
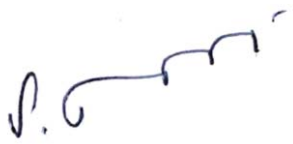



BHARAT HEAVY ELECTRICALS LIMITED
Tiruchirappalli - 620 014



NTPC- PATRATU STPP, PHASE-I (3X800MW)
RANCHI, RAMGARH DIST, JHARKHAND
CUSTOMER NO: U8-1828/1829/1830 UNIT – I,II&III
PAINTING SCHEDULE
NTPC Drawing No: 9585-001-102-PVM-H-006A

Prepared by	K. Srinivasan Senior Engineer/ Plant Lab		Document No: PL: C3 - PS / 1828
Reviewed by	S. Thiagarajan AGM/ PE/ FB		Revision No: 01 Dated: 16-11-2018
Approved by	A. Santhakumari AGM / Plant Lab		Sheet No. 01 of 13.

m:\ chem. \ contracts 16\NTPC 3X800 MW PATRATU\psword_00.doc

RECORD OF REVISIONS

Rev. No	Date	Details of revision	Remarks
00	12-09-2018	New	Prepared in line with NTPC Bidding Doc. No. CS-9585-001-2 & related amendments and clarifications to Bidding Documents issued by NTPC.
01	16-11-2018	Sheet 3 – Gr.I aluminium paint indicated for Sl.no.1. Paint details indicated in sl.no.3. Sheet 4 – furnace Inlet headers are included in Sl. No. 4. Sheet 5 – Gr. I aluminum paint incorporated for RH & SH headers. Sheet 7 – Coating thickness indicated in sl. no. 10. Sheet 9 – Heat resistant aluminum paint provided for fuel pipes. Sheet 13 – Power tool cleaning requirement is indicated.	Modified as per comments for CAT. II approval by NTPC ‘Transmittal for comments on painting scheme of SG & auxiliaries’ Ref: null 102: 1246 Dt. 26.10.2018 & NTPC drawing no: 9585-001-102-PVM-H-006A.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
1 PS10	<u>Collector & Separator Vessels (Except Internals), Supports</u> 04 –321,323;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminum Paint to IS 13183 Gr. 1 DFT 20 μm per coat	1	--	--	Heat Resistant Aluminum Paint to IS 13183 Gr. 1 DFT 20 μm per coat	1	Aluminum	40
2 PS5	<u>Collector & Separator Vessels internals and Dd items (threaded and machined surfaces only)</u> 04-347;07-331,360,361,362,393; 08-911,912,913; 09-304; 12-306,314; 12-317,324,327,328,344,348,354,393; 17-304,306,319;19-306,307;21-602,605,700; 24-352,700,803,813,818,827,842; 28-700;32-700;35-190,700,701;36-700; 39-700;41-710;42-700,710;43-710; 45-710;47-710;48-019,700; 65-710;67-710; Foundation materials: 35-010, 39-012	SSPC – SP3 Power Tool Cleaning	Rust Preventive Fluid to PR: CHEM: 09 – 04 DFT=25 μm per coat	1	--	--	--	--	--	25
3 PS19C4	<u>Buck stays</u> 08-001,003,006,007,111,380,400, 08-501,503,901,910; <u>Boiler supporting structures, Columns, Girders, Bracings</u> 34-101 to 105,200,300,390, 34-441 to 445, 511, to 515, 35-131 to 139, 141 to 149, 151 to 159, 35-181 to 189, 211, 212, 35-213,214,221,222,231,232,311,312,321, 35-322,331,332,341,342,351,352,361,362, 35-371,372,374,375, 381 to 388, 390, 35-441 to 448, 451 to 458, 511 to 518	Blast cleaning to SA2 ½ (Near white metal) conforming to ISO 8501-1 with surface profile 40-60 μm	Inorganic Ethyl Zinc Silicate Primer DFT=70 μm per coat (refer sheet 12 Sl.no.11 for details)	1	Epoxy based MIO pigmented intermediate coat DFT 100 μm per coat (refer sheet 12 Sl.no.10 for details)	1	#Aliphatic acrylic Polyurethane paint DFT 35 μm (refer sheet 12 Sl.no.2 for details)	2	Grey White Shade To RAL 9002	240

~~# Out of 2 coats of aliphatic acrylic Polyurethane finish paint, one coat shall be given at shop / subcontracting works and second coat shall be applied at site.~~

For structural steel, all coats shall be applied at shop as per technical specification.

S. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
3 PS19C4 (Contd.)	35-521 to 528; 35-531 to 538, 995; <u>Galleries, Stair-ways & inter connecting Walkways</u> 36-111,112,113, 151,152,153, 36-311,312,313,314,315,316, 36-321,322,323,324,325,326,331,332,333, 36-334,335,336,337,338,341,342,343,344, 36-345,346,351,352,353,354,355,356,361, 36-362,363,364,365,366, 371 to 377,381,382; 36-391 to 395 36-610,613,620,621,740; 38-210,299,310,381,410,510,610, 710; <u>ID system structures.</u> 39-101,102,141,142,150,299,300,301, 39-304,305,306,993; <u>Duct supports</u> 48-015,115,145, 205,225,235,265,345,355,365,385, 48-435,465,485,495,665;	Blast cleaning to SA2 ½ (Near white metal) conforming to ISO 8501-1 with surface profile 40-60 μm	Inorganic Ethyl Zinc Silicate Primer DFT=70 μm per coat (refer sheet 12 Sl.no.11 for details)	1	Epoxy based MIO pigmented intermediate coat DFT 100 μm per coat (refer sheet 12 Sl.no.10 for details)	1	#Aliphatic acrylic Polyurethane paint DFT 35 μm (refer sheet 12 Sl.no.2 for details)	2	Grey White Shade To RAL 9002	240
4 PS9	<u>Components >95° C Insulated other than components in Sl.No.7 &9</u> Ring Headers, Down Comers, Hot air Headers outside the gas path etc. 05-137,147,155,227,231,251,327,330,350; 07-102,110,125,217,223,231,232; 12-178, 850,852, 900; 17-407,476,807; 18-001,002,010,701; 19-701,702,903;21-600;24-811,824,828; 24-836,837;42-020,030,128,150,158;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	Aluminum	40

~~# Out of 2 coats of aliphatic acrylic Polyurethane finish paint, one coat shall be given at shop / subcontracting works and second coat shall be applied at site.~~

For structural steel, all coats shall be applied at shop as per technical specification.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate Coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
4 PS9 (Contd.)	Hot Air: 48-018, 202,204,207,208,212,214, 222,224,232,234,262,264,662,664,667; Flue Gas: 48-342,344,352,354,362,364,372,382,384,386, 432,434,462,464,482, 484 ,492,494, 498;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	Aluminum	40
5 PS 9	<u>Components >95° C uninsulated other than components coming in gas path.</u> Temp: >95°C & <400°C 20-511; 24-807,820,860,865,867; 42-200,300,358; Instrument tappings, doors 48-200,915;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. II Gr. I DFT 20 μm per coat	1	Aluminum	40
6 PS 10	Components uninsulated other than components coming in gas path. (Temp: >400°C & <600°C) 09-003,004,005; 28-220; Components insulated (Temp: >400°C & <600°C) RH & SH headers 10-135,174,176,178,191,235,274,276,278,283, 10-284,285,291; 15-136, 178,236,278;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. I DFT 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. I DFT 20 μm per coat	1	Aluminum	40
7 PS2	<u>Loose tubes, SH, RH & Eco. coils</u> 11-074,078,374,378,406,467,469, 11-487,491,494,606,608,684,694,716,717,718, 11-767,768,769,787,791,916,917,918,967,968, 11-969,987,991;12-179,181,184,187,368, 12-405,514,524,544,554; 12-800,803,805,903,914,917,924,927,928,944,948, 12-954,968; 16-201,202,203,270,278,379; 19-092,402,804,814,824,853,884,914,924,984;	SSPC – SP2 or SSPC – SP3 Hand tool / Power tool cleaning	Red Oxide Zinc Phosphate Dip coat primer to PR: CHEM: 09 – 03 DFT=35 μm per coat	1*	--	--	No paint	No paint	Red Oxide	35

*-In lieu of dip painting, 2 coats of brush painting of Red oxide Zinc Phosphate primer to a coating thickness of 60 μ is also permitted in line with Sr.No.9.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate Coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
8 PS1A1	<p>Miscellaneous and casing sheets 07-409,431,460,461,462,502,503,509,531,560; 12-506,906,907; 17-919; 21-601,604,606; 24-350,351,354, 801,804,805,806,808,809, 24-810,815,817,821,825,826,835,840,841,855, 24-950,955,960;30-233,234; 36-396,611, 999; 38-611; 39-302;</p> <p>04-147, 547</p> <p>Fuel firing: 41-350,390,500;</p> <p>Steam blowing piping 42-001,002,005,010,046,065,070,120,152,154, 42-157; 43-004,104, 200; 45-200,801,802, 804,805,806,858; 47-281,283, 858;</p> <p>Duct plates, expansion joints 48-911,912;</p> <p>Coal Feeding 65-736; 67-204,272,276, 283,801,802,803; 95-088,089,091,485;96-186;97-585, 592;</p> <p>\$Handling equipment:99-099,100,300,400,600;</p> <p>Impulse lines: 24-800 Seal air ducting: 43-005, 105; Cold Air duct:48-012,014, 112,114, 141 Tempering Air: 48-142,144</p>	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30 μm per coat	2	--	--	Synthetic Enamel paint (Long Oil Alkyd) to IS 2932 DFT= 20 μm per coat	2	Smoke Grey Shade No: 692 of IS5	100

\$ - Final Shade is Golden yellow for Under hung crane, Chain Pulley Block, Ratchet Lever and Trolley with hoist. Black shade for Hook.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
9 PS3	<u>Components >95° C coming in the gas path, Headers, Commissioning Spares & erection Materials etc.,</u> 06-400,401,431,434,437,441,444, 06-447,451, 453,455,500,501,731,732, 06-734,735,737,741,744,745,747,751,752,753, 06-755, 759; 07-309,315,316,318,423,883,993; 10-182,183,184,185; 11-474; 12-883,993;17-174,504,506,900,903; 19-704,753,763,783,793,802,850,851,852; 20-988,998; 21-987,988; 24-822,823, 987,988, 989, 993; 30-105,211,215,219,223,224,235; 31-010,104; 32-010,210,810; 35-993; 36-993;37-010;38-993; 41-997; 42-858,997;43-997;45-997;47-997;48-993; 65-200,997; 67-200,997;95-988;96-193; 97-282,590; 99-501; 41-988; 42-988;	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30 μm per coat	2	--	--	No paint	No paint	Red oxide	60
10 PS6	<u>Hand rails and posts, ladders / rungs</u> 34-810,820,850; 35-821,822,823,851; 36-821,822,823,851,852,853; 38-820,850;39-820,850; <u>Floor Grills, Step treads</u> 35 – 811,812;36-811,812,813,814 38 – 810, 39 – 810	SSPC – SP8/ Acid pickling	Hot dip Galvanizing to a coating weight of 610 g/m ² (minimum) and to a coating thickness of 87 μm . Refer Notes given below **							

Notes **: The Guard plates, Hood Ladders, Stringer channels, angles and plates shall be painted as per painting scheme prescribed in Sl. No: 03.

PAINTING SCHEME FOR VALVES

Sl.No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
11 PS 9/10	<u>Cast carbon steel valves (Conventional)</u> <u>Cast alloy steel valves (Conventional)</u> <u>All API valves, QCNRV, SV & SRV Silencers,</u> 21-800,825, 24-885; Safety valves & ERV 21-850; 24-880,881,883;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr.H/I Gr. I DFT= 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr.H/I Gr. I DFT= 20 μm per coat	1	Aluminum	40
	Forged valves	Chemical cleaning	Phosphating to a coating weight of 1500 mg per Sq.ft.	--	--	--	--	--	--	--
1AS2	<u>Soot Blower components</u> 20-051,054,201,204,794,962.	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30 μm per coat	2	--	--	Syn. Enamel paint (Long Oil Alkyd) to IS 2932 DFT= 20 μm per coat	2	Verdigris Green Shade No. 280 of IS5	100
	HP / LP system	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr.I DFT= 20 μm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr.I DFT= 20 μm per coat	1	Aluminum	40

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT μm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
12 PS15	<u>For CLH & VLH*</u> PGs 07,08,12,17,19,21,24,47,48 &80 07-402 to 405,505;12-517,528; 17-904,906 19-506,507,904,905, 906,907; 24-353; 48-206,395;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 μm	Epoxy zinc rich primer To IS 14589 Gr. II (latest) %VS=35, (min) DFT=40 microns per coat	1	--	--	Aliphatic acrylic Poly-urethane paint to IS13213 (latest) %VS=40.0 (min) DFT= 30.0 microns per coat	1	Phirozi Blue Shade No. 176 of IS5	70
13 PS8B	<u>Components > 95°C, un-insulated Fuel pipes</u> 47-200, 289;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. III DFT 20 μm per coat	1 Gr. I	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. III DFT 20 μm per coat	1 Gr. I	Aluminum	40
14 PS 1BE	All Columns below '0' level (embedded in concrete) PGs 34,35,36,38, 39	SSPC-SP3/ Power Tool Cleaning	HB Chlorinated Rubber Based Zinc Phosphate primer %VS=40, (min) DFT=50 microns per coat	1	--	--	No paint	No paint	Grey	50

*- For components other than CLH & VLH, Painting scheme shall be as given in Sl. No. 8.

NOTES:

1. Rust Preventive Coating should be given on HSFG Bolt and nut threads.
2. Machined surfaces and all retainers are to be applied with a coating of Temporary Rust Preventive oil.
3. All threaded and other surfaces of foundation bolts 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.
4. Ground shade/ Colour of Finish paints & identification tag/Band for equipments, pipings pipe service, boiler supporting structures and other boiler components shall be followed as per NTPC doc. ref no: QS-01-DIV-W-4, Rev.00.
5. PGMA's under Sub-Vendor items are not indicated. For all bought-out and sub-vendors items including PGMA's mentioned above falling under the scope of BHEL the same scheme as for main equipment as covered in this document shall be followed. For SCR system, vendor's painting scheme to be followed.
6. This painting Schemes is valid for only Customer No: U8/1828, 1829 & 1830, NTPC PATRATU - 3X800 MW.
7. No painting is required for Stainless Steel, non-ferrous & galvanized components.
08. Wherever inside surfaces of components under PGMA 48 – XXX & others, need protection till erection, two coats of Red-oxide zinc phosphate primer paint to IS12744 to a DFT of 60 microns shall be applied, after power tool cleaning.
09. The Temporary Rust Preventive coating that already been applied on any components, tubes, pipes etc., shall be visually inspected for good adherence. If the coating is intact, direct coating of alkyd based red oxide paints over the coating is permitted. In case, the coating has peeled off over a large area, then the coating is to be removed by suitable solvents / heating to 350 –400 °C for an hour before primer paint application –but, in this case, it should be ensured that the minimum surface cleanliness required for primer paint application shall be SSPC – SP2 (equivalent – Hand Tool cleaning).
10. In components, wherever plates / sheets of thickness less than or equal to 5 mm and rods of <25mm/tubes/drain pipes are used, power tool / hand tool cleaning to SSPC – SP3 / SP2 shall be followed and the painting shall be done as described in S.No.8.
11. For all commissioning components-erection materials (xx-993) two coats of Red oxide Zinc Phosphate Primer shall be applied to meet the temporary protection till erection, after power tool cleaning.
12. Touch-up paintings, making good any damaged shop painting and completing any unfinished portion of the shop coat shall be carried out as per clause applicable painting scheme.
13. All components covered under different PGMA's are to be painted. In case any component is left out, the same shall be deemed to be included under the relevant section based on paint logic approved.
14. For very small components like clamps etc. which are not having feasible dimensions for blast cleaning, painting scheme of S.No.8 shall be followed.
15. For very small components with weldable primer at edges, the entire component shall be applied with weldable primer. Structural members having welded connections at site, relevant area can be painted with primer paint instead of Weldable primer.

16. Painting scheme for all temporary structures like 04-196 shall be PS 1AE i.e. 1 coat of Red oxide Zinc Phosphate primer (Alkyd Base) to IS 12744-DFT-30 μ and 2 coats of Synthetic Enamel paint (Long Oil Alkyd) to IS 2932-DFT-2X20 μ Shade Yellow –Shade No. 356 of IS 5- Total DFT 70 μ . These are to be cut & removed at site after erection. (It excludes components covered under Sr. No. 3 & 9 of description table).

17. For internal protection of Pipes, tubes, headers and other pressure parts, Volatile Corrosion Inhibitor (VCI) pellets shall be put (after sponge testing/ draining/ or drying) and subsequently end capped. The dosage of VCI pellets shall be approximately 100 g/ Cu.m. For tubes typically 4 – 5 tablets per end are to be put. For C & I items the dosage of self-indicating Silica Gel (colourless) shall be 250 g/ cu.m. (About 2 to 3 bags weighing approximately 100 grams each). VCI pellets shall not be used for stainless steel components and its composite associates.

18. All threaded components of spring assemblies and turnbuckles shall be galvanized and achromatized to 15 microns minimum thickness.

19. Soot blower components i.e Valve head assembly having high surface temperature (> 200 and <600 deg. C) shall be applied with protective coating as per PS9 (up to 400 deg.C) and PS10 (up to 600 deg.C)

20. Corner plate, sheet channel and fixing pins of PGMA 32-210 shall be painted as per scheme PS3 to total DFT of 60 microns.

21. It is mandatory that for finish coat each layer shall have a permanent DFT and free from any paint defects like sags, wrinkles etc. Total DFT of a component correspond to respective painting scheme has to be ensured and recorded by inspection agency as per QP.

22. For chequered plates having thickness $\leq 5\text{mm}$, surface preparation can be power tool cleaning to St3 and painting shall be in line with Sl. No. 8.

23. Handrails, step treads of PGMA under Sl. No. 3 need to be galvanized in line with scheme for handrails (i.e. Sl .No. 10).

24. Inside surfaces of fabricated structure (e.g. Box type column) shall be painted with two coats of red oxide primer paint during fit up stage.

25. Painting of bunker structures to be in line with painting scheme of supporting structures (Sl. No. 3).

26. All steel structures shall be provided with painting as given in the specification. Further, painting system shall also meet the requirements of corrosivity category C3 (durability high) as per ISO 12944.

Painting Scheme – Details for procurement & application purposes

Sl. No.	Generic nature of paint	Theoretical Covering Capacity Sq.m per Litre.	No. of pack	Volume solids, % (min)	DFT in microns per coat (approx.)	Shade	Shade No. to IS5	Mode of appln.	Over coating interval, Hrs.
1	Epoxy Zinc rich primer to IS14589 Gr.II (latest)	8	2	35	50	Grey	--	Spray	24
2	Two-pack aliphatic Isocyanate cured acrylic finish paint (solid by volume minimum 55% (min) with Gloss retention (SSPC Paint Spec No 36, ASTM D 4587, D 2244, D 523) of Level 2 (after minimum 1000 hours exposure, Gloss loss less than 30 and colour change less than 2.0 Delta – E).	13	2	55	35	Grey white	RAL 9002	Airless Spray	24
3	Heat resistant Aluminium paint to IS 13183 Grade I/II (latest)	10	1	-	20	--	--	Brush / Spray	24
4	Red oxide zinc phosphate primer paint to IS 12744 (latest)	10	1	--	30	-	--	Brush / Spray	12
5	Red oxide Zinc Phosphate Dip coat primer paint to PR: CHEM: 09-03	10	1	--	35	--	---	Dip	12
6	Long oil alkyd synthetic enamel finish paint to IS2932 (latest)	17	1	--	20	Reqd. shade	Corrpdg. Shade no.	Brush / Spray	12
7	Temporary Rust preventive fluid to PR: CHE: 09 – 04	10	1	--	25	--	--	--	12
8	General purpose Aluminium paint to IS 2339 (latest)	10	2	--	20	Aluminum	--	Brush	12
9	HB Chlorinated Rubber Based Zinc Phosphate Primer-Colour Grey	8	1	40	50	Grey	--	Brush / Spray	12
10	Two component polyamide cured epoxy based polyamide cured MIO pigmented intermediate coat. (containing lamellar MIO minimum 30% on pigment)	8	2	80	100 (min)	Brown/ grey	--	Airless Spray	24
11	Two component moisture curing zinc (ethyl) silicate primer, metallic Zinc content 80% (min), Zinc dust quality shall be as per ASTM D 520 Type 2.	8	2	60	70 (min)	Grey	--	Airless Spray	24

The covering capacity of paints specified is only approximate.

The paints and Rust Preventive fluid shall be procured from BHEL's approved suppliers.

Painting of Damaged Areas

(Areas where the paint has deteriorated badly by erosion and areas where the paint film has lost its adhesion and where the steel has rusted appreciably, should be repainted as follows)

Sl.No.	Components	Surface Preparation	Primer coat		Intermediate coat		Finish coat			Total DFT μm
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
1	Paint damaged components fall under Sl.no: 3	Power tool cleaning of minimum 6" of surrounding areas to bare metal	Epoxy zinc rich primer to IS 14589 Grade II	2 T.DFT 70 μ (min)	As given in scheme	1	As given in scheme	3	As given in scheme	As given in scheme