bottom (78 921, 922,932), CE rapping mechanism (78 925), Splitter & Guide vane (78 957), Guide plate/ vane EP inlet (78 989), Gas distribution assy (78 908), GD rapping mechanism (78 909)	Blast cleaning to Sa 2½	Red oxide Zinc phosphate primer to IS 12744 (Two coats) DFT- 30 μ /coat	02/ 60	--	--	Synthetic Enamel to IS 2932 (One coat) DFT-20 μ	01	Smoke grey Shade no:69 2 of IS 5	80
06	Commissioning spares (78 988)	As per respective items as above mentioned in this painting scheme								

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SI no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
D	GATES AND DAMPERS									
01	Damper Temperature <95°C 57033, 57083, 57141, 57143, 57173, 57013	Blast cleaning to Sa 2½	Epoxy Zinc phosphate primer to IS 13238	01/ DFT= 80 μ / coat	--	--	--	--	--	80
02	Gates Temperature <95°C 57010, 57110, 57160 and other structural items of 57466 PGMA	Blast cleaning to Sa 2½	Epoxy Zinc phosphate primer to IS 13238	01/ DFT= 80 μ / coat	Epoxy polyamide cured MIO pigmented intermediate coat	02/ DFT= 80 μ / coat Total - 160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213	01/ DFT= 50 μ / coat	Windows grey (RAL 7040)	290
03	Gates and Damper Temperature > 95°C 57063, 57203, 57223, 57270, 57273, 57370, 57430, 57460, 57470, 57480, 57490, 57343	Blast cleaning to Sa 2½	Inorganic ethyl zinc silicate to IS 14946	01/ DFT= 75 μ / coat	--	--	Silicone aluminium to IS 13183 (Gr. II)	02/ DFT= 25 μ / coat Total- 50 μ	--	125
04	Ladder, Cage for Ladder, Toe guard plate, Floor grill, Hand rails, Hand rail post (57 466)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								
05	Ducts commissioning spares (57 988), Packing crates (57230, 57343)	As per respective items mentioned in this painting scheme								

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
E	CHIMNEY									
01	Foundation bolt (87010)	Power tool cleaning to St-3 (SSPC SP3)	Temporary rust preventive oil dry type (**)	40	--	--	--	--	--	40
02	Shells- Inside and Uninsulated side (87100), Ducts Inside& uninsulated side (87150)	Blast cleaning Sa 2½	Inorganic Ethyl Zinc silicate to IS 14946	01/ DFT= 75 μ / coat	--	--	Silicon e aluminium to IS 13183 Gr. II	02/ DFT= 25 μ / Coat Total- 50 μ	--	125
03	Chimney Strakes, (87150), Painter trolley (87200)	Blast cleaning Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80 μ / Coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT= 80 μ / Coat	Aliphatic acrylic polyurethane paint to IS 13213	01/ DFT= 50 μ / coat	Windows grey (RAL 7040)	290
04	Shells- Outside (87100), Base plate, Ducts- Outside (87150)	Blast cleaning to Sa 2½	Inorganic Ethyl Zinc silicate to IS 14946	01/ DFT= 75 μ / coat	--	--	Silicon e Acrylic	02/ DFT= 50 μ / coat	Windows grey (RAL 7040)	175
05	Platform ladder and hand rails post, hand rails and floor grills& step treads	Hot dip galvanizing to 610 gms/ Sq. m (min) for sections 2-5 mm thick , 900 gms/ Sq. m for sections above 5 mm thick and to the coating thickness of 85 μ m (min) for both.								

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
F	POWER HOUSE STRUCTURES									
01	TG bay Columns, A-ROW, B-ROW, C ROW, D ROW, E ROW, F&G ROW(TS501, TS502, TS503, TS504, TS505, TS506), HOR Beams Trans Front B-C BAY (TS507), Rear B-C BAY(TS508), HOR Beams (TS509, TS510, TS511, TS512, TS513, TS514), Gantry Girders (TS515, TS516), Roof Girder (TS517), Roof Purlins, Runners (TS518, TS519), Intermediate Columns (TS520), Platform & staircase (TS521), Floor beams (TS522), Floor columns (TS523), Clad framing (TS524, TS525), Gable end columns (TS526), Auxiliary Structures (TS527), Cladding frame (TS528), Framing plan (TS529, TS530), Pipe& Cable support structure	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										

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	(TS531), Vent& Bus duct support structure (TS532), Wall beams framing(TS533, TS534, TS535), Clad& Frame at cont. tower (TS536), Pipe support (TS537), PHS Misc supports (TS538), Misc floors (TS539), PHS Misc bracing (TS540)									
02	Fasteners for columns, floor beams, bracings (TS541, TS542, TS543)	Temporary rust preventive oil dry type (**)- DFT- 40μ (**)- Sea worthy rust preventive oil as per PRQA 524								
03	Hand rail post, Bend, ERW tubes, step treads, Floor grills, Ladders (TS521)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

Note: guard plate and stringer channel shall be painted as per painting scheme specified in SI no: 01 of F, Power house structures.

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
G	BUNKERS									
01	Bunker conical portion (66145), Bunker Cylindrical portion (66147), Bunker Ring girder (66152), Bunker sealing (66157)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										
02	Bunker bay feeder floor structures (66160), Misc Structures (66162), Bunker bay tripper floor structures (66165), Bunker bay roof structures (66170)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										
03	Fasteners for feeder floor structures, tripper floor structures, roof structures, bracings etc.	Temporary rust preventive oil dry type (**)- DFT- 40μ (**)- Sea worthy rust preventive oil as per PRQA 524								
04	Hand rail post, Bend, ERW tubes, step treads, Floor grills, Ladders (If applicable)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

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			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
H	AHP-CHP									
01	Ash Intermediate Silo, Bottom Ash Silo, Ash Silo Jetty, Bottom Ash Silo Jetty, (AH 602, AH 635, AH 637, AH639), HCSD Pump house, Compressor house (AH 641, AH 643), AHP MCC Room-1,2,3,4 (AH 645,AH 647, AH 649, AH 651), Fly Ash Pipe rack-1 to 10 (AH 653, AH 655, AH 657, AH 659, AH 661, AH 663, AH 665, AH 667, AH 669, AH 671), AWRS Pump house 1 (AH 673), Transfer point 14, 15 (AH 675, AH 677), Transfer point 2, 16, 17, 18 (AH 679, AH 681, AH 683, AH 685), Dumper Hopper-5 (AH 687), Tail pulley house (AH 689), Lime stone pipe conveyor (AH 691), Lime stone belt conveyor 1, 2 (AH 693, AH 695), Gypsum Pipe conveyor-1 (AH 697)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT=8 0μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT= 80μ/ Coat Total= 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Winds grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										

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02	Lime stone UG hopper (AH 699), Limestone Inter Silo 1&2 (AH 702), Gypsum silo (AH 703), Bottom Ash conveyor-1& 2 (AH 705, AH 706), Bottom Ash pipe conveyor structures, Gallery (AH 707, AH 709)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/DFT=80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/DFT=80 μ /Coat Total=160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/DFT = 50 μ /coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										
03	Primary Screen House- Columns, Floor beams, bracings, Truss, Staircase (CC 501, CC 503, CC 505, CC 507, CC 509), Purlins& Side runners (CC 511), Misc Structures (CC 513), Transfer point -1 to 12 (CC 515, CC 517, CC 519, CC 521, CC 523, CC 525, CC 527, CC 529, CC 531, CC 533, CC 535), TP-13- Columns, Beams& bracings (CC 537, CC 539), Dump Hopper- 1,2,3,4 (CC 541), Tail pulley house 1,2,3,4, 1 A/B (CC 543, CC 545)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/DFT=80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/DFT=80 μ /Coat Total=160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/DFT = 50 μ /coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										

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04	Crusher house columns, Floor beams, Bracings, Truss, Staircase (CC 547, CC 549, CC 551, CC 553, CC 555), Purlins & Side runners (CC 557), Misc. Structures (CC 559), Coal blend Silo- 1& 2 (CC 561, CC563), Belt conveyor 1 to Belt conveyor 19, Belt conveyor 29 (CC 565, CC 567, CC 569, CC 571, CC 573, CC 575, CC 577, CC 579, CC 581, CC 583, CC 585, CC 587, CC 589, CC 591, CC 593, CC 595, CC 597, CC 599, CC 601, CC 603, CC 605, CC 607) DS Pump house-1,2 (CC 609, CC611),	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT=80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT=80 μ /Coat Total=160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT = 50 μ /coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										
05	CHP MCC Room- 1 to 4 (CC 613, CC 615, CC 617, CC 619), Dozer Shed (CC 621), CHP Work shop Bldg (CC 623), Cable rack- 1 to 4 (CC 625, CC627, CC629, CC 631)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT=80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT=80 μ /Coat Total=160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT = 50 μ /coat; #	Windows grey (RAL 7040)	290

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06	Fasteners, Foundation Bolts- Threaded portion for structures (PGMA's) as above	Temporary rust preventive oil dry type (**)- DFT- 40μ (**)- Sea worthy rust preventive oil as per PRQA 524 (Non-threaded portion of Foundation bolts (If applicable) - Red oxide can be applied; DFT- 30μ)
07	Hand rail post, Bend, ERW tubes, step treads, Floor grills, Ladders (If applicable)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
I	SWITCH YARD STRUCTURES									
01	Building structures and Misc structures (TT 030 & TT 045)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80 μ / Coat Total = 160 μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ /coat; #	Windows grey (RAL 7040)	290
02	Foundation bolts (TT 045) other than Galvanizing-Threaded portion	Temporary rust preventive oil dry type (**)- DFT- 40 μ (**)- Sea worthy rust preventive oil as per PRQA 524 Non threaded portion of Foundation bolts (if applicable) - Red oxide can be applied; DFT- 30 μ								
03	200kV, 400kV transmission tower (TT010, TT020), Fasteners (TT 040), Misc structures Foundation bolts (TT 045) if GAL is indicated	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

#- To be applied at site

As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
J	BALANCE OF PLANT STRUCTURES AND PIPE RACKS; RODM STRUCTURES									
01	Pipe rack-1 to 5 (61005, 61006, 61007, 61008, 61009), Pipe rack mill bunker (61010), RODM Structures (WT 220, WT 225), RC pump& Oxidation blower building, Roof, (91100, 91102, 91104), CW Pump house structurals, Gantry girder (91106, 91108), Intake water pump house (91110), Chimney Internal platforms (91112), Compressor building (91114), Fan& Mill Maintenance Bldg (91116), Parking shed (91118), Wet ball mill building (91120), Gypsum dewatering bldg. (91122), Workshop Bldg (91124)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT=80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Windows grey (RAL 7040)	290
#- To be applied at site As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										
02	Foundation bolts-Threaded portion (PGMAs as above), HSFG Fasteners (91126)	Temporary rust preventive oil dry type (**)- DFT- 40μ (**)- Sea worthy rust preventive oil as per PRQA 524 Non threaded portion of Foundation bolts (if applicable) - Red oxide can be applied; DFT- 30μ								
03	Hand rail post, Bend, ERW tubes, step treads, Floor grills, Ladders (If applicable)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
K	FLUE GAS DESULPHURIZATION (FGD SYSTEM)- MANUFACTURING ITEMS									
01	Absorber System Base, Structures, Casing bottom- Outside surfaces, Casing Top- Outside surfaces (FW 219, FW 220, FW 221, FW 222), Emergency quench water tank- Outside surfaces (FW 226), Duct structure between duct (FW 260), Duct structure between scrubber (FW 262), Supporting structure for Bypass duct (FW286), Structures for Elevator (FW 292), Galleries and Railings- Structural items (FW 610), Platform for Pipe rack- Structural items (FW 614), Monorail for Hoist & Cranes (FW 710), Galleries and Railings for Tank- Structural items (FW 722), Limestone slurry storage tank- Outside surfaces (FW 742)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80μ/ coat	Epoxy based polyamide cured MIO pigmented intermediate coat	02/ DFT =80μ / Coat Total = 160μ	Two component Aliphatic acrylic polyurethane paint to IS 13213 #	01/ DFT= 50 μ/ coat; #	Windows grey (RAL 7040)	290
#- To be applied at site										
As per Sl no: 05 of MAITREE-0-BFA-FF-100000-GEN, Rev.03										



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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
03	Casing bottom, Casing Top- Inside surfaces (FW 219, FW 220, FW221, FW 222), Limestone slurry storage tank- Inside surfaces (FW 742), Auxiliary storage tank- Inside surfaces (FW 743), Filtrate tank- Inside surfaces (FW 744), Wastage water tank- Inside surfaces (FW 745), Hydroclone waste water tank- Inside surfaces (FW 747), All tanks Internal structure (FW 749)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 50 μ /coat	--	--	--	--	--	50
		All tanks Liner is available inside- Hence primer is only envisaged								
		Gypsum Intermediate silo (FW 794) Inside surfaces- SS lining is avl inside, hence primer is only envisaged. DFT- 50 μ m								
04	Emergency quench water tank (FW 226)- Inside surfaces Process water tank- Inside surfaces (FW 748),	Blast cleaning to Sa 2½	Glass flake reinforced epoxy	01/ DFT= 500 μ /coat	--	--	--	--	--	500

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Sl no	PGMA/Description	Surface preparation & surface profile	Primer coat		Intermediate coat		Finish coat			Total DFT μ (min)
			Paint	No of coats/ DFT	Paint	No of coats	Paint	No of coats	Shade	
05	Agitator support (FW 721)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 80 μ /coat	Epoxy based polyamide cured MIO pigmented intermediate coat	01/ DFT =80 μ / Coat	--	--	--	160
06	Expansion joint between bypass, Duct between bypass duct inlet (FW 255), Duct between scrubber and GGH (FW 257), Miscellaneous FGD system (FW 299)	Blast cleaning to Sa 2½	Epoxy zinc phosphate to IS 13238	01/ DFT= 50 μ /coat	--	--	--	--	--	50
07	Foundation Material for scrubber (FW 281), Foundation material for Elevator (FW 282), Foundation material for Tanks (FW 740), Foundation Material for Pipe racks (FW 760)- Threaded portion	Temporary rust preventive oil dry type (**)- DFT- 40 μ (**)- Sea worthy rust preventive oil as per PRQA 524 Non threaded portion of Foundation material (if applicable) - Red oxide can be applied; DFT- 30 μ								
08	Hand rail post, Bend, ERW tubes, step treads, Floor grills, Ladders (If applicable)	Hot dip galvanizing to a coating weight of 610gm per sq. m (minimum) for sections 2 to 5 mm thick, 900gm per sq. m (minimum) for sections above 5mm thick and to a coating thickness of 85 microns (minimum) for both.								

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GENERAL NOTES

1. No painting is required for Galvanized, Non-ferrous & stainless steel items, except as indicated above.
2. Machined items are to be applied with coat of temporary rust preventive oil.
3. PGMA's covered in sub-supplier (ie. Purchased) items viz., support bearing, slide bearing and other sub-delivery components of ESP etc are not indicated in the above list. However the painting schedule for all items supplied by all sub-suppliers and BOI under the scope of BHEL shall be same as for main equipment covered in this document.
4. In sub-assy, wherever the plates / sheets of thickness less than or equal to 5mm and rods are used- Power tool cleaning or Hand tool cleaning to SSPC- SP3/ SP2 shall be followed.
5. All components covered under different PGMA's are to be painted. In case any component is left out, the same shall deem to be included under the relevant section.
6. All threaded and other surfaces of foundation bolt and its materials, insulation pins, Anchor channels, Sleeves shall be coated with temporary rust preventive fluid and during execution of civil works; the dried film of coating shall be removed using organic solvents.
7. Weld edges made for site welding shall be manual cleaning by wire brushing and shall be applied with weldable primer.
8. All running meter items are to be painted with One coat of Epoxy Zinc phosphate primer to IS 13238, DFT- 80 microns, Shade: Grey with surface preparation of Sa 2 ½ blast cleaning.
9. For items of less than 5mm thk, surface preparation of power tool cleaning followed by Primer of Red oxide Zinc phosphate primer of DFT- 60 microns (Two coats) and Finish paint of synthetic Enamel to IS 2932 (One coat) – DFT- 20 microns; Total DFT- 80 microns

Paint suppliers approved by customer for structural works

- 1) M/s Shalimar Paints
- 2) M/s Jenson and Nicholson
- 3) M/s Kansai Nerolac
- 4) M/s Akzo Nobel
- 5) M/s Asian paints

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SL NO	TYPE OF PAINT	SPECIFICATION OF PAINT	No of pack	Volume of Solids (% Min)	Shade
01	Epoxy Zinc phosphate primer	IS 13238	2	55	Grey
02	Epoxy zinc rich primer to IS 14589 Gr.II	IS 14589 Gr. II	2	55	Grey
03	Zinc Ethyl silicate primer	IS 14946	2	60	Grey
04	Epoxy High solid-Polyamide cured Epoxy based MIO pigmented intermediate coat	Similar to Intermediate coat of ESP X81 columns	2	60	Brown
05	Epoxy High solid-Epoxy based polyamide cured finish paint	IS 14209	2	40	Windows grey RAL 7040
06	Aliphatic acrylic polyurethane paint	IS 13213	2	40	Windows grey RAL 7040
07	Silicone Aluminium	IS 13183 Grade I/ II	1	--	
08	Silicone Acrylic for chimney		1	--	Windows grey RAL 7040
09	Red oxide Zinc phosphate primer	IS 12744	1	--	
10	Synthetic Enamel to IS 2932	IS 2932	1	35	Smoke grey 692 of IS 5
11	Glass flake reinforced high solid epoxy	--	2	90	--