

CORRIGENDUM III

NAME OF THE WORK. **Maintenance Recoating of Howrah Bridge (Rabindra Setu) with MCU Coatings System**

NIT NO.:_ SMPK/KDS/CIV/T/2540/72 dt. 15.02.2021

CORRIGENDUM I : SMPK/KDS/CIV/T/2540/365 dt. 10.03.2021

CORRIGENDUM II : SMPK/KDS/CIV/T/2540/480 dt. 12.04.2021

In continuation to the above mentioned NIT No. Following is further notified.

Page Reference	In place of	To be read as
44 Item No. 2 of BOQ in the NIT	<p>Application of Primer Coat: - Application of single component single component, moisture cure Polyurea, Mio and Zinc based corrosion, impact and abrasion resistant Primer by spray/ Brush/ Roller evenly @ 75 microns DFT and allowing the coating to completely dry. The Primer coat shall match the following Specifications and Performance Properties; Product Specifications of Primer coat; 1. Resin type: Aromatic urethane 2. Pigment type: Zinc & micaceous iron oxide 3. Sheen: Flat Colours: Blue & purple 4. Volume solids: 62.0% ± 2.05. VOC: 328 g/L (2.7 lb/gal) Performance Properties of Primer coat; 1. Adhesion (ASTM D4541): >15 MPa (2175 PSI) 2. Abrasion resistance (ASTM D4060): CS17 wheel 1000 cycles/kg; 135 mg loss 3. Impact (ASTM 2794): direct 160; reverse 20 4. Prohesion (ASTM G85 5000 hours): scribe rate 9.5; blistering: none 5. Dry heat resistance: continuous 145 °C (293 °F) 6. Salt Spray (ASTM B117): +10.000 h (several systems) 7. Norsok M-501 several systems: Passes 8. ISO 12944 C5M high and C5I high: Passes in 2 layer system and 3 layer system</p>	<p>Application of Primer Coat: - Application of single component single component, moisture cure Polyurea, Mio and Zinc based corrosion, impact and abrasion resistant Primer by spray/ Brush/ Roller evenly @ 75 microns DFT and allowing the coating to completely dry. The Primer coat shall match the following Specifications and Performance Properties; Product Specifications of Primer coat; 1. Resin type: Aromatic urethane 2. Pigment type: Zinc & micaceous iron oxide 3. Sheen: Flat Colours: Blue & purple 4. Volume solids: 62.0% ± 2.05. VOC: 328 g/L (2.7 lb/gal) Performance Properties of Primer coat; 1. Adhesion (ASTM D4541): >15 MPa (2175 PSI) 2. Abrasion resistance (ASTM D4060): CS17 wheel 1000 cycles/kg; 135 mg loss 3. Impact (ASTM 2794): direct 160; reverse 20 4. Prohesion (ASTM G85 5000 hours): scribe rate 9.5; blistering: none 5. Dry heat resistance: continuous 145 °C (293 °F) 6. Salt Spray (ASTM B117): +10.000 h (several systems) 7. Norsok M-501 several systems: Passes 8. ISO 12944 C5M high and C5I high: Passes in 2 layer system and 3 layer system</p> <p style="text-align: center;">OR</p> <p>APPLICATION OF ANTI CORROSIVE, HIGH ADHESION, FIRST COAT- PRIMER COAT FOR STEEL/ALUMINIUM/: Application of Primer coat of Single pack Moisture Cured Polyurethane, MIO & aromatic poly-isocyanate pre-polymers, with Iron oxides, magnesium silicates, modified phosphate anticorrosive pigment, having universal adherence on Steel, Aluminum, galvanized steel, carbon steel etc., having very good anti corrosive properties by use of an active modified (zinc free) phosphate anticorrosive pigment, even on hand cleaned surfaces giving high performance when blast clean is not possible; can be applied by roller, brush or sprayer, High solids content & Good elasticity (indirect and direct impact resistance). The primer coat shall be applied in</p>

		<p>a single one coat to achieve a total DFT of 75 microns, allowing it to cure within 6-8 hours. The Parameters and properties of the primer coat, shall be as follows:</p> <ol style="list-style-type: none"> 1. Type of binder/resin : Moisture curing, aromatic poly-isocyanate pre-polymers. 2. Type of pigment : Iron oxides, magnesium silicates, modified phosphate anticorrosive 3. Colour : Oxide red. 4. Density: $1,33 \pm 0,05 \text{ g/cm}^3$ 5. Solids content: $66 \pm 2\%$ (in volume) $77 \pm 2\%$ (in weight) 6. Viscosity: $87 \pm 5 \text{ KU}$ 7. VOC: $< 300 \text{ g/L}$ (non diluted) 8. Elasticity and Hardness Ericson (ISO 1520) : 5 Direct Impact (ISO 6272) : 130 kgcm Indirect Impact (ISO 6272) : 40 kgcm 9. Salt spray test: (ISO 7253) :- No Corrosion at scratch- + 10,000 hours (complete system). 10. Adhesion: (ISO 2409) =. > 15 MPa.- (GT-0) 11. Abrasion resistance : (ASTM-D4541)= 1000 cycles/Kg:= 125 mg loss. 12. Heat Resistance:= up to 150 degrees C (cured coating) 13. Application Relative Humidity= up to 98 % RH. 14. Chemical Resistance (ISO 2812-1):= Unchanged- No Change in colour of gloss, after immersion in 10% NaOH & 10% H₂SO₄
45 Item No. 3 of BOQ in the NIT	<p>Application of UV and weather resistant protective Top /Finish Coat:- Application of single component, moisture cure urethane and Aluminum based, corrosion, UV and weather resistant, Finish/Top coat by spray/ Brush/ Roller evenly @150 micron DFT in 2 coats of 75 microns DFT each coat by on touch dry and cure of the CFRP Composite Structural Strengthening System. The Top coat/Finish Coat shall match the following Product Specifications</p> <p>Product Specifications of Top coat/Finish Coat:</p> <ol style="list-style-type: none"> 1. Resin type: Aliphatic urethane 2. Pigment type: Aluminum flake 3. Sheen: Semi-gloss 4. Colours: Aluminum 5. Volume solids: $63.0\% \pm 3.0$ 6. VOC: 205 g/L (1.92 lb/gal) 	<p>Application of UV and weather resistant protective Top /Finish Coat:- Application of single component, moisture cure urethane and Aluminum based, corrosion, UV and weather resistant, Finish/Top coat by spray/ Brush/ Roller evenly @150 micron DFT in 2 coats of 75 microns DFT each coat by on touch dry and cure of the CFRP Composite Structural Strengthening System. The Top coat/Finish Coat shall match the following Product Specifications</p> <p>Product Specifications of Top coat/Finish Coat:</p> <ol style="list-style-type: none"> 1. Resin type: Aliphatic urethane 2. Pigment type: Aluminum flake 3. Sheen: Semi-gloss 4. Colours: Aluminum 5. Volume solids: $63.0\% \pm 3.0$ 6. VOC: 205 g/L (1.92 lb/gal) <p style="text-align: center;">OR</p> <p>B) APPLICATION OF UV-CHEMICAL& WEATHER RESISTANT ANTI CORROSIVE TOP COAT/FINISH COAT:</p> <p>Application of Top coat of Single pack Moisture Cured Polyurethane over primer , after the specified re- coat interval of 8 hours. The top</p>

		<p>coat shall be applied in single coat to achieve a DFT of min. 50 microns; having Type of binder: -Moisture curing aliphatic polyisocyanate pre-polymers, Type of pigment:- Light-stable organic and/or inorganic pigments, depending on the colour, having High gloss (minimum 90%). 60°Gn (Gardn)</p> <p>The parameters & properties of the top coat shall be as follows:</p> <ol style="list-style-type: none"> 1. Density : 1.05 – 1.4 g/ml 2. Volume Solids :- 58 - 65% 3. Sheen : Full Gloss 4. VOC value : 200 g/L 5. Viscosity : 80 (±10) sec CF4 6. Gloss : >90 7. – Colours: All required RAL colours available. 8. UV & Chemical Resistance: (ISO 2812-1):= Unchanged- No Change in colour of gloss, after immersion in 10% NAOH & 10% H2SO4
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All other terms and conditions remain unchanged.

Sd/-
Dy. Chief Engineer-III
 For Chief Engineer

SYAMA PRASAD MOOKERJEE PORT , KOLKATA