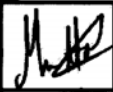
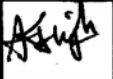


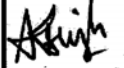
दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004			
				पृष्ठ 22 Page 1	का 1 of 22		
SUPERSEDES INVENTO RY NO.	भारतीय भारी विद्युत मशीनरी लिमिटेड	INSTRUCTIONS FOR PAINTING AND CONSERVATION OF PARTS AND SUB ASSEMBLIES OF STEAM TURBINE					
COPYRIGHT AND CONFIDENTIAL The information on this documents 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	भारतीय भारी विद्युत मशीनरी लिमिटेड						
स्वामित्व अधिकार एवं गोपनीय इस दस्तावेज में दी गई जानकारी भारत भारी विद्युत मशीनरी लिमिटेड की संपत्ति है। इसका प्रयोग एवं व्यापार अन्य के बिना की जा सकता है, जो कि भारतीय के हित में हानिकारक हो न सके।	भारतीय भारी विद्युत मशीनरी लिमिटेड						
दिनांक एवं हस्ताक्षर SIGN & DATE	दिनांक एवं हस्ताक्षर SIGN & DATE						
भारतीय भारी विद्युत मशीनरी लिमिटेड INVENTO RY NO.	भारतीय भारी विद्युत मशीनरी लिमिटेड	सहायक विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE			
P. 5435	22/03/18	Member PSC QAX TSX	Neelu Garg Deepika Singh Lalit Kumar	21/3/18 21/03/18 21/03/18	निर्माणकर्ता WORKED BY जांचकर्ता CHECKED BY पर्यवेक्षणकर्ता SUPERVISED BY	Munendra Mittal Alok Kumar Singh D K Ray	20/03/18 20/03/18 20/03/18
STE-TG STE-TB STE-TF STE-PED REV.NO. 07	Lakhmi Singh Ramesh Kumar Mohit Chauhan Sunil Sharma	21/03/18 21/03/18 21/03/18 21/03/18	स्वीकृति APPROVED :	राजेश गुलती (AGM, STE & GTE)	GR. No		
Dt. 21.03.18	21.03.18	निर्माण PREPARED : STE	जारी ISSUED : TSX	दिनांक DATE : 12.05.81			

C/A NO- STE-18-04

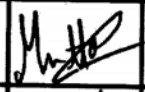
SIGN & DATE भारती एलसी 	उत्पाद मानक PRODUCT STANDARD		ST 33004	
			पृष्ठ 22 Page 2	का 2 of 22
SUPERSEDES INVENTORY भारती एलसी भारतीय भारती	CONTENTS			
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	S.NO.	TOPIC	SHEET NO.	
	1	SCOPE	3	
	2	PAINTING AND PRESERVATION	3-4	
	3	SPECIAL INSTRUCTIONS	5-6	
	4	QUALITY CHECKS	6	
	5	TABLE-1; ASSEMBLY-WISE PRESERVATION AND PAINTING OF COMPONENTS	7-19	
	6	PAINTING SCHEME : ANNEXURE-1	20	
	7	LIST OF MATERIALS : ANNEXURE-2	21	
	8	LIST OF CROSS REFERRED STANDARDS	22	
भारती एलसी INVENTORY NO. P-5435	REV. NO.07		निर्माणकर्ता WORKED BY MUNENDRA MITTAL	20/03/18
		जांचकर्ता CHECKED BY ALOK KUMAR SINGH	20/03/18	

रितक एवं हस्ताक्षर SIGN & DATE सापत्नी सूची संख्या को अधिकारित करता है SUPERSEDES INVENTORY NO. COPYRIGHT 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 स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की संपत्ति है। इसका उपयोग एवं प्रसारण केवल से किसी भी तृतीय प्रयोग, जो कि कंपनी के हित में हस्तिकारक हो न किया जाए।		उत्पाद मानक PRODUCT STANDARD		ST 33004														
				पृष्ठ 22 का 3 Page 3 of 22														
INSTRUCTIONS FOR PAINTING AND CONSERVATION OF PARTS AND SUB ASSEMBLIES OF STEAM TURBINE																		
1.0 SCOPE. This standard deals with painting and conservation of steam turbine components, before dispatch from the plant. This shall also be applicable for deconservation and reconservation at site. Instruction for preservation and painting is valid for Steam Turbine components for inland and overseas preservation including coastal regions.																		
2.0 PAINTING AND PRESERVATION:																		
2.1. Proper painting and preservation of sub-assemblies and parts of Steam Turbine components and Assemblies are very much essential to protect the surfaces against corrosion.																		
2.2. Proper preparation of the surfaces before applying the coating is of vital importance in order to have effective protection of parts against corrosion. The surface of the part to be painted should be uniform, clean from corrosion, oil, and dirt. It should be dry and free from burns. Even the slight dirt left over the surface may later on cause destruction of the coating films and subsequent corrosion of metals																		
2.3. The surface of the parts prepared for painting should be prevented from the atmospheric action of moisture and dirt etc. and shall have metallic shine.																		
2.4. Painting and Preservation of parts must be done not later than 8-10 hours after cleaning and degreasing.																		
2.5. The application of coating material should take place in special, well-aired rooms. If this is not possible, an area of 5m x5m, depending upon the degree of danger, should be declared a safety area for application of large amount of the coating material (more than 5kg/ 8h). Within this safety area smoking, naked flames and the use of machines causing sparks is forbidden. Sufficient ventilation must be ensured.																		
2.6. The paints and primer should be diluted to working viscosity with the thinner as given in the suppliers catalogues or as mentioned below:																		
		<table border="1"> <thead> <tr> <th>COAT</th> <th>PROCESS</th> <th>VISCOSITY</th> </tr> </thead> <tbody> <tr> <td rowspan="2">PRIMER</td> <td>Spray</td> <td>28-32</td> </tr> <tr> <td>Brush</td> <td>40-60</td> </tr> <tr> <td rowspan="2">PAINT</td> <td>Spray</td> <td>28-32</td> </tr> <tr> <td>Brush</td> <td>40-60</td> </tr> </tbody> </table>				COAT	PROCESS	VISCOSITY	PRIMER	Spray	28-32	Brush	40-60	PAINT	Spray	28-32	Brush	40-60
COAT	PROCESS	VISCOSITY																
PRIMER	Spray	28-32																
	Brush	40-60																
PAINT	Spray	28-32																
	Brush	40-60																
रितक एवं हस्ताक्षर SIGN & DATE 	सापत्नी सूची संख्या INVENTORY NO. P-5435	REV. NO: 07	निर्माणकर्ता WORKED BY MUNENDRA MITTAL 	20/03/18														
			जांचकर्ता CHECKED BY ALOK KUMAR SINGH 	20/03/18														

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004 पृष्ठ 22 का 4 Page 4 of 22	
SUPERSEDES INVENTORY NO. सार्वजनिक सूची संख्या को अतिरिक्त करता है	2.7. Surfaces can be coated with paint/ varnish by spray gun or brush. 2.8. Conservation grease can be put on the surface either in cold or hot condition by hair brush or spatula. 2.9. The parts conserved by grease should be additionally protected by waxed paper. 2.10. The protective surface coat must be applied very carefully so as to have a uniform layer thickness without any pores. Discontinuity or break in layer and air inclusions are not permitted. 2.11. Each individual coating will be well dried before applying the next coat. Before applying the second/ subsequent coat it should be ensured that the surface is free from paint cracks, molten pearls and other foreign impurities. 2.12. Quality of painted surfaces should be checked by visual inspection. Any observed defect should be immediately rectified. Special attention should be paid for painting of those parts which are inaccessible. 2.13. All anticorrosive materials (paints, varnishes, grease etc.) are inflammable and therefore it is necessary to store them in special places which are reliably fire-proof. 2.14. Freshly painted parts should not be stored immediately before drying. These should not press against the floor and in no case rain water is allowed to drop. 2.15. All the paints prepared should be consumed before the expiry of its pot life. Out-aged paints should never be applied. The primer is to be utilized within the time specified in the container by the manufacturer of the primer. 2.16. All pipes which cannot be painted from inside should be thoroughly cleaned and dried from inside and blanked by plastic/PVC plugs as per AA7242801. 2.17. For lifting of jobs with machined surfaces, rubber sheet should be used along with wire rope, as rope alone damages conservative film and results in subsequent corrosion. 2.18. Machined surfaces as well as threads are not to be painted. These are to be given a coat of Mobilux grease. 2.19. Edges requiring welding later (at site) are to be left unpainted up to 80 mm from the edges. 2.20. Surfaces damaged during the storage and handling in plant should be checked immediately and coated with the same paint after preparation of the damaged surface. 2.21. Both the primer and its thinner should be compatible to each other.				
COPYRIGHT 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					
स्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका प्रयोग एवं प्रकाशन रूप से किसी भी प्रकार स्वीकार्य, जो कि कंपनी के हित में हानिकारक हो न किया जाए।					
दिनांक एवं हस्ताक्षर SIGN & DATE					
सार्वजनिक सूची संख्या INVENTORY NO. P-543	REV. NO: 07		निर्माणकर्ता WORKED BY MUNENDRA MITTAL		20/03/18
			जांचकर्ता CHECKED BY ALOK KUMAR SINGH		20/03/18

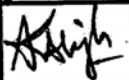
दिनांक एवं हस्ताक्षर SIGN & DATE SUPERSEDES INVENTORY NO. सावधानीपूर्वक संख्या को अप्रतिष्ठित करता है		उत्पाद मानक PRODUCT STANDARD		ST 33004		
				पृष्ठ 22 का 5 Page 5 of 22		
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.						
3.0. SPECIAL INSTRUCTIONS:						
3.1.1. In place on TRP HE 1712, cartec 369 M of M/s OKS can be used.						
3.1.2. For subcontracted items instead of TRP HE 1706+ TRP HE 1710, 368 L of M/s OKS can be used.						
3.2. Procedure for conservation with TRP 1706 + TRP 1710 (one coat of TRP 1706 followed by two coat of TRP 1710) to be done as per below procedure:						
3.2.1. After the surface of the job has been properly cleaned apply one coat of TRP HE 1706 and allow it to air dry for about 12 hours.						
3.2.2. Clean the dust from the surface and given first coat of black TRO HE 1710. Allow to air dry for about 12 hours.						
3.2.3. Apply second coat of TRP HE 1710.						
3.3. Procedure for conservation for Rotor journals and thrust collars is as follows:						
3.3.1. Before starting preservation take piece of cloth dipped in toluol and remove the dirt from the surface of the thrust collar and journals and then clean the surface with white spirit. Presence of fats, corrosion sports on the surface is not allowed.						
3.3.2. Cleaned surface should be dried in the air for 20-30 minutes and only after that it should be conserved.						
3.3.3. It is prohibited to touch the cleaned surface by hand.						
3.3.4. After the coatings get completely dried up, the thrust collar and journal of the rotors are wrapped with bitumin paper which shall be suitably fixed with adhesive tape at the ends. Then the journal will be wrapped with rubber sheet and thereafter with aluminum foil of 0.05 to 0.1 mm thick.						
3.3.5. Finally tightened with an adhesive tape.						
3.4. List of materials required for painting and conservation has been given at annexure 2.						
3.5. Process for painting of metal components and steel surfaces be done according to corporate standard AA0674123.						
3.6. Drying time of at least 4 hours is to be given after each coat of primer and 12 hours after each coat of paint.						
3.7. It is necessary that the surface to be painted is free from loose dust, mill scale, rut, grease, oil, old film etc. Surface cleaning and preparation is to be done as per AA 0674101. The surfaces before painting should correspond to standard degree of purity SA 2 ^{1/2} .						
दिनांक एवं हस्ताक्षर SIGN & DATE 22/3/18	सावधानीपूर्वक संख्या INVENTORY NO. P-5435	REV. NO: 07		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL 	20/03/18
				जांचकर्ता CHECKED BY	ALOK KUMAR SINGH 	20/03/18

SIGNATURE SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004	
				पृष्ठ Page	22 का 6 6 of 22
SUPERSEDES INVENTORY NO. सावनी सूची संख्या को अधिलिखित करता है	3.8. Checking of surface preparation / measurement of dry paint thickness, adhesion, gloss & finish of painted surface is to be done as per AA 0674105. 3.9. Deconservation before erection to be done as per following: 3.9.1. During erection and commissioning of turbine the deconservation of different part of the turbine should be done as and when necessary. 3.9.2. Paints and TRP need not be removed, provided their presence do not interfere with erection or working of turbine and they are in good condition, without any sign of damage in their coating. 3.9.3. Due to requirement of erection technology when and where it is necessary, the paint or TRP coating may be removed with the help of solvent. 3.9.4. Deconservation of thrust collars and journals of rotors are done by wrapping them with thick cloth, well soaked in solvent and after 20-30 minutes the cloth is removed and the surface is rubbed with clean cloth soaked in solvent till the conservative is completely. 3.9.5. No sharp edge tools shall be use to remove the conservative coating. 3.10. Assembly Wise (PGMA Wise) painting and Preservation of components is given in the Table -1. Conservation Material to be used is given in this table with respective material specification and are listed assembly wise (PGMA wise). 3.11. Painting and conservation as per this Specification is valid for inland and overseas preservation storage for 12 months including coastal regions. Additional measures are only necessary for long term storage more than 12 months. However, after an interval of 6 month the surface of conserved jobs shall be re-examined for damage and corrosion spots at site. Additional measures for long term storage is to be done as per ST33007.				
COPYRIGHT 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					
इस दस्तावेज में दी गई सूचना भारत हेवी एलेक्ट्रिकल लिमिटेड की संपत्ति है इसका प्रयोग एवं प्रसारण के बिना की अनुमति नहीं दी जायेगी, जो कि कंपनी के हित में हानिकारक हो न सके।					
निम्न एवं प्रमाणित SIGN & DATE	4.0 QUALITY CHECKS: Quality control should inspect the various painting materials received in stores according to relevant specifications. 4.1 The QC/shop should ensure that complete technological process of painting is followed and all the operations are carried out fully. 4.2 The viscosity of the paints/ primers should be checked after adding the solvent/ thinner for each mixture in viscosity meter. 4.3 The QC department shall visually inspect the finished component for various paint film defects such as gloss, uniformity of shade, wrinkles, orange peel effect, blistering etc. 4.4 Painting / conservation of steam turbine components to be ensured as per Table-1. 4.5 The thickness of the dried painted film, when measured by using suitable instruments for the non-destructive measurement of the coats, as per Annexure-1.				
सावनी सूची संख्या INVENTORY NO. P-5435	REV. NO: 07	निर्माणकर्ता WORKED BY MUNENDRA MITTAL	MUNENDRA MITTAL	20/03/18	जांचकर्ता CHECKED BY ALOK KUMAR SINGH
				20/03/18	20/03/18

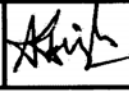
SIGN & DATE 22/3/18		उत्पाद मानक PRODUCT STANDARD				ST 33004
						पृष्ठ 22 का 7 Page 7 of 22
SUPERSEDES INVENTORY नवीन सूची संख्या को प्रतिस्थापित करता है	TABLE -1; Assembly-wise Preservation and Painting of components					
	SL. NO	PGMA	COMPONENT	SURFACE	PAINTING / CONSERVATION (ANNEXURE-1)	FINISH PAINT COLOUR SHADE
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	01	10101, 10102, 10107, 10201, 10202, 10204, 10301, 10304, 10306, 10307, 10309	HP, IP & LP Rotor, Blading of HP IP & LP Rotor.	All surfaces except journals, thrust collars, flanges faces & coupling bolt holes. Rotor journals, Thrust collars, Flanges faces Coupling bolt holes.	TRP HE 1712 (Table C) TRP HE 1706 & 1710 (Table B) Mobilux grease-2	
	02	10501, 10601, 10525, 10526, 10527, 10626	HP & IP Outer Casing, Support Arm-IP	Outer unmachined Outer machined	Aluminium Paint (Table D) TRP HE 1706 & TRP HE 1710 (Table B)	
	03	10502, 10602	HPT & IPT Inner Casing or Diaphragm carrier	Outer & Inner	TRE HE 1712 (Table C)	
	04	10505, 10506, 10528, 10529	HP shaft sealing's	Inner	TRE HE 1712 (Table C)	
	05	10605, 10606	IP shaft sealing housing	Inner Outer	TRP HE 1712 (Table C) Aluminum paint (Table D)	
	06	10514	HP Inlet insert, Connection, Breech nut	All	TRP HE 1712 (Table C)	
	07	10515	HP exhaust Assy	Outer un machined Outer machined Inner	Aluminum paint (Table D) TRP HE 1706 & TRP HE 1710 (Table B) TRP HE 1712 (Table C)	
	08	10518, 10519, 10521	Guide blades HPC, SBR	All	TRP HE 1712 (Table C)	
	09	10612, 10613	IP inlet	Outer un machined Outer machined	Aluminium paint (Table D) TRP HE 1706 & TRP HE 1710 (Table B)	
	10	10616, 10617, 10621	Guide blade IPC, SBR	All	TRP HE 1712 (Table C)	
	11	10710, 10711	LP shaft seal casing (TS & GS)	Inner Outer	TRP HE 1712 (Table C) Aluminum paint (Table D)	
नवीन सूची संख्या INVENTORY NO. P-5435	REV. NO.07		निर्माणकर्ता WORKED BY MUNENDRA MITTAL		20/03/18	
			जांचकर्ता CHECKED BY ALOK KUMAR SINGH		20/03/18	

SIGN & DATE 	उत्पाद मानक PRODUCT STANDARD					ST 33004	
						पृष्ठ 22 का 8 Page 8 of 22	
SUPERCEDES INVENTORY NO. सामग्री सूची संख्या मॉडलिंग नंबर है	SL. NO	PGMA	COMPONENT	SURFACE	CONSERV- ATION	FINISH PAINT COLOUR SHADE	
	12	10713, 10750 to 10758	Cross around pipe / Cross over pipe	Outer Unmachined	Aluminum paint (Table D)		
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company				Machined	TRP HE 1706 & TRP HE 1710 (Table B)		
				Inner	TRP HE 1712 (Table C)		
	13	10723	Base plate	Unmachined	Red Oxide Primer (AA56101) (Table E)		
				Machined	TRP HE 1706 & TRP HE 1710 (Table B)		
	14	10736, 10738 & 10739	Longitudinal girder (Left & right) LPC front wall (TS & GS)/ Side wall (Left & Right)	Outer Unmachined	Painting scheme (Table A)	Light Blue RAL 5012	
				Outer Machined	TRP HE 1706 & TRP HE 1710 (Table B)		
				Inner	TRP HE 1712 (Table C)		
	15	10740, 10764, 10714	LP outer casing upper part Rupture Diaph. Assembly	Outer Unmachined	Painting scheme (Table A)	Light Blue RAL 5012	
				Outer Machined	TRP HE 1706 & TRP HE 1710 (Table B)		
				Inner	TRP HE 1712 (Table C)		
सार्वजनिक एवं गोपनीय इस प्रतीक से की गई प्रस्तावना मात्र है। गोपनीयता की जानकारी है। प्रस्ताव प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी प्रत्यक्ष प्रतीक, जो कि कंपनी के लिए से सुविधाकारक हो न कि हानिकारक।	16	10741, 10783	LP inner outer casing/ LP inner casing	Inner	TRP HE 1712 (Table C)		
				Outer Unmachined	TRP HE 1712 (Table C)		
				Outer Machined	TRP HE 1712 (Table C)		
	17	10742	LP inner inner casing, LP Inner Casing Inlet Part-FAB	Inner	TRP HE 1712 (Table C)		
SIGN & DATE 				Outer Unmachined	TRP HE 1712 (Table C)		
				Outer Machined	TRP HE 1712 (Table C)		
INVENTORY NO. P-5435	18	10745, 10746 10768, 10769, 10770, 10726 10773, 10870	LP steam inlet & Extraction piping LP Casing frame section	Inner	TRP HE 1712 (Table C)		
				Outer	TRP HE 1712 (Table C)		
सामग्री सूची संख्या INVENTORY NO. P-5435	REV. NO. 07		SUPERCEDES		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL	20/03/18
					जांचकर्ता CHECKED BY	ALOK KUMAR SINGH	20/03/18

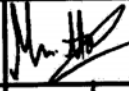
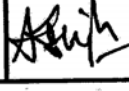
Review एवं हस्ताक्षर SIGN & DATE			उत्पाद मानक PRODUCT STANDARD				ST 33004	
							पृष्ठ 22 का 9 Page 9 of 22	
			SUPERCEDES INVENTORY NO. भारती एसी शीट की पहचान संख्या है	SL. NO	PGMA	COMPONENT	SURFACE	CONSERVATION
19	10747, 10748	Guide blade LPC		All	TRP HE 1712 (Table C)			
20	10749, 10780 10781, 10784	LP extraction pipe sheathing		All	TRP HE 1712 (Table C)			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	21	10760	Inner guide plate of diffuser (TS & GS)	Machined Unmachined	TRP HE 1712 (Table C) TRP HE 1712 (Table C)			
	22	10761	Support to CAP end Assy	Outer unmachined Outer machined	Painting scheme (Table A) TRP HE 1712 (Table C)	Light Blue RAL 5012		
	23	10762, 10763	Diffuser TS & GS	Machined Unmachined	TRP HE 1712 (Table C)			
	24	10766, 10767	LP shaft sealing TS & GS	All	TRP HE 1712 (Table C)			
	25	11101, 11102, 11103, 11121, 11122, 11123, 11142	Guide blade carrier LP 1R, 2R, 3R (TS) & guide blade carrier LP 1L, 2L 3L (GS)	All	TRP HE 1712 (Table C)			
	26	11200	Suspension arrangement of valves (ESV CV)	Unmachined Machined surface Springs	Painting scheme (Table A) TRP HE 1706 & 1710 (Table B) Mobilux grease-2	Graphite Black RAL 9011		
	27	11202, 11223, 11224 & 11222 11239 & 11241	ESV, HPCV and E.S.V. & C.V. Casing Overload valve assembly & Overload valve casing assembly	Outside Inner unmachined Inner Machined	Aluminum Paint (Table D) TRP HE 1712 (Table C) TRP HE 1712 (Table C)			
	28	11225	Frame for suspension (IV)	Machined Unmachined	TRP HE 1706 or 1710 (Table B) Painting scheme (Table A)	Graphite Black RAL 9011		
	29	11320, 11321 & 11322	IV, IV & CV Casing and IPCV	Outside Inner Unmachined Machined	Aluminium paint (Table D) TRP HE 1712 (Table C)			
	स्वयंसाधिकाएँ एवं मोनोपॉल इस दस्तावेज में दी गई जानकारी भारत भारती एसी प्रोपर्टी लिमिटेड की संपत्ति है। इसका प्रयोग एवं प्रसारण के बिना भारत भारती एसी प्रोपर्टी लिमिटेड की लिखित अनुमति के बिना नहीं किया जा सकता।	REV. NO. 07		SUPERCEDES		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL	20/03/18
				जांचकर्ता CHECKED BY	ALOK KUMAR SINGH	20/03/18		
भारती एसी शीट INVENTORY NO. P-5435								

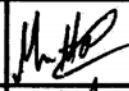
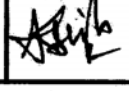
दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD					ST 33004	
							पृष्ठ 22 का 10 Page 10 of 22	
		SUPERCEDES INVENTORY NO.	SL. NO	PGMA	COMPONENT	SURFACE	CONSERV- ATION	FINISH PAINT COLOUR SHADE
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bhanshi Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	30	11323	Suspension of valve (IV)	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011		
	31	11400	Gov. system control rack & supply unit	Outer unmachined	Painting scheme (Table A)	As per schematic diagram		
	32	11401, 11402, 11403, 11404	ESV/ HPCV/ IV & IPCV servomotor, Control valve testing device & its gear	Outer unmachined Outer machined	Painting scheme (Table A) TRP HE 1706 & 1710 (Table B)	Canary Yellow ISC No. 309		
	33	11417	Gov. system control rack assy	Outer unmachined	Painting scheme (Table A)	As per governing schematic		
	34	11418	Test valve	Outer unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309		
	35	11420	Frame for control rack	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	36	11421	Gear for startup & loading device, Hy. Speed governor	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	37	11422	Electro Hyd. Converter (Gov.)	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	38	11423	Follow up pistons for Hd. Amp	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	39	11424	Low vacuum trip assy.	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	40	11425	Assy of extraction valve relay	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	41	11426	Over speed trip testing unit.	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	42	11427	Support assy, follow up piston for EHC	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	43	11428	Hydraulic amplifier	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	44	11429	Main trip valve	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	दिनांक एवं हस्ताक्षर SIGN & DATE	REV. NO. 07		निर्माणकर्ता WORKED BY		MUNENDRA MITTAL		20/03/18
SUPERCEDES INVENTORY NO.	SUPERCEDES		जांचकर्ता CHECKED BY		ALOK KUMAR SINGH		20/03/18	

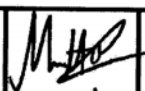
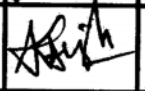
दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD					ST 33004																																																																																																																									
							पृष्ठ 22 का 11 Page 11 of 22																																																																																																																									
		सुपरसेड्स INVENTORY NO. भारतीय सूची संख्या से भारतीय संदर्भ	SL. NO PGMA COMPONENT SURFACE CONSERV- ATION FINISH PAINT COLOUR SHADE	<table border="1"> <tr> <td>45</td> <td>11430</td> <td>Hy. Pr Accumulator</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Light Brown ISC No. 320</td> </tr> <tr> <td>46</td> <td>11433</td> <td>Trip valve (Fire protection)</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>47</td> <td>11435</td> <td>ATT change over valve</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>48</td> <td>11436</td> <td>Oil filter (Fire protection)</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>49</td> <td>11437</td> <td>Emergency shut off valve</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Canary Yellow ISC No. 309</td> </tr> <tr> <td>50</td> <td>11440</td> <td>Valve block assy</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>51</td> <td>11441, 11442</td> <td>Supply unit for valves & its frame</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>52</td> <td>11445</td> <td>Changeover double filter</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Canary Yellow ISC No. 309</td> </tr> <tr> <td>53</td> <td>11446</td> <td>Hand trip valve</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>54</td> <td>11447, 11448</td> <td>Hyd. Accumulator</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Light Brown ISC No. 320</td> </tr> <tr> <td>55</td> <td>11451</td> <td>Frame for protection rack</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>56</td> <td>11452</td> <td>Pressure converter for LPB valve</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>57</td> <td>11454</td> <td>Supply unit frame (IP)</td> <td>Outer Unmachined</td> <td>Painting scheme (Table A)</td> <td>Brilliant Green ISC No. 221</td> </tr> <tr> <td>58</td> <td>11501</td> <td>Hydraulic turning gear/ Hydraulic turning motor</td> <td>All</td> <td>TRP HE 1712 (Table C)</td> <td></td> </tr> <tr> <td>59</td> <td>11505, 11506</td> <td>Hand barring gear</td> <td>All</td> <td>TRP HE 1712 (Table C)</td> <td></td> </tr> <tr> <td>60</td> <td>11601</td> <td>HP front bearing pedestal</td> <td>Outer Unmachined</td> <td>Painting scheme - (Table A)</td> <td>Light Blue RAL 5012</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Outer Machined</td> <td>TRP HE 1706 & 1710 (Table B)</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Inner</td> <td>TRP HE 1712 (Table C)</td> <td></td> </tr> <tr> <td>61</td> <td>11603</td> <td>Oil piping of front pedestal</td> <td>All</td> <td>TRP HE 1712 (Table C)</td> <td></td> </tr> <tr> <td>62</td> <td>11604</td> <td>Journal bearing</td> <td>All</td> <td>TRP HE 1712 (Table C)</td> <td></td> </tr> </table>							45	11430	Hy. Pr Accumulator	Outer Unmachined	Painting scheme (Table A)	Light Brown ISC No. 320	46	11433	Trip valve (Fire protection)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	47	11435	ATT change over valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	48	11436	Oil filter (Fire protection)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	49	11437	Emergency shut off valve	Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309	50	11440	Valve block assy	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	51	11441, 11442	Supply unit for valves & its frame	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	52	11445	Changeover double filter	Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309	53	11446	Hand trip valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	54	11447, 11448	Hyd. Accumulator	Outer Unmachined	Painting scheme (Table A)	Light Brown ISC No. 320	55	11451	Frame for protection rack	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	56	11452	Pressure converter for LPB valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	57	11454	Supply unit frame (IP)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	58	11501	Hydraulic turning gear/ Hydraulic turning motor	All	TRP HE 1712 (Table C)		59	11505, 11506	Hand barring gear	All	TRP HE 1712 (Table C)		60	11601	HP front bearing pedestal	Outer Unmachined	Painting scheme - (Table A)	Light Blue RAL 5012				Outer Machined	TRP HE 1706 & 1710 (Table B)					Inner	TRP HE 1712 (Table C)		61	11603	Oil piping of front pedestal	All	TRP HE 1712 (Table C)		62	11604	Journal bearing	All
45	11430	Hy. Pr Accumulator	Outer Unmachined	Painting scheme (Table A)	Light Brown ISC No. 320																																																																																																																											
46	11433	Trip valve (Fire protection)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
47	11435	ATT change over valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
48	11436	Oil filter (Fire protection)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
49	11437	Emergency shut off valve	Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309																																																																																																																											
50	11440	Valve block assy	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
51	11441, 11442	Supply unit for valves & its frame	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
52	11445	Changeover double filter	Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309																																																																																																																											
53	11446	Hand trip valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
54	11447, 11448	Hyd. Accumulator	Outer Unmachined	Painting scheme (Table A)	Light Brown ISC No. 320																																																																																																																											
55	11451	Frame for protection rack	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
56	11452	Pressure converter for LPB valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
57	11454	Supply unit frame (IP)	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221																																																																																																																											
58	11501	Hydraulic turning gear/ Hydraulic turning motor	All	TRP HE 1712 (Table C)																																																																																																																												
59	11505, 11506	Hand barring gear	All	TRP HE 1712 (Table C)																																																																																																																												
60	11601	HP front bearing pedestal	Outer Unmachined	Painting scheme - (Table A)	Light Blue RAL 5012																																																																																																																											
			Outer Machined	TRP HE 1706 & 1710 (Table B)																																																																																																																												
			Inner	TRP HE 1712 (Table C)																																																																																																																												
61	11603	Oil piping of front pedestal	All	TRP HE 1712 (Table C)																																																																																																																												
62	11604	Journal bearing	All	TRP HE 1712 (Table C)																																																																																																																												
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bhans Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		स्वतंत्रतापूर्वक रूप से गोपनीय इस दस्तावेज़ में दी गई जानकारी का उपयोग केवल उद्देश्य के लिए ही किया जाना चाहिए और इसका उपयोग किसी भी अन्य उद्देश्य के लिए नहीं किया जाना चाहिए, जो कि कंपनी के हित में हानिकारक हो या बिना हानि के हो।																																																																																																																														
दिनांक एवं हस्ताक्षर SIGN & DATE	REV. NO. 07					निमग्नकर्ता WORKED BY MUNENDRA MITTAL		20/03/18																																																																																																																								
भारतीय सूची संख्या INVENTORY NO. P 543	SUPERCEDES					जांचकर्ता CHECKED BY ALOK KUMAR SINGH		20/03/18																																																																																																																								

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD					ST 33004	
							पृष्ठ 22 का 12 Pag12 of 22	
		सुपरसेड्स INVENTORY NO.	SL. NO	PGMA	COMPONENT	SURFACE	CONSERV- ATION	FINISH PAINT COLOUR SHADE
सापेक्षी सुपरी संका से संबंधित संका है	63	11605	MOP casing, MOP assy, Impeller assy	All	TRP HE 1712 (Table C)			
	64	11627	Emergenc governor	All	TRP HE 1712 (Table C)			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	65	11647	Mounting of speed sensors	All	TRP HE 1712 (Table C)			
	66	11648	Oil flush & pr. Testing device	All	TRP HE 1712 (Table C)			
	67	11651	Over speed trip release device	All	TRP HE 1712 (Table C)			
	68	11652	Oil guard ring (F.B. pedestal)	All	TRP HE 1712 (Table C)			
	69	11653	Cover of bearing pedestal	Outer	Painting scheme (Table A)	Light Blue		
				Inner	TRP HE 1712 (Table C)	RAL 5012		
	70	11655	Piping for Hy. Motor	All	TRP HE 1712 (Table C)			
	71	11701	Bearing Pedestal (HP-IP)	Outer	Painting scheme (Table A)	Light Blue RAL 5012		
				Inner	TRP HE 1712 (Table C)			
	72	11703	Radial thrust & jour. Bearing	All	TRP HE 1712 (Table C)			
	73	11717	Oil flush & pr. Testing device	All	TRP HE 1712 (Table C)			
	74	11721	HP-IP Ped. Oil guard ring (F)	All	TRP HE 1712 (Table C)			
	75	11722	Cover of bearing pedestal	Outer	Painting scheme (Table A)	Light Blue RAL 5012		
				Inner	TRP HE 1712 (Table C)			
	76	11724	HP -IP Ped. Oil guard ring (R)	All	TRP HE 1712 (Table C)			
	77	11801, 11802, 11803, 11804, 11824, 11825	Bearing pedestal & cover	Outer	Painting scheme (Table A)	Light Blue RAL 5012		
				Inner	TRP HE 1712 (Table C)			
	78	11812	Oil flush & pr. Testing device	All	TRP HE 1712 (Table C)			
79	11814	Journal bearing	All	TRP HE 1712 (Table C)				
80	11816, 11820, 11821	IP-LP Ped oil guard ring (F & R)	All	TRP HE 1712 (Table C)				
दिनांक एवं हस्ताक्षर SIGN & DATE	सापेक्षी सुपरी संका INVENTORY NO.	REV. NO. 07	SUPERCEDES	निर्माणकर्ता WORKED BY	MUNENDRA MITTAL		20/03/18	
				जांचकर्ता CHECKED BY	ALOK KUMAR SINGH		20/03/18	

SIGN & DATE SUPERCEDES INVENTORY NO.		उत्पाद मानक PRODUCT STANDARD					ST 33004
							पृष्ठ 22 का 13 Page 13 of 22
SUPERCEDES INVENTORY NO.	SL. NO	PGMA	COMPONENT	SURFACE	CONSERVATION	FINISH PAINT COLOUR SHADE	
	81	11817, 1826, 11827	LP Gen Ped. Oil guard ring (F&R)	All	TRP HE 1712 (Table C)		
	82	11821, 11823	LP/LP Ped. Oil guard ring (F&R)	All	TRP HE 1712 (Table C)		
COPYRIGHT 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.	83	11818, 11836	Journal bearing	All	TRP HE 1712 (Table C)		
	84	11831, 11832, 11833, 11723, 11654	Arrangement of IP/LP, LP/LP, LP/Gen, HP/IP, Front brg. pedestal	All	TRP HE 1712 (Table C)		
	85	11901	Main oil tank nozzle arrang. Main oil tank assly	Outer unmachined	Painting scheme (Table A)	Light grey ISC No. 631	
SUPERCEDES INVENTORY NO.				Outer machined	TRP HE 1706 & 1710 (Table B)		
				Inner	TRP HE 1712 (Table C)		
	86	11904	Injector with float	All	TRP HE 1712 (Table C)		
SUPERCEDES INVENTORY NO.			Injector without float	Inner Outer unmachined	TRP HE 1712 (Table C)		
				Outer machined	Painting scheme (Table A)	Light grey ISC No. 631	
	87	11906	Oil vapour exhausters	Outer	Painting scheme (Table A)	Light grey ISC No. 631	
SUPERCEDES INVENTORY NO.	88	11912	Waste oil tank, leakage/dirty oil tank	Outer	Painting scheme (Table A)	Light grey ISC No. 631	
				Inner	TRP HE 1712 (Table C)		
	89	11923	Oil strainer	All	TRP HE 1712 (Table C)		
SUPERCEDES INVENTORY NO.	90	11925	Control fluid tank	All	No Painting		
	91	11928	Oil purification unit	Outer unmachined	Painting scheme (Table A)	Light grey ISC No. 631	
	92	11929	CF vapour exhauster	Outer	Painting scheme (Table A)	Light grey ISC No. 631	
SUPERCEDES INVENTORY NO.	93	11930	CF purifier	Outer unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309	
	94	11934, 11936	Duplex oil filter (Lub oil / jacking oil)	Outer	Painting scheme (Table A)	Light grey ISC No. 631	
	95	11935	Fixing plates for tank	All	Red Oxide Primer (AA56101) (Table E)		
SUPERCEDES INVENTORY NO.	96	12010	Dummy shaft	Machined	TRP HE 1706 & 1710 (Table B)		
				Unmachined	TRP HE 1712 (Table C)		
SUPERCEDES INVENTORY NO.	REV. NO. 07	SUPERCEDES			निर्माणकर्ता WORKED BY	MUNENDRA MITTAL	20/03/18
					जांचकर्ता CHECKED BY	ALOK KUMAR SINGH	20/03/18

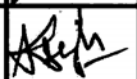
सिग्नेचर SIGN & DATE			उत्पाद मानक PRODUCT STANDARD			ST 33004		
						पृष्ठ 22 का 14 Page 14 of 22		
SUPERCEDES INVENTORY NO. भारतीय भारी बिजली भारी भारतीय भारी बिजली भारी	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	स्वतंत्रता दिवस एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत के स्वतंत्रता दिवस की श्रद्धांजलि है। इस दस्तावेज को गोपनीय माना जाता है। इस दस्तावेज को बिना अनुमति के किसी भी व्यक्ति को प्रकट नहीं किया जा सकता है।	SL. NO	PGMA	COMPONENT	SURFACE	CONSERVATION	FINISH PAINT COLOUR SHADE
			97	12013	Shaft lifting device (LPT)	Machined	TRP HE 1706 & 1710 (Table B)	
				Unmachined	Painting scheme (Table A)	Light Blue RAL 5012		
98	12019/12079, 12080	HP, IP & LP shaft support	Machined	TRP HE 1706 & 1710 (Table B)				
		Unmachined	Painting scheme (Table A)	Light Blue RAL 5012				
99	12023, 12024	Hy. Test device MS/HRH pipe	All	TRP HE 1712 (Table C)				
100	12025, 12026	Steam blowing device MS/HRH pipe, Overload valve	Unmachined	Red Oxide Primer (AA56101) (Table E)				
		Machined	TRP HE 1712 (Table C)					
101	12027/12087, 12038	Assy tools for main turbine Breech Nut Heating Device	All	TRP HE 1712 (Table C)				
102	12037, 12081, 12082, 12083, 12085 12088	Assy fixture for HPT Mount. Frame for bearing shell Mount.Dev. for overload valve	Machined	TRP HE 1706 & 1710 (Table B)	Light Blue RAL 5012			
		Unmachined	Painting scheme (Table A)					
103	12039, 12040, 12041	M. device for shaft seal compensator, device for axial adjustment LP rotor, HP transport device	Machined	TRP HE 1706 & 1710 (Table B)	Light Blue RAL 5012			
		Unmachined	Painting scheme (Table A)					
104	12042	LP joint covering	All	Red Oxide Primer (AA56101) (Table E)				
105	12043, 12044, 12098	Assy device for valves (HP, IP and OLV)	All surface Fasteners	Red Oxide Primer (AA56101) (Table E)				
106	12046, 12047	Transport device for Gov. rack/LPB rack	All	Red Oxide Primer (AA56101) (Table E)				
107	12050	Steam blowing device for LPBP valves	Unmachined	Red Oxide Primer (AA56101) (Table E)				
		Machined	TRP HE 1712 (Table C)					
108	12052	Turning over device	Unmachined	Painting scheme (Table A)	Light Blue			
		Machined	TRP HE 1706 or 1710 (Table B)	RAL 5012				
109	12053	Casing support	Unmachined	Painting scheme (Table A)	Light grey ISC No. 631			
		Machined	TRP HE 1706 or 1710 (Table B)					
भारतीय भारी बिजली INVENTORY NO. P.54735	REV. NO. 07	SUPERCEDES	निर्माणकर्ता WORKED BY	MUNENDRA MITTAL		20/03/18		
			जांचकर्ता CHECKED BY	ALOK KUMAR SINGH		20/03/18		

दिनांक एवं हस्ताक्षर SIGN & DATE			उत्पाद मानक				ST 33004	
	PRODUCT STANDARD						पृष्ठ 22 का 15 Page 15 of 22	
SUPERCEDES INVENTORY NO. भारतीय भारी बिजली लिमिटेड का नाम	SL. NO	PGMA	COMPONENT	SURFACE	CONSERV- ATION	FINISH PAINT COLOUR SHADE		
	110	1261	Mounting frame of bearing shell	Machined	TRP HE 1706 or 1710 (Table B)	Graphite Black RAL 9011		
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	111	12069	Transport device for protection rack	Unmachined	Red Oxide Primer (AA56101) (Table E)			
	112	12071	Valve support for HP Overhaul	All	TRP HE 1712 (Table C)			
	113	12300	LP by pass control rack	All	Painting scheme (Table A)	As per schematic diagram		
	114	12301	LPBV servomotor	Outer machined	TRP HE 1706 & 1710 (Table B)			
				Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309		
	115	12302, 12308	Pilot valve for LPB stop / control valves	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	116	12303, 12301	Chest LPB stop & control valve	Outer unmachined	Aluminium Paint (Table D)			
				Outer machined	TRP HE 1706 & 1710 (Table B)			
				Inner	TRP HE 1712 (Table C)			
	117	12304, 12305	LP bypass stop/control valve	All	TRP HE 1712 (Table C)			
	118	12306, 12307	LPB stop/control valve servomotor	Outer unmachined	Painting scheme (Table A)	Canary Yellow I SC No. 309		
				Outer machined	TRP-HE 1706 & 1710 (Table B)			
119	12309	Frame for suspension of LPBV	Machined	TRP HE 1706 & 1710 (Table B)	Graphite Black RAL 9011			
			Unmachined	Painting scheme (Table A)				
120	12310, 12311	LPB control rack assy / frame	Outer unmachined	Painting scheme (Table A)	As per pass rack schematic diagram			
121	12312, 12313	Electro Hy. Convertor LPB Hy. Convertor LPB	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221			
122	12314	Bypass limit controller	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221			
दिनांक एवं हस्ताक्षर SIGN & DATE	REV. NO. 07		SUPERCEDES		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL		20/03/18
	जांचकर्ता CHECKED BY	ALOK KUMAR SINGH				20/03/18		

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD					ST 33004	
							पृष्ठ 22 का 16	
							Page 16 of 22	
सुपरसेडिड INVENTORY NO.	SUPERSEDES INVENTORY NO.	SL. NO	PGMA	COMPONENT	SURFACE	CONSERV- ATION	FINISH PAINT COLOUR SHADE	
		123	12315	Low vacuum condenser protection	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
		124	12316	Spray water pressure switch	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	भारतीय भारी बिजली मशीन लि. भारतीय भारी बिजली मशीन लि. के बिना इस दस्तावेज़ के बिना किसी भी रूप में प्रयोग, प्रकाशित करना या इस दस्तावेज़ के किसी भी हिस्से का प्रयोग करना गैर कानूनी है।	125	12317	Pilot valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
		126	12318	Check valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
		127	12320	Water injection valve	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
		128	12321	Suspension of LPB valves	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011	
			11240	Suspension of overload valve	Machined	TRP HE 1706 & 1710 (Table B)		
		129	12322	Feedback assy	Outer Unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309	
		130	12323	Pr. Converter for LPBV	Outer Unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	
		131	12402	Embedment for anchor points	All	Red Oxide Primer (AA56101) (Table E)		
		132	12404	Base plate assy	Unmachined	Red Oxide Primer (AA56101) (Table E)		
					Machined	TRP HE 1706 & 1710 (Table B)		
		133	13111	Variable orifice Nb 125 (B70)	All	TRP HE 1712 (Table C)		
		134	13121	Hanger & support lub oil	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011	
					Machined	TRP HE 1706 & 1710 (Table B)		
		135	13123	Oil throttle valve Mb25, Flushing part oil throttle Nb25	All	TRP HE 1712 (Table C)		
		136	13142	Hanger & support control fluid	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011	
			Machined	TRP HE 1706 & 1710 (Table B)				
137	13143, 13144	Steam strainer of MS / HRH	All	TRP HE 1712 (Table C)				
भारतीय भारी बिजली मशीन लि. INVENTORY NO.	REV. NO. 07	SUPERCEDES		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL		20/03/18	
				जांचकर्ता CHECKED BY	ALOK KUMAR SINGH		20/03/18	

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD					ST 33004		
							पृष्ठ 22 का 17 Page 17 of 22		
		SUPERCEDES INVENTORY NO. बावरी पूरी संख्या की सहीरित वन है	SL. NO PGMA COMPONENT SURFACE CONSERV- ATION FINISH PAINT COLOUR SHADE	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bhans Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company					
स्वामित्वकारी एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत की पूर्णतया स्वतंत्रता की सुरक्षा है, इसका प्रयोग एवं प्रसारण के बिना की जा सकती है, जो कि संरक्षित है और इस दस्तावेज को न बिना	138	13147	Oil stripper	Outer Unmachined	Painting scheme (Table A)	Light grey I	SUPERCEDES INVENTORY NO. बावरी पूरी संख्या की सहीरित वन है		
				Inner	TRP HE 1712 (Table C)	SC No. 631			
	139	13150, 13151	MS/ HRH strainer housing	Outer	Aluminum (Table D)				
				Inner	TRP HE 1712 (Table C)				
	140	13159, 13160	MS / HRH strainer assy. Device	All	TRP HE 1712 (Table C)				
	141	13152, 13154	Hangers & support seal steam/cond. Spray	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011			
	142	13156, 13158	H&S control oil (LPBV) / control pipes (NRV)	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011			
				Machined	TRP HE 1706 & 1710 (Table B)				
	143	13162, 13164	Hangers for CW (Oil cooler / C.F. cooler)	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011			
	144	13166	Water spray nozzles	All	TRP HE 1712 (Table C)				
दिनांक एवं हस्ताक्षर SIGN & DATE	145	13166	Sludge catcher	Inner	TRP HE 1712 (Table C)		SUPERCEDES INVENTORY NO. बावरी पूरी संख्या की सहीरित वन है		
				Outer	Painting scheme (Table A)	Light grey ISC No. 631			
	146	13169	Variable orifice Nb150/Nb200	All	TRP HE 1712 (Table C)				
	147	13173, 13174	Oil throttle valve Nb65/ flushing part Oil throttle valve Nb65	All	TRP HE 1712 (Table C)				
	148	13177	SPR blocks & damper INT SYS	Outer unmachined	Painting scheme (Table A)	Graphite Black RAL 9011			
दिनांक एवं हस्ताक्षर SIGN & DATE	149	13235	Servomotor for NRV on CRH line.	Outer unmachined	Painting scheme (Table A)	Canary Yellow ISC No. 309	SUPERCEDES INVENTORY NO. बावरी पूरी संख्या की सहीरित वन है		
				Machined	TRP HE 1706 & 1710 (Table B)				
दिनांक एवं हस्ताक्षर SIGN & DATE	150	13236	Change over valve	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221	SUPERCEDES INVENTORY NO. बावरी पूरी संख्या की सहीरित वन है		
बावरी पूरी संख्या INVENTORY NO. P. 54 35	REV. NO. 07	SUPERCEDES		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL	20/03/18			
				जांचकर्ता CHECKED BY	ALOK KUMAR SINGH	20/03/18			

दिनांक एवं हस्ताक्षर SIGN & DATE			उत्पाद मानक PRODUCT STANDARD				ST 33004	
							पृष्ठ 22 का 18 Page 18 of 22	
			SUPERCEDES INVENTORY NO. बावरी पूरी संख्या सहित लिखें	SL. NO PGMA COMPONENT SURFACE CONSERV- A ION FINISH PAINT COLOUR SHADE	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bhanshi Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.			
स्वामित्व अधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत और विदेशों में कानूनी रूप से सुरक्षित है। इस दस्तावेज को बिना अनुमति के प्रसारित करना या इस दस्तावेज के किसी भी हिस्से का प्रयोग करना गैर कानूनी है। बावरी पूरी संख्या सहित लिखें	151	13238	Pilot valve/ Pilot valve for NRV. CRH	Outer unmachined	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	152	13239, 13240	Gland / Leakage steam valve, Electro Hy. Actuator	Valve Outer	Aluminum (Table D)	Light grey ISC No. 631		
			Valve Inner	TRP HE 1712 (Table A)				
			Actuator outer	Painting scheme (Table A)				
	153	13245, 13246, 13248	Junction box for supply rack	Outer surface	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	154	13252, 13253, 13254, 13255, 13256, 13257, 13259	Rack for FR fluid / pr./condenser/Ext. & gland /Ms./Pr. /control fluid/ lube oil instruction	Unmachined	Painting scheme (Table A)	Light grey ISC No. 631		
	155	13378	Junction box for LPBP rack	Outer surface	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	156	13379	Junction box for Gov. rack/ protection rack	Outer surface	Painting scheme (Table A)	Brilliant Green ISC No. 221		
	157	10530	Overload valve inlet Assembly.	Outer & Inner	TRP HE1712 (Table C)			
	158	11940	Valve Block Assembly	All	No Painting			
159	11224 , 11323	Mounting supports for MS/HRH valve	Unmachined	Painting scheme (Table A)	Graphite Black RAL 9011			
			Machined surface	TRP HE 1706 & 1710 (Table-B)				
			Springs	Mobilux grease-2				
160	12027	Assy. tools for Governing assemblies, Forced cooling device for HPV, Forced cooling device for IPV	All	TRP HE 1712 (Table-C)				
161	11450	Gov. system protection rack assy	Outer unmachined	Painting scheme (Table A)	As per schematic			
दिनांक एवं हस्ताक्षर SIGN & DATE P-54335	REV. NO. 07	SUPERCEDES		निर्माणकर्ता WORKED BY MUNENDRA MITTAL	20/03/18			
बावरी पूरी संख्या INVENTORY NO. P-54335			जांचकर्ता CHECKED BY ALOK KUMAR SINGH	20/03/18				

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004	
				पृष्ठ 22 का 19 Page 19 of 22	
बाहरी दफ्तरी संख्या INVENTORY NO. २५१३५	SUPERSEDES INVENTORY NO. बाहरी दफ्तरी संख्या की सफाई नंबर है	<u>Components not covered above to be conserved as follows:</u> 1. External Unmachined surface exposed to atmosphere during installation - painting scheme Annexure -3 2. External machined surface – TRP HE 1706 & TRP HE 1710 3. Surface in contact with steam / oil during installation TRP HE 1712 4. Threads and holes – Mobilux grease. Note : On inner surfaces of bearing pedestals, MOP casing, cross over pipes/cross around pipe, extraction pipes, LP upper part, front & rear walls, Longitudinal girders/Side walls and on inner and outer surfaces of LP inner and LP inner outer casing, inner surface of IP inlet pipe, oil tank, which will come in contact with steam or oil during operation, no primer is to be used only HE 1712 is to be used.			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company					
स्वामित्व अधिकार एवं गोपनीयता इस दस्तावेज में दी गई जानकारी भारत भारती एलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं प्रसारण के बिना भारत भारती एलेक्ट्रिकल्स की लि. की स्वीकृति के बिना न होना चाहिए।					
दिनांक एवं हस्ताक्षर SIGN & DATE 20/03/18	REV. NO. 07				
बाहरी दफ्तरी संख्या INVENTORY NO. २५१३५	निर्माणकर्ता WORKED BY MUNENDRA MITTAL		 20/03/18		
	जांचकर्ता CHECKED BY ALOK KUMAR SINGH		 20/03/18		

SIGNATURE SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004																									
				पृष्ठ 22 का 20 Page 20 of 22																									
SUPERCEDES INVENTORY NO. बावरी पूरी संकाई अधिकार संकाई	PAINTING SCHEME Table A					Annexure – 1																							
	<table border="1"> <thead> <tr> <th>Primer paint</th> <th>No. of Coat</th> <th>DFT μm (for 2 Coats)</th> <th>Intermediate Paint</th> <th>No. of Coats</th> <th>DFT μm</th> <th>Finish paint</th> <th>No. of Coats</th> <th>DFT μm (for 2 Coats)</th> <th>Total DFT μm (Minimum)</th> </tr> </thead> <tbody> <tr> <td>Epoxy, Base zinc rich primer paint (Two pack) AA56114</td> <td>2</td> <td>70</td> <td>Epoxy Tio2 pigmented polyamide cured paint AA56112</td> <td>1</td> <td>70</td> <td>Aliphatic Acrylic two pack polyurethane finish paint AA56142</td> <td>2</td> <td>60</td> <td>200</td> </tr> </tbody> </table>									Primer paint	No. of Coat	DFT μm (for 2 Coats)	Intermediate Paint	No. of Coats	DFT μm	Finish paint	No. of Coats	DFT μm (for 2 Coats)	Total DFT μm (Minimum)	Epoxy, Base zinc rich primer paint (Two pack) AA56114	2	70	Epoxy Tio2 pigmented polyamide cured paint AA56112	1	70	Aliphatic Acrylic two pack polyurethane finish paint AA56142	2	60	200
	Primer paint	No. of Coat	DFT μm (for 2 Coats)	Intermediate Paint	No. of Coats	DFT μm	Finish paint	No. of Coats	DFT μm (for 2 Coats)	Total DFT μm (Minimum)																			
Epoxy, Base zinc rich primer paint (Two pack) AA56114	2	70	Epoxy Tio2 pigmented polyamide cured paint AA56112	1	70	Aliphatic Acrylic two pack polyurethane finish paint AA56142	2	60	200																				
Table B																													
<table border="1"> <thead> <tr> <th>TRP</th> <th>No. of Coats</th> <th>Total DFT μm (Minimum)</th> </tr> </thead> <tbody> <tr> <td>TRP 1706 & TRP 1710</td> <td>1 coat of TRP1706 followed by 2 coats of TRP 1710 (Refer clause 3.2)</td> <td>20+25+25=70 Minimum</td> </tr> </tbody> </table>		TRP	No. of Coats	Total DFT μm (Minimum)	TRP 1706 & TRP 1710	1 coat of TRP1706 followed by 2 coats of TRP 1710 (Refer clause 3.2)	20+25+25=70 Minimum																						
TRP	No. of Coats	Total DFT μm (Minimum)																											
TRP 1706 & TRP 1710	1 coat of TRP1706 followed by 2 coats of TRP 1710 (Refer clause 3.2)	20+25+25=70 Minimum																											
Table C																													
<table border="1"> <thead> <tr> <th>TRP</th> <th>No. of Coats</th> <th>Total DFT μm</th> </tr> </thead> <tbody> <tr> <td>TRP 1712</td> <td>2 coats</td> <td>Not Applicable</td> </tr> </tbody> </table>		TRP	No. of Coats	Total DFT μm	TRP 1712	2 coats	Not Applicable																						
TRP	No. of Coats	Total DFT μm																											
TRP 1712	2 coats	Not Applicable																											
Table D																													
<table border="1"> <thead> <tr> <th>Paint</th> <th>No. of Coats</th> <th>Total DFT μm (For 2 coats) (Minimum)</th> </tr> </thead> <tbody> <tr> <td>Aluminum Paint</td> <td>2</td> <td>40</td> </tr> </tbody> </table>		Paint	No. of Coats	Total DFT μm (For 2 coats) (Minimum)	Aluminum Paint	2	40																						
Paint	No. of Coats	Total DFT μm (For 2 coats) (Minimum)																											
Aluminum Paint	2	40																											
Table E																													
<table border="1"> <thead> <tr> <th>Only Primer</th> <th>No. of Coats</th> <th>Total DFT μm (Minimum) (For 2 coats)</th> </tr> </thead> <tbody> <tr> <td>Epoxy Base zinc rich primer paint (Two pack) AA56114 or Red oxide primer (Two pack) AA56101 as applicable</td> <td>2</td> <td>80</td> </tr> </tbody> </table>		Only Primer	No. of Coats	Total DFT μm (Minimum) (For 2 coats)	Epoxy Base zinc rich primer paint (Two pack) AA56114 or Red oxide primer (Two pack) AA56101 as applicable	2	80																						
Only Primer	No. of Coats	Total DFT μm (Minimum) (For 2 coats)																											
Epoxy Base zinc rich primer paint (Two pack) AA56114 or Red oxide primer (Two pack) AA56101 as applicable	2	80																											
DFT – Dry film thickness PREPARATION OF EPOXY PRIMER (AA56114) AND EPOXIDE FINISHING PAINT (AA56142) Both these paints as supplied consist of two separate ingredients namely base and accelerator. Shortly before mixing and use these shall be thoroughly stirred. Mixing ratio of base: Accelerator is to be kept as per the recommendations of the supplier. The accelerator should be added to the base and not the base to the accelerator. The paints shall be mixed with continuous stirring until a uniform consistency is obtained.																													
NOTE: - After mixing the paint shall be allowed to mature for 30 minutes and the mixed paint shall be used within 8 hours, unless otherwise specified by the paint supplier.																													
REV. NO. 07 SUPERCEDES	निर्माणकर्ता WORKED BY MUNENDRA MITTAL		जांचकर्ता CHECKED BY ALOK KUMAR SINGH		20/03/18 20/03/18																								

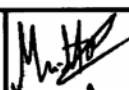
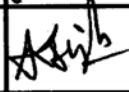
COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of Bharti Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company

संप्रदायिक एवं गोपनीय

इस दस्तावेज में दी गई सूचना भारत भारती उपकरणों की संपत्ति है। इसका प्रयोग एवं प्रसारण बिना भारत भारती उपकरणों की लिखित अनुमति के बिना न किया जाए।

SIGNATURE
DATE
20/03/18INVENTORY NO.
P-5435

दिनांक एवं हस्ताक्षर SIGN & DATE SUPERCEDES INVENTORY NO. भारतीय सूची संख्या को संश्लेषित करें		उत्पाद मानक PRODUCT STANDARD		ST 33004 पृष्ठ 22 का 21 Page 21 of 22	
		Annexure -2 <u>LIST OF MATERIALS</u>			
COPYRIGHT 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.	SL NO.	DESCRIPTION	REMARKS		
	1	TRP HE 1706	AA5510055308	AA55155	
	2	TRP HE 1710	AA5510054000	AA55154	
	3	TRP HE 1712	AA5510051000	AA55151	
	4	ALUMINIUM PAINT	HW5610049997	HW56149	
	5	RED OXIDE ZINC PRIMER	AA5610001013	AA56101	
	6	MOBILUX GREASE	AA5740001005	AA57401	
		2 OF IOC OR INDUSTRIAL GREASE			
	7	EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACKS)	HW5610014000	AA56114	
	8	HIGH BUILD INTERMEDIATE EPOXY PAINT	HW5610012996	AA56112	
	9	CHEMICAL RESISTANT EPOXIDE FINISHING PAINT OF FOLLOWING SHADE:			
		WHITE	AA5610031567	AA56131	
	10	FULL GLOSS POLYURETHANE FINISHING PAINT:			
		LIGHT GREY	AA5610042208	AA56142	
		BRILLIANT GREEN	HW5610042976	AA56142	
	LIGHT BROWN	HW5610042950	AA56142		
	LIGHT BLUE	HW5610042992	AA56142		
	CANARY YELLOW	HW5610042968	AA56142		
	INTERNATIONAL ORANGE	HW5610042917	AA56142		
	CHERRY RED	HW5610042909	AA56142		
	DARK VIOLET	HW5610042895	AA56142		
	GRAPHITE BLACK	HW5610042887	AA56142		
	TRAFFIC WHITE	HW5610042860	AA56142		
	11	XYLOL	AA5670003004	AA56703	
	12	TOLUOL	AA5670002008	AA56702	
	13	MINERAL TURPENTINE (WHITE SPIRIT)	AA5670001001	AA56701	
	14	VCI PAPER	HW 5511516015	IS: 6243	
	15	ALUMINIUM FOIL 0.05 – 01 NN THICK	AA1232301019 AA 1232301027	AA12301	
दिनांक एवं हस्ताक्षर SIGN & DATE भारतीय सूची संख्या INVENTORY NO. P-5435	REV. NO. 07	SUPERCEDES		निर्माणकर्ता WORKED BY MUNENDRA MITTAL	20/03/18 
			जांचकर्ता CHECKED BY ALOK KUMAR SINGH	20/03/18 	

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		ST 33004	
				पृष्ठ 22 का 22 Page 22 of 22	
भारतीय सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY NO.	LIST OF CROSS REFERRED STANDARDS 1. AA55155 2. AA 55154 3. AA55151 4. AA55126 5. AA56128 6. AA56101 7. AA57401 8. AA 56105 9. AA 56131 10. AA 56703 11. AA 56702 12. AA 56701 13. AA 55619 14. AA 12301 15. AA 7242801 16. AA 0674101 17. AA 0674123 18. IS 5730 19. IS 6263 20. IS 5			
भारतीय सूची संख्या के अधिनियम प्रकाशित					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		Released			
स्वत्वाधिकार एवं गोपनीयता यह लेख मे दी गई सूचना भारत भारती उपकरणों की संपत्ति है इसका प्रकाश एवं प्रसारण बिना भारत भारती की लिखित अनुमति के बिना किया जायेगा					
दिनांक एवं हस्ताक्षर SIGN & DATE	REV. NO. 07				
भारतीय सूची संख्या INVENTORY NO.	REV. NO. 07		निर्माणकर्ता WORKED BY	MUNENDRA MITTAL	20/03/18
भारतीय सूची संख्या INVENTORY NO.	REV. NO. 07		जांचकर्ता CHECKED BY	ALOK KUMAR SINGH	20/03/18