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REV.	DATE	ALTERED		REV.	DATE	ALTERED		REV.	DATE	ALTERED	
		CHECKED				CHECKED				CHECKED	
		APPROVED				APPROVED				APPROVED	

PAINTING SCHEDULE FOR BHUSAWAL CV PUMP

CUSTOMER		MAHARASHTRA STATE POWER GENERATION CO. LTD.
PROJECT		BHUSAWAL TPS, MAHAGENCO UNIT #6, 1 X 660 MW STAGE-I
CONSULTANT		DEVELOPMENT CONSULTANTS PVT. LTD.
TYPE OF PRODUCT		CONCRETE VOLUTE TYPE CW PUMP

	BHARAT HEAVY ELECTRICALS LTD. HYDERABAD			NAME	SIGN	DATE	NO. OF VAR.
			DRN.	SUDHEER	SUDHEER	06/11/2019	
			CHD.	SATISH	SATISH	06/11/2019	
			APPD.	K.H.R.K	K.H.R.K	06/11/2019	NA
DEPARTMENT	PUMPS ENGG.	SCALE	WEIGHT (KG)		REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS
CODE	410	NA	NA		NA	NA	NA
TITLE	PAINTING SCHEDULE FOR BHUSAWAL CV PUMP			DRAWING NO.			REV.
				FP13627			00
				SHEET NO. 01	NO. OF SHEETS		12



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1. Summary of Paint Color and Painting System																																								
<table><thead><tr><th></th><th></th><th>Insulation</th><th>Finishing Color</th><th>Paint System No.</th></tr></thead><tbody><tr><td colspan="2" rowspan="5"> * Non-Submerged surface of casing cover, sole plate and manhole *Coupling cover *Thrust bearing pedestal *Thrust bearing *Radial bearing *Outer surface of discharge pipe (only for the concrete opening area of Manhole and concrete outside area of discharge flange.) *Piping supports *Thrust bearing nut *Radial bearing nut *Bearing collar (outer surface above top cover) </td><td>-</td><td>French Blue</td><td>01</td></tr><tr><td>-</td><td>Black</td><td>02</td></tr><tr><td>-</td><td>French Blue</td><td>03</td></tr><tr><td>-</td><td>Brown</td><td>03</td></tr><tr><td>-</td><td>Black</td><td>04</td></tr><tr><td colspan="2" rowspan="3"> *Submerged surface of casing cover, sole plate and manhole *Inner surface of discharge pipe and counter flange *Impeller guide *Coupling hub *Coupling spacer *Special tools *Volute of concrete *Joint between metal parts and concrete </td><td>-</td><td>Black</td><td>05</td></tr></tbody></table>																Insulation	Finishing Color	Paint System No.	* Non-Submerged surface of casing cover, sole plate and manhole *Coupling cover *Thrust bearing pedestal *Thrust bearing *Radial bearing *Outer surface of discharge pipe (only for the concrete opening area of Manhole and concrete outside area of discharge flange.) *Piping supports *Thrust bearing nut *Radial bearing nut *Bearing collar (outer surface above top cover)		-	French Blue	01	-	Black	02	-	French Blue	03	-	Brown	03	-	Black	04	*Submerged surface of casing cover, sole plate and manhole *Inner surface of discharge pipe and counter flange *Impeller guide *Coupling hub *Coupling spacer *Special tools *Volute of concrete *Joint between metal parts and concrete		-	Black	05
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2. Detailed Painting Schedule											
System No.		Application		Place of Operation	Surface Preparation	product name (General Name)	No. of coat	Dry Film Thickness (μ m)	Met hod	Color	Remarks
01		* Non-Submerged surface of casing cover, sole plate and manhole. * Coupling cover *Thrust bearing pedestal *Thrust bearing *Radial bearing *Outer surface of discharge pipe (only for the concrete opening area of manhole and concrete outside area of discharge pipe) *Outer surface of counter flange *Piping supports *Thrust bearing nut *Radial bearing nut *Bearing collar (Outer surface above top cover)		Shop	Blast cleaning SSPC SP 10 Power tool cleaning SSPC SP 3	2 Pack Epoxy Zinc Rich Paint Ref: DAI NIPPON TORYO : ZETTAR EP-2HB	1*	75* *	A.L or B	Gray	French Blue: code no. 166 of IS-5
						2 Pack Epoxy Coating Ref: Dai NIPPON TORYO: EPONICS MIO	1*	50* *	A.L or B	Silver or Gray	
						Acryl polyurethane Enamel Ref: DIA NIPPON TORYO: V TOP-HB	1	75	A.L or B	Frenc h Blue	
				Site	Power tool cleaning SSPC SP 3	2 Pack Epoxy Zinc Rich Paint. Ref: DAI NIPPON TORYO: ZETTAR EP-2HB	(1*)	(75**)	A.L or B	Gray	Spot cleaning and touch up for damaged areas only. Non-submerged surface of sole plate.
						2 Pack Epoxy Coating Ref: Dai NIPPON TORYO: EPONICS MIO	(1*)	(50**)	A.L or B	Silver or Grey	French Blue: code no. 166 of IS-5
						Acryl polyurethane Enamel Ref: DIA NIPPON TORYO: V TOP-HB	(1)	(75)	A.L or B	Frenc h Blue	
Total thickness over 200 μ m											
Method A.L: Airless Spray B: Brush											
Mark* : If the paint method is brush, the number of coat is 2. Mark* * : It shows total D.F.T. The paint does not include Pd, Cr and Cd.											
Ref. Doc.											

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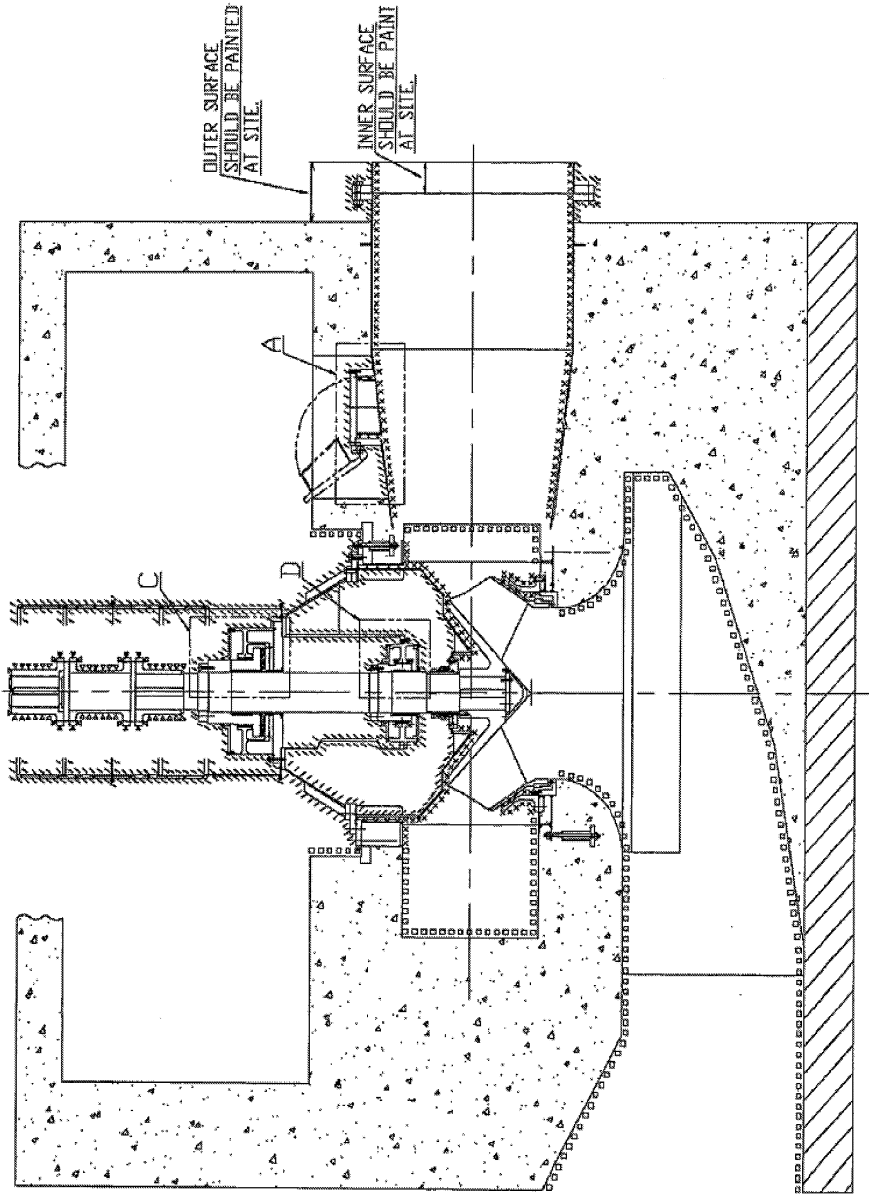
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The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED It must not be used directly or indirectly in any way detrimental to the interest of the company			System No.	Application	Place of Operation	Surface Preparation	General Name/ Ref. product name	No. of coat	Dry Film Thickness (μ m)	Method	Color	Remarks
			02	* Submerged surface of casing cover, sole plate and manhole. * Inner surface of discharge pipe and counter flange * Impeller Guide	Shop	Blast cleaning SSPC SP 10	Modified Aliphatic Polyamine cured Epoxy Zinc Rich Primer Ref:DAI NIPPON TORYO : ZETTAR EP-2	1	15~20	A.L or B	Gray	
							Modified polyamine cured tar epoxy coating Ref: DAI NIPPON TORYO SDC COAT #402T ECO***	1*	300**	A.L or B	Black	
					Site	Power tool cleaning SSPC SP 3	Modified Aliphatic Polyamine cured Epoxy Zinc Rich Primer Ref:DAI NIPPON TORYO : ZETTAR EP-2	(1)	(15~20)	A.L or B	Gray	Spot cleaning and touch up for damaged areas only
							Modified polyamine cured tar epoxy coating Ref: DAI NIPPON TORYO SDC COAT #402T ECO***	(1*)	(300**)	A.L or B	Black	
			Total thickness over 315 μ m									
			Method A.L : Airless Spray B : Brush									
			Mark* : If the paint method is brush, the number of coat is 2. Mark** : It shows total D.F.T. Mark***; SDC COAT #602T ECO shall be used instead of SDC COAT #402T ECO in winter season(ambient temperature 10°C or less) The paint does not include Pd, Cr and Cd.									
Ref. Doc.												

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System No.	Application	Place of Operation	Surface Preparation	General Name/ Ref. product name	No. of coat	Dry Film Thickness (μ m)	Method	Color	Remarks
03	Coupling hub Coupling spacer Special Tools	Shop	Power tool cleaning SSPC SP 10	Synthetic resin base, phosphate pigment Anticorrosive Paint Ref: DAI NIPPON TORYO GREEN SUBOID QD UNDER COAT	2	35**	B	Brown	Special tools are painted this coating only.
		Site	Power tool cleaning SSPC SP 3	Synthetic resin base, phosphate pigment Anticorrosive Paint Ref: DAI NIPPON TORYO GREEN SUBOID QD UNDER COAT	(2)	(35**)	B	Brown	This coating should be painted after centering at site and flange area only should be coated with TECTYL 506 paints.
				Long Oil Alkyd Coating Ref: DAI NIPPON TORYO TAIKO MARINE INTERMEDIATE COAT GH	1*	30**	B	French Blue	French Blue : code no. 166 of IS-5
				Long Oil Alkyd Coating Ref: DAI NIPPON TORYO TAIKO MARINE TOP COAT GH	1*	25**	B	French Blue	
Total thickness over 90 μ m									
Mark* : If the paint method is brush, the number of coat is 2. Mark** : It shows total D.F.T. The paint does not include Pd, Cr and Cd.									
Method A : L : Airless Spray B : Brush									

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		Mark* : If the paint method is brush, the number of coat is 2. Mark** : It shows total D.F.T. The paint does not include Pd, Cr and Cd.							
		Method A.L : Airless Spray B : Brush							
		Total Thickness over 250 µ m							
System No.	Application	Place of Operation	Surface Preparation	General Name/ Ref. product name	No. of coat	Dry Film Thickness (µ m)	Method	Color	Remarks
05	*Joint between metal parts and concrete *Inside of the embedded parts and casing ring *discharge lip	Site	Blast (To remove the oil content soil and etc.,)	A high solids, low viscosity, two or three-pack epoxy primer with excellent adhesion to damp surfaces. Ref: CORROCOAT PLASMET ECP	1*	100~175**	A.L or B	Amb or	This coating should be carried out after three months pass after concrete placing.
				A polyamine cured, high solids, two-pack glass filled epoxy with good gloss and chemical resistance (Epoxy Glass Flake) Ref: CORROCOAT PLASMET ZE	1*	(150~500**)	A.L or B	Black	

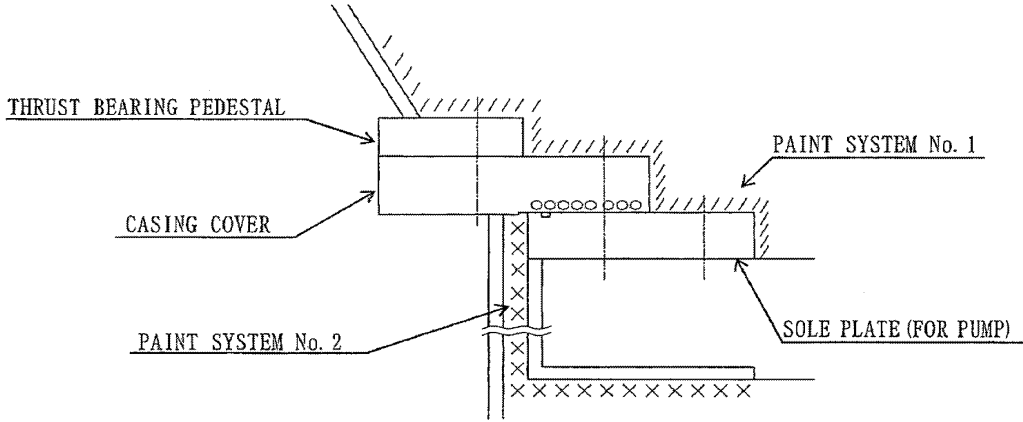
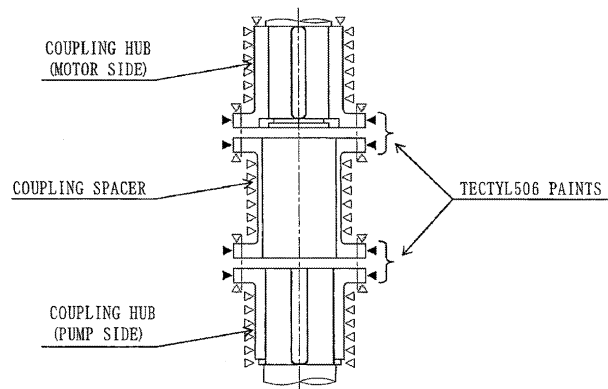
3 PAINTING AREA OF PUMP



SYMBOL	SYSTEM No.
//	01
XXX	02
▽▽▽	03
▲▲▲	03 (TECTYL506)
□	04
	05 (The joint areas between metal parts and concrete, Inside of the embedded parts and casing ring, discharge lip)
NO SYMBOL	



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COPY RIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED It must not be used directly or indirectly in any way detrimental to the interest of the company		4. NOTES FOR PAINTING WORKS <u>(A) General requirement</u> The following area should not be carried out painting. (1) Screw hole (2)Casing flange surface (3)Fitting area (4)Wearing area (ex. Impeller ring and casing ring) (5)Pin-hole (ex. Taper pin hole, etc) (To avoid being blocked, that kind of holes should be protected with pins during painting. (6) Rotating parts (excluding radial / thrust bearing nut, bearing collar (outer surface above top cover)))(ex. Impeller, Impeller plate, shaft, etc.,) <u>(B) Notes for Painting works at SITE</u> (1) After the installation, if damaged painting or rusted area caused by transportation or assembling is found, that area should be brushed and chipped, and touched up with removing oil, dust, water, and harmful foreign material. (2) The outer surface should be touched up after the final assembling. (3) the inner surface of concrete volute should be painting based on system No.4 at site (4) The joint area between the concrete and metal casing (ex. Discharge pipe etc.,) should be carried out the over coating based on sysem No.4 <u>(C) Notes for Pump Sole plate</u> (1) The area for pump sole plate excluded in paint system no. 2 is applied with anticorrosive oil (TECTYL 506) for transportation purpose. (2) The anticorrosive oil should be wiped out before erection of sole plate. (3) After that, sealant (Threebond #1121) should be coated in above area (O marked area only) of pump sole plate. And the surface of soleplate should be painted based on sytem no.1 after installation of the pump at site.					
		Ref. Doc.					

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COPY RIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED It must not be used directly or indirectly in any way detrimental to the interest of the company		 (D) Notes for Shaft coupling. (1) ▽Marked area is applied with anticorrsoive oil for transportation purpose. (2) The anticorrosive oil should be wiped out before centering. (3) After centering, the rust-proof painting should be coated on detailed painting system no. 3 and flange area (marked ▽area only)should be coated with TECTYL 506 considering maintenance. 	
	Ref. Doc.		

