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ACTION **1** DATE **09.06.2025**

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1	Approved	3	Returned with Comments. Please Resubmit.
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LETTER REF NO. DATE.



OWNER/PROJECT: NLC India Ltd.
NLC TALABIRA THERMAL POWER PROJECT
3X800 MW JHARSUGUDA, ODISHA

CONSULTANT:



Development Consultants Private Limited
Certified to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018



EPC CONTRACTOR:
BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

DRAWING TITLE:

PAINTING SCHEME FOR PULVERISERS

	NAME	DATE	
PREPARED BY	UDAY	22.10.2024	STATUS: <i>FOR APPROVAL</i>
CHECKED BY	KCM	22.10.2024	BHEL DRAWING No.: HY-BM-TALABIRA-PS-00
APPROVED BY	AMAN	22.10.2024	REV No.: 01

CUSTOMER DRG. / DOC NO.: HY-BM-TALABIRA-PS-00

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SECTION 1: SCOPE

This specification applies to the **3X800 MW NLC TALIBARA** 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:** SSPC-SP 10 -- Swedish Std Sa2½ of ISO 8501 (near white metal).
- B) **Primer:** Two coats of Inorganic Ethyl Zinc Silicate Primer with total DFT 80 microns (for surfaces below 95 Deg C) and high temperature Aluminum silicone primer with total DFT 40 microns (for surfaces above 95 Deg C). Primer to be applied after surface preparation to SA 21/2.

Note:

- 1) Primer along with Oil resistant paint application is envisaged inside Planetary Gear Box Housing.
- 2) No primer application is envisaged on the inside of the Journal 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:** SSPC-SP 10 -- Swedish Std Sa2½ of ISO 8501 (near white metal).
- B) **Primer:** One coat Aluminum silicone (High Temperature Paint) with total DFT 20 microns.
- C) **Intermediate Coat:** One coat Aluminum Silicone (High Temperature paint). Paint applied by airless spray technique with 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:** SSPC-SP 10 -- Swedish Std Sa2½ of ISO 8501 (near white metal).
- B) **Primer:** Two coats of Ethyl Zinc Silicate Primer with total DFT 80 microns.
- C) **Intermediate Coat:** Two coats of High Build Epoxy MIO coating with total DFT 200 microns.
- D) **Finish Coat (Shop):** High Build Gloss Aliphatic Acrylic polyurethane with total DFT 60 microns.

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.
- B. Swedish Std Sa2½ preparation (Swedish Std Sa2½ of ISO 8501 (near white metal)): SSPC-SP1: 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 Sa2½ requirements. 
- C. Machined surfaces are not painted. Water repellent grease is applied after cleaning.
- D. Bought-out items shall be as per BHEL 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. This painting scheme is valid for all Bowl Mill items from sub-vendors and sister units of BHEL. 
- G. DFT shall be measured using Electronic Gauge. 
- H. The profile depth or blast pattern shall be measured by surface preparation comparator. 



SECTION 6: PAINT SCHEDULE

Sl. No.	Surface Location	Surface Preparation	Primer		Intermediate		Finish Coat			Total DFT
			Paint	No. of Coats	Paint	No. of Coats	Paint	No. of Coats	Shade	µm min
01	Interior Surfaces of Mill All Surfaces 95°C or less.	Swedish Std Sa2½ of ISO 8501 (near white metal)	Inorganic Ethyl Zinc Silicate Primer DFT=40µm per coat	2	NA	-	-	-	-	80 µm min.
	Interior Surfaces of Mill All Surfaces temperature above 95°C	Swedish Std Sa2½ of ISO 8501 (near white metal)	Aluminium silicone (High Temperature Paint) DFT=20µm per coat	2	-	-	-	-		40 µm DFT.
02	Exterior Surfaces of Mill below 95 °C or less (All surfaces except the Mill Side Assembly and Bowl and bowl Hub assembly) Includes: Separator Body Assembly, Journal Opening Cover, Spring Assembly, Separator Top, Dynamic Classifier Assembly, Discharge Valve	Swedish Std Sa2½ of ISO 8501 (near white metal)	Inorganic Ethyl Zinc Silicate Primer DFT=40µm per coat	2	High Build Epoxy MIO coating DFT = 100µm per coat	2	Aliphatic acrylic Polyurethane paint DFT = 30µm per coat.	2	Grey white RAL 9002	340 µm DFT 



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	Components, Outlet Pipes, Seal Air Piping, Planetary Gearbox, Pulveriser Top Platform, Lube Oil System)									
03	Exterior Surfaces of Mill above 95 °C (Mill Side Assembly & Bowl & Bowl Hub Assembly) Exterior Surface of the Mill Side Assembly is insulated	Swedish Std Sa2½ of ISO 8501 (near white metal)	Aluminium silicone (High Temperature Paint) DFT=20µm per coat	1	Aluminium silicone (High Temperature Paint) DFT=20µm per coat	1	-	-		40 µm DFT.