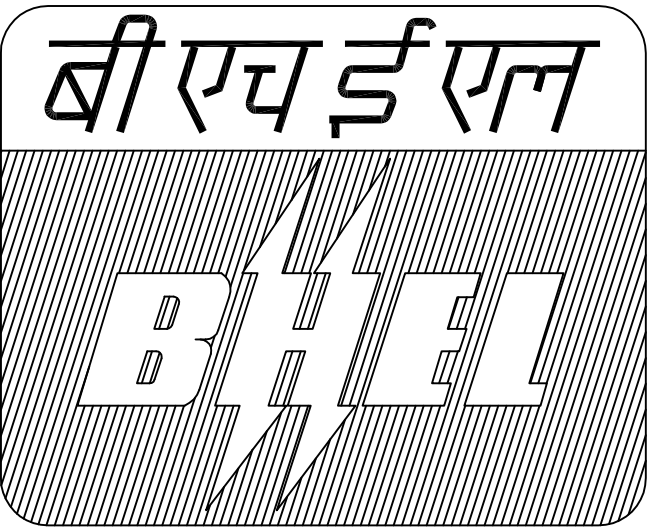
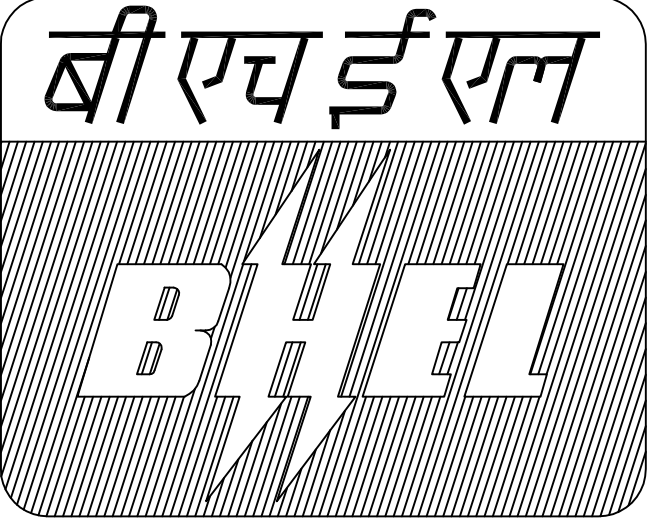


INVENTORY NO. _____ SIGN. AND DATE _____ REF. DRG. NO. _____ THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTREST OF THE COMPANY	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	ADDITIONAL INFORMATION				
											STATUS OF DRAWING				
											DISTURIBUTION OF PRINTS				
S.NO		DESCRIPTION					UNITS			DATA					
1		GENERAL DATA													
1.1		Service of Heat Exchangers								OIL COOLER (1x100% PHE)					
1.2		No. of Heat Exchangers								As per Enquiry					
1.3		Item No.													
1.4		LOCATION								OUTDOOR					
1.5		OPERATION								CONTINUOUS					
2		DESIGN DATA AND CONSTRUCTION REQUIREMENT FOR <u>ONE PHE</u>								HOT FLUID		COLD FLUID			
2.1		Fluid circulated								OIL (ISO VG-46)		WATER			
2.2		Flow rate					m³/hr			9.5		VENDOR TO PROVIDE			
2.3		Temperature inlet					°C			65		38			
2.4		Temperature outlet					°C			45		VENDOR TO PROVIDE			
2.5.		PROPERTIES								@55 °C	@45 °C				
2.5.1		Density					Kg/m³			840	855				
2.5.2		Viscosity					cp			16.67	30.55				
2.5.3		Specific heat					KCal/Kg.°C			0.48	0.46				
2.5.4		Thermal conductivity					KCal/hr.m.°C			0.1285	0.13				
2.5.5		Fouling Factor					m².K.hr/KCal			0.0002		0.0002			
2.6		Operating pressure					Kg/cm²(g)			10.5		4.0			
2.7		Max. Allow. Press. Drop Including Nozzles					Kg/cm²			0.6		0.5			
2.8		Heat exchanged					KCal/Hr			31748					
2.9		Design pressure					Kg/cm²(g)			8		6.5			
2.10		Design temperature					°C			80		60			
2.11		Corrosion allowance on C.S. Mat.					mm			3.0		3.0			
2.12		Surface Area Margin					Excess area %			10%					
2.13		Provision to accommodate additional plates for future expansion					%			10%					
2.14		Hydrostatic test pressure					Kg/cm²			1.5 X Design pressure.					
2.15		Max differential pressure between hot and cold fluid					Kg/cm²			10.0					
2.16		Type & Size of connections								Flanged ASME 150# RF					
		Inlet Nozzle & Outlet Nozzle								Size to be specified by vendor.					
2.17		Permissible Noise level					DBA			85 dBA At a Distance Of 1 M From Outline Of The Equipment.					
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD							DRN.	NAME ANSHUL				DATE 04.03.2020		NO.OF VAR.	
							CHD.	SUNIL				04.03.2020		NA	
							APPD.	PRAFUL				04.03.2020			
TITLE: DATA SHEET – A PLATE TYPE HEAT EXCHANGER (OIL SERVICE)						CARD CODE		DRAWING NO. 4–165–01–22891					REV. 00		
								SHEET NO. 1			NO OF SHEETS 2				

INVENTORY NO. _____ SIGN. AND DATE _____ REF. DRG. NO. _____ 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 INTREST OF THE COMPANY	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	ADDITIONAL INFORMATION		
											STATUS OF DRAWING		
											DISTURIBUTION OF PRINTS		
3		MATERIALS OF CONSTRUCTION											
3.1		Heat transfer plates									SS 304		
3.2		Heat transfer plates thickness							mm		0.6		
3.3		Fixed / Movable cover plate									IS 2062		
3.4		Lateral bolts (Tie rods) / nuts									A193B7/A1942H		
3.5		Guide rail									SS CLAD IS 2062		
3.6		Support beam/column									IS 2062		
3.7		Plate gaskets									NITRILE RUBBER		
3.8		Nozzle gaskets									Non - Asbestos		
3.9		Nozzle pipes											
		(a) Hot fluid side									SS 304		
		(b) Cold fluid side									SS 304		
3.10		Nozzle flanges & Counter flanges											
		(a) Hot fluid side									SS 304 (Slip-On Type)		
		(b) Cold fluid side									SS 304 (Slip-On Type)		
3.11		Name plate									SS		
3.12		Nozzle flange bolt/nuts									A193B7/A1942H		
4		TESTS											
4.1		Hydrostatic Test									YES		
5		SPARES									AS PER REQUIREMENT		
5.1		Heat Exchanger Plates											
5.2		Plate Gasket											
5.3		End Plates											
5.4		End Plate Gaskets											
6		MAINTENANCE TOOLS											
6.1		Wrenches									YES		
		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD							DRN.	NAME ANSHUL	SIGN.	DATE 04.03.2020	NO.OF VAR.
									CHD.	SUNIL		04.03.2020	NA
									APPD.	PRAFUL		04.03.2020	
TITLE:		DATA SHEET – A PLATE TYPE HEAT EXCHANGER (OIL SERVICE)						CARD CODE		DRAWING NO. 4–165–01–22891			REV. 00
										SHEET NO. 2		NO OF SHEETS 2	