



1 X 800 MW Super Critical Thermal Power Plant Unit No.7 on Ash Dyke Area at Ukai



COMMENT RESOLUTION SHEET

DESCRIPTION		PAINTING SCHEME FOR PULVERISERS				
BHEL DOCUMENT/DRAWING No.		HY-DG-BA-PS-UKAII-00				
GSECL/STEAG DOC NO.						
Sl. No.	GSECL / STEAG Comments (Rev No. 00) DTN/Email Ref : Approval Category : - 3	BHEL's Clarification (Response / Resolution) on Rev. No. 00 BHEL Reference No. and Date : 27.02.2026	GSECL / STEAG Comments/Approval (Rev No. 01) DTN/Email Ref : Approval Category 2	BHEL's Clarification (Response / Resolution) on Rev. No. 01 BHEL Reference No. and Date : 14.03.2026	Status (Open/Close)	Remarks (if Any)
1	Please refer SI No. 1 Surface location Interior surfaces of mill .Please indicate the shade of paint.	Please refer section-6	Not indicated Please refer SI no.1 Surface location Interior surfaces of mill	Shade updated in section-6	Open	
2	Please add in exterior surfaces of mill Mounting plates & Sole Plate.	mill Mounting plates & Sole Plate are coated with red oxide on bottom and on machined surface grease applied.	Noted, However same to be indicated in the Painting scheme with DFT and surface preparaton.	Included in Section 6 SI no4	Open	
3	Please indicate Planetary Gear box a. Inside Surfaces paint with DFT b. Outside Surfaces of paint with DFT	Please refer section-2: note -1	Noted		Close	
4	Please indicate the surface preparation and paint with DFT for outside surfaces of mill side assembly.	Please refer section-6: sl no3.	Noted		Close	
5	Please indicate the surface preparation and paint with DFT for outside surfaces of Separator body assembly.	Please refer section-6: sl no2.	Please refer DFT should me minimum 250-300micron.	Revised please section-6: sl no2.	Open	
5	Please indicate the surface preparation and paint with DFT for outside surface of Separator Top assembly.					
6	Please indicate the surface preparation and paint with DFT for outside surface of Journal Opening Cover and spring.	Please refer section-2: note -2	Please refer DFT should me minimum 250-300 micron.		Open	
7	Seal Air Piping min total DFT shall be 245-300µm.	Seal air piping covered in section-6, sl no 2	Noted		Noted	
8	Discharge valve components outside surface total DFT shall be min 245-300µm.					
9	Please add Coupling Guard & tool related to safety pain & thickness with Min DFT 245-300µm.					
10	Please add section 5 General Note- Grease and Oil Removal: Special care shall be taken to remove grease and oil by means of suitable solvents. Preferred method of removing grease and oil films is to wash with a solution of ¼ lb of Tri-sodium phosphate to each gallon of water. After flushing with clean water and drying, the surface shall be wiped with a mixture of Household Ammonia in water and rinsed again in clean water	Modified.	Noted		Close	
11	Interior surfaces are those surfaces inside the pulverizer exposed to the mill airflow and coal. Also included are those surfaces inside the pulverizer and not exposed to mill airflow and coal, such as the inside of the Journal Housing, and the inside of the Spring Housing.	Confirmed.	Noted		Close	
12	Exterior surfaces are those surfaces visible by someone outside the fully assembled pulverizer.	Confirmed.	Noted		Close	
13	Refer PDF comment also.	Replied below			Close	
14	Project name shall be added on each page	Added.	Noted		Close	
15	Total DFT shall be mentioned	Specified in table. Refer scetion-6	Noted		Close	
16	It shall be 35 Microns each and total DFT shall be 70 Microns.	Refer Paint manufacturer attached - Max DFT per coat can be 20 microns.	Noted for Aluminum Paints.		Close	



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GSECL/STEAG DOC NO.						
Sl. No.	GSECL / STEAG Comments (Rev No. 00)	BHEL's Clarification (Response / Resolution) on Rev. No. 00	GSECL / STEAG Comments/Approval (Rev No. 01)	BHEL's Clarification (Response / Resolution) on Rev. No. 01	Status (Open/Close)	Remarks (if Any)
	DTN/Email Ref :	BHEL Reference No. and Date : 27.02.2026	DTN/Email Ref :	BHEL Reference No. and Date : 14.03.2026		
	Approval Category : - 3		Approval Category 2			
17	All mill components, except the Mill Side Housing Assembly and Bowl and Bowl Hub Assembly. A. Primer: Self curing inorganic zinc silicate primer (solids by volume 60% min) Minimum DFT 75 microns. Shop applied immediately after blast cleaning by airless spray technique. B) Intermediate Coat: Polyamide cured pigmented titanium dioxide (TiO2) or Micaceous iron oxide (MIO) epoxy based paint. (solids by volume 60% min) Minimum DFT 75 microns. Paint applied by airless spray technique. C) Finish Coat (Shop): Polyamide cured color pigment epoxy based paint. (solids by volume 60% min) Minimum DFT 75 microns. D) Finish -Finish Coat (After Erection): of 50 micron DFT (minimum) of Polyurethane based colour pigmented paint (solids by volume minimum 40%).	Modified.	Noted		Noted	
18	This painting specifications are not as per the industrial standard and not acceptable to GSECL.					
19	Brush Off Blast Swedish Std Sa 2.5 preparation: Brush Off Blast (SSPC-SP10): All oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface by abrasive blasting, except for very light shadows, very light streaks or slight discolorations caused by rust stain, mill scale oxides or slight, tight residues of paint or coating. At least 95% of each square inch of surface area shall be free of all visible residues and the remainder shall be limited to light discolorations mentioned above. Work to the Sa 2.5 requirements.	Modified.	Noted		Noted	
20	G. All exposed metallic surfaces subjected to corrosion shall be protected by shop application of suitable rust preventive coatings	Included.	Correct the last word spelling of coatings.	Modified.	Open	
21	Review as per comments marked on page no. 4 of 7.	Modified.	Noted		Close	
22	35 microns , 70 microns	Refer Paint manufacturer attached - Max DFT per coat can be 20 microns.	Noted		Close	

	 BHARAT HEAVY ELECTRICALS LIMITED PULVERISERS, HPEP HYDERABAD	Doc. No.: HY-DG-BA-PS-UKAII-00
	PAINTING SCHEME FOR COAL PULVERISERS	Rev. No. 02
	PROJECT : 1X800MW SUPER CRITICAL THERMAL POWER PLANT UNIT NO.7 AT UKAI	Page 1 of 6

<u>PROJECT : 1X800MW SUPER CRITICAL THERMAL POWER PLANT UNIT NO.7 ON ASH DYKE AREA AT UKAI</u>			
	<u>OWNER:</u> GUJARAT STATE ELECTRICITY CORPORATION LIMITED		
	<u>OWNER REVIEW CONSULTANT:</u> STEAG ENERGY SERVICES (INDIA) PVT. LTD.		
	<u>EPC CONTRACTOR:</u> BHARAT HEAVY ELECTRICALS LTD, NEW DELHI		
	<u>BHEL UNIT:</u> HEAVY POWER EQUIPMENT PLANT - HYDERBAD		
<u>DRAWING TITLE:</u> MILLS-PAINTING SCHEDULE			
	NAME	DATE	
PREPARED BY	BGK	01.01.2026	STATUS: <i>FOR APPROVAL</i>
CHECKED BY	UDAY	01.01.2026	BHEL DRAWING No.: HY-DG-BA-PS-UKAI-00
APPROVED BY	AMAN	01.01.2026	REV No.: 02
CUSTOMER DRG. / DOC NO.: HY-DG-BA-PS-UKAI-00			

	 BHARAT HEAVY ELECTRICALS LIMITED PULVERISERS, HPEP HYDERABAD	Doc. No.: HY-DG-BA-PS-UKAII-00
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	 BHARAT HEAVY ELECTRICALS LIMITED PULVERISERS, HPEP HYDERABAD	Doc. No.: HY-DG-BA-PS-UKAII-00
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SECTION 1: SCOPE

This specification applies to the **Ukai 1X800 MW** contract. Included are all parts and assemblies manufactured by BHEL, its sister units and its sub-vendors/subcontractors.

SECTION 2: ALL INTERIOR SURFACES OF THE MILL

Interior surfaces:

Those surfaces inside the pulverizer exposed to the mill airflow and coal. Also included are those surfaces inside the pulverizer and not exposed to mill airflow and coal, such as the inside of the Planetary Gearbox, Journal Housing, and the inside of the Spring Housing. ***No finish paint is envisaged on these surfaces.***

- A) **Surface preparation:** Commercial Blast SSPC-SP 10 (Swedish Std SA 2.5)
- B) **Primer:** Self curing inorganic zinc silicate primer (solids by volume 60% min) Minimum DFT 75 microns (for surfaces below 95 Deg C) and Heat resistant Aluminium Paint to IS-13183 Gr.-1 [high temperature primer] (for surfaces above 95 Deg C)-Minimum DFT 40 microns in two coats. Primer to be applied after surface preparation to SP3/SP4 (SSI- SA3 / SA21/2).

Note:

- 1) Primer (inorganic zinc silicate) along with Oil resistant paint (Enamel Synthetic, Oil Resistant paint or superior) application is envisaged inside Planetary Gear Box Housing and lube oil tank.
- 2) No primer application is envisaged on the inside of the Journal Housing & Spring Housing.

SECTION 3: EXTERIOR SURFACES OF THE MILL WITH SURFACE TEMPERATURE GREATER THAN 95°C AND INSULATED

Exterior surfaces:

Those surfaces visible by someone outside the fully assembled pulveriser.

Components with Surfaces Greater Than 95° C:

Mill Side Housing Assembly (Externally Insulated) and Bowl & Bowl Hub Assembly

- A) **Surface preparation:** Commercial Blast SSPC-SP 10 (Swedish Std SA 2.5)
- B) **Primer:** Heat resistant Aluminium paint to IS-13183 Gr.-1 (1 coats of Total DFT 20 microns).
- C) **Finish Coat:** Heat resistant Aluminium paint to IS-13183 Gr.-1 (1 coats of Total DFT 20 microns).

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SECTION 4: EXTERIOR SURFACES OF THE MILL WITH SURFACE TEMPERATURES LESS THAN 95 °C

Exterior surfaces:

Those surfaces visible by someone outside the fully assembled pulverizer.

Components with Surfaces Less Than 95° C:

All mill components, except the Mill Side Housing Assembly and Bowl and Bowl Hub Assembly.

- A. Surface preparation:** Commercial Blast SSPC-SP 10 (Swedish Std SA 2.5)
- B. Primer:** Self curing inorganic zinc silicate primer (solids by volume 60% min) Minimum DFT 75 microns. Shop applied immediately after blast cleaning by airless spray technique.
- C. Intermediate Coat:** Polyamide cured pigmented titanium dioxide (TiO₂) or Micaceous iron oxide (MIO) epoxy based paint. (solids by volume 60% min) Minimum DFT 100 microns. Paint applied by airless spray technique.
- D. Finish Coat (Shop):** Polyamide cured color pigment epoxy based paint. (solids by volume 60% min) Minimum DFT 75 microns.
- E. Finish –Finish Coat (After Erection):** of 50 micron DFT (minimum) of Polyurethane based colour pigmented paint (solids by volume minimum 40%).

SECTION 5: GENERAL NOTES:

- A. Grease and Oil Removal:** Special care shall be taken to remove grease and oil by means of suitable solvents as per SSPC-SP-01. Preferred method of removing grease and oil films is to wash with a solution of ¼ lb of Tri-sodium phosphate to each gallon of water. After flushing with clean water and drying, the surface shall be wiped with a mixture of Household Ammonia in water and rinsed again in clean water
- B. Brush Off Blast Swedish Std Sa 2.5 preparation:** Brush Off Blast (SSPC-SP10): All oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface by abrasive blasting, except for very light shadows, very light streaks or slight discolorations caused by rust stain, mill scale oxides or slight, tight residues of paint or coating. At least 95% of each square inch of surface area shall be free of all visible residues and the remainder shall be limited to light discolorations mentioned above. Work to the Sa 2.5 requirements.
- C. Machined surfaces are not painted.**
- D. Bought-out items** shall be as per manufacturer painting standards. This painting scheme shall be applicable for Mills components as mentioned.
- E. 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.
- F. All exposed metallic surfaces** subjected to corrosion shall be protected by shop application of suitable rust preventive coating

SECTION 6: PAINT SCHEDULE

Sl. No.	Surface Location	Surface Preparation	Primer			Intermediate			Finish Coat				Total DFT µm min
			Paint	DFT/Coat	No. of Coats	Paint	DFT/Coat	No. of Coats	Paint	DFT/Coat	No. of Coats	Shade	
01	Interior Surfaces of Mill	SA2.5	Inorganic Zinc Silicate	75 µm min	2	NA		-	-		-	Grey	75 µm min.
	All Surfaces 95°C or less.												
	Interior Surfaces of Mill	SA2.5	Heat resistant Aluminium Paint to IS-13183 Gr.-1	20 µm min	2	NA		-	-		-	Aluminium	40 µm min
	All Surfaces temperature above 95°C												
02	Exterior Surfaces of Mill below 95 °C or less (All surfaces except the Mill Side Assembly and Bowl and bowl Hub assembly)	SA2.5	Inorganic Zinc Silicate	75 µm min DFT total	2	Polyamide cured pigmented titanium dioxide (TiO2)	100µm Min Total	1-2 coats	Finish (Shop)	75 µm Min Total	1-2	Grey white RAL 9002	250 µm (Shop)
	Includes: Separator Body Assembly, Journal Opening Cover, Spring Assembly, Separator Top, Dynamic Classifier Assembly, Discharge Valve Components, Outlet Pipes, Seal Air Piping, Planetary Gearbox, Pulveriser Top Platform, Lube Oil System)								----- Polyamide cured color pigment epoxy based paint	-----	-----	-----	-----
									Finish (after erection) Polyurethane based color Pigment paint (solids by volume 40% min)	50 µm min	1		300 µm (after erection)

Sl. No.	Surface Location	Surface Preparation	Primer			Intermediate			Finish Coat				Total DFT µm min
			Paint	DFT/Coat	No. of Coats	Paint	DFT/Coat	No. of Coats	Paint	DFT/Coat	No. of Coats	Shade	
03	Exterior Surfaces of Mill above 95 °C (Mill Side Assembly & Bowl& Bowl Hub Assembly) Exterior Surface of the Mill Side Assembly is insulated	SA2.5	Heat resistant Aluminium Paint to IS-13183 Gr.-1	20 µm min	1	NA		-	Heat resistant Aluminium Paint to IS-13183 Gr.-1	20 µm min	1	Aluminium	40 µm.
04	Mounting Plates & Sole Plate	SA2.5	Red Oxide Zinc Phosphate primer	25 µm-35 µm	2							Oxide red	50-70 µm.