



F.A.T.I. GENERAL EQUIPMENTS PVT. LTD
(ISO 9001:2008 Certified)

Doc. No. FGEPL/DS/1608/01
Rev. 0
Job No. DNE-1608
Sheet 1 of 2

DATASHEET OF HEATER

Client : M/s. Brahmaputra Cracker and Polymer Ltd.

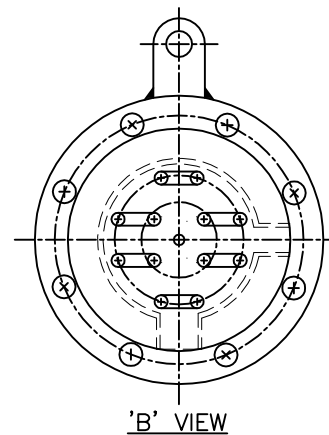
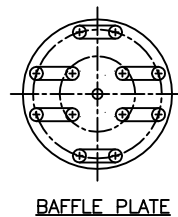
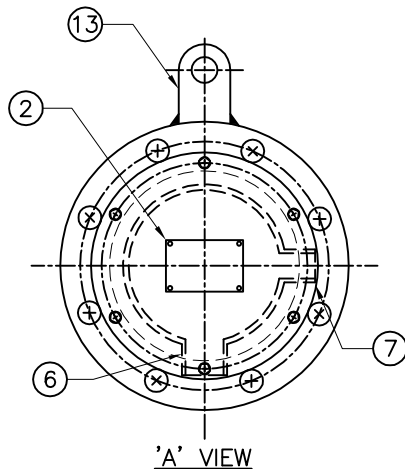
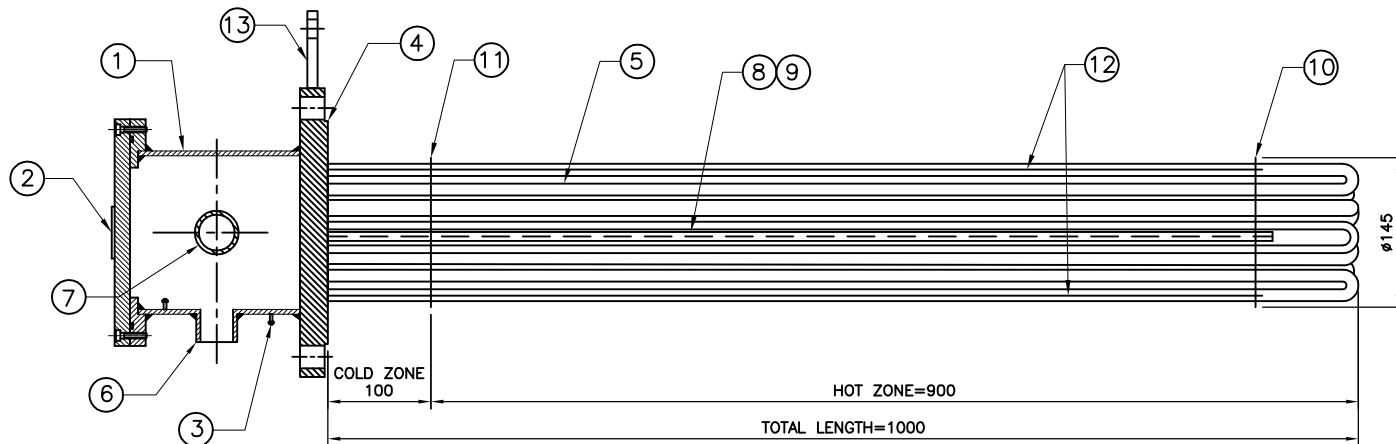
W.O.No. : DNE- 1608

P.O No. : BCPL/LEPK/ELECT/CPPI/PETTY PURCHASE/2019-20/01

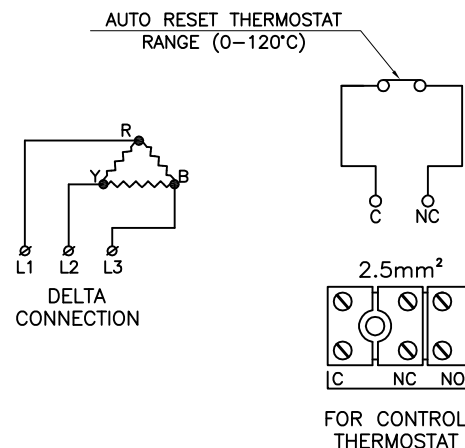
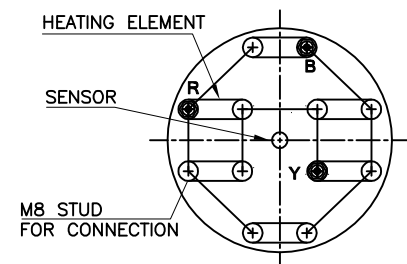
Dtd: 22.05.2019

0	ISSUE FOR APPROVAL	24.05.2019	JBP	VGN	AMO						
Rev	Description	Date	Prd	Chk	App	Rev	Description	Date	Prd	Chk	App

		F.A.T.I. GENERAL EQUIPMENTS PVT. LTD (ISO 9001:2008 Certified)		Doc. No. FGEPL/DS/1608/01 Rev. 0 Job No. DNE-1608 Sheet 2 of 2
DATASHEET OF HEATER				
Client: M/s. Brahmaputra Cracker and Polymer Ltd.			Item Description : Electric Heater Bundle - 34kW	
EPC Contractor:				
PROCESS REQUIREMENTS				
Medium:		Water		
Volume:	Ltrs.	Please Specify		
Temperature	°C	Please Specify		
Pressure	Kg/cm ² (g)	Please Specify		
Hydro Pressure	Kg/cm ² (g)	10		
Tag No.		Please Specify		
Quantity	No.	1		
HEATER CONSTRUCTION				
Design Wattage : 34 kW				
Number of Bundles : 1		Baffle Type : 2 Nos. Full		
Number of Stages for Bundle : 1		Baffle Cut : N/A %		
Wattage for each Stage : Stage 1 34 kW		Baffle Diameter : 145 mm		
		Baffle Orientation : Vertical		
		Baffle MOC : SS 304		
No. of Heating Elements per Bundle 6 Nos.		Heat Shield : 1 No. Provided on cold zone in SS 304		
No. of Active Heating Elements per Bundle : 6 Nos.		Impingement Plate : N/A		
No. of Spare Heating Elements per Bundle : NA Nos.		Tube Sheet MOC : SA 182 F304		
		Tube Sheet Size : 6"		
Max Design Watt Density : 8.00 W/cm ²		Tube Sheet Rating : 150# BLRF		
Spare Elements : - Nos.		Element Connection with Tube Sheet : Welded		
Heater Voltage : 415 VAC		Type : ☐ with extension ☒ without extension		
Frequency : 50 Hz		Standoff Dimension : NA		
Phase : 3		Terminal Box : 150/D Ex'd' Zone 2, IIA/IIB T3 IP-65 PESO Certified		
Connection : Delta (Please Confirm)		Material : CS		
Element diameter : 12.5 mm		Cable Entry : 1 No. of ½" NPT (F) for Power		
Element Length below Tube sheet : 1000 mm		1 No. of ½" NPT(F) for Temp. Sensor		
Active Lenght : 900 mm				
Neutral Lenght : 100 mm		Sensor Head : NA		
Standoff : NA mm				
Element Power : 5,667 Watts		Space Heater ☐ yes ☒ no		
Element type : U type		Painting according to		
Element sheath MOC : SS304		Color External : RAL 3000		
Insulator : Compacted MgO				
Thermoelement:				
Tag No.		Service: Temperature Elements		
Type	☐ TC K ☐ Simplex ☐ Duplex ☐ RTD Pt-100 ☐ Simplex ☐ Duplex			
Sensor	Thermostat Auto Reset	Quantity : 1 No.		
Tag No.	Please Specify			
Range	0-120°C			
Set point	Please Specify			
Factory Set @	80°C			



WIRING DIAGRAM



13	LIFTING LUG	10MM THK.	1	SS
12	TIE ROD	#10MM	2	SS304
11	HEAT SHIELD	2 MM THK.	1	SS304
10	BAFFLE PLATE	2 MM THK.	1	SS304
9	POCKET FOR SENSOR	#10MM O.D	1	SS304
8	AUTO RESET THERMOSTAT	#6 MM	1	SS304
7	SENSOR CABLE ENTRY	1/2" NPT (F)	1	LM6
6	POWER CABLE ENTRY	1/2" NPT (F)	1	CS
5	HEATING ELEMENTS	12.5 MM O.D	6	SS304
4	TUBESHEET	6" 150# BLRF B16.5	1	SA182 F304
3	EARTH SCREW	M6 (EXTERNAL & INTERNAL)	2	SS
2	NAME PLATE	2 MM THK.	1	SS
1	TERMINAL BOX	150/D Ex'd' ZONE2, IIA/IIB T3JP85	1	CS
Sr.	DESCRIPTION	SPECIFICATION	QTY.	MOC

BILL OF MATERIAL			
QUANTITY:- 1 NO.		SERIAL NUMBER:- EH-1608/1	
		Equipments Pvt. Ltd.	
Plot No. 2 & 3, Jawahar Indl. Estate, Kamothe, Navi Mumbai - 410 209 INDIA E-mail ID: engg.design@fati-india.com Web: www.fati-india.com			
TITLE:-		W.O. NO:- DNE-1608	
ELECTRIC HEATER		P.O. NO:-BCPL/LEPK/ELECT/CPP/PETTY DTD.22.05.2019	
CUSTOMER:- M/s.BRAHMAPUTRA CRACKER		SCALE:- HTS LOCALITY:- INDIA	
		DRWG. NO.:-FGEPL/1608/1	

PROCESS DATA	
FLUID	WATER
VOLUME	Please Specify
OPERATING PRESSURE	Please Specify
OPERATING TEMPERATURE	Please Specify
HYDRO PRESSURE	10 kg/cm ²

HEATER DATA	
POWER	34 kW
VOLTAGE	415 VAC
FREQUENCY	50 Hz
CONNECTION	DELTA (Please Confirm)
SURFACE CHARGE	8 W/cm ²
W PER ELEMENT	5667 WATT

REFERENCE DRAWINGS	
DRAWING No.	TITLE
- - -	- - -

1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2) TOLERANCE $\pm 2\%$

REV	DATE	DESCRIPTION	REMARK
0	24.05.2019	FOR APPROVAL	

OWNER: ---

CONTRACTOR: ---

SUB CONTRACTOR: ---

PROJECT: ---

FATI General Equipments Pvt. Ltd.

APPROVED	VGN				
CHECKED	JRY				
PREPARED	JBP	24.05.2019	CONTRACT NO:	SIZE:- M	
POSITION	NAME	SIGN	DATE	...	PAGE: 1 OF 1



F.A.T.I. GENERAL EQUIPMENTS PVT. LTD

QUALITY PLAN

Client: M/s. Brahmaputra Cracker and Polymer Ltd.

P.O. No. : BCPL/LEPK/ELECT/CPP/PETTY PURCHASE/2019-20/01 DTD: 22.05.2019

Tag No:- -

W.O. No. DNE-1608

Item Description : 34 kW Electric Heater

Plan No. QAP/1608/1

Sr.No.	Component / Operation	Characteristics Checked	Category	Type/Method of Check	Extent of Check		Reference Document	Format of Plan	Agency		Remarks
					By 1	By 2			By 1	By 2	
1	Raw Material	Visual & Dimentional Test	MA/MT	Visual Check	100%	-	Approved Drawing	Test Rep.	PR	R	
		Physical & Chemical Test	MA	Testing	100%	-	Material Specification	Test Cert.	PR	R	
2	Electric Test	Ohmic Value Test	MA	Testing	100%	10%	ETP Procedure PT001_01	Test Rep.	PR	W	
		Dielectric Strength Test / H.V. Test @ 1 KV for 60 sec.	MA	Testing	100%	10%	ETD3 Procedure PT003_01	Test Rep.	PR	W	
		Insulation Test Min. 1 MΩ.	MA/CR	Testing	100%	10%	ETI Procedure PT002_01	Test Rep.	PR	W	
3	Assembly	Visual & Overall Dimensional Check	MA/MT	Visual Check	100%	10%	DRG.	Test Rep.	PR	W	
		Hydro Test @ 10Kg/cm ² (g) for 30 min.	MA/CR	Testing	100%	10%	ETD3 Procedure PT003_01	Test Rep.	PR	W	
		Cleaning, Painting	MT	Visual Check	100%	-	DRG.	Test Rep.	PR	R	
		Final Packing	MA/MT	Visual Check	100%	-	as per FGEPL packing procedure	Test Rep.	PR	-	

Category CR : Characteristics affecting safety of equipment & personnel

MA : Characteristics affecting Performance

MT : Characteristics affecting Appearance

For M/s. Brahmaputra Cracker and Polymer Ltd.

Approved By

AMO

Checked By

VGN

Prepared By

HSS

Legend H - Hold point

V - Verify

PR-Perform & Record

R - Review

C - Certificate

M - Monitoring

BY 1 : FGEPL

BY 2 : BCPL

For FATI General Equipments Pvt. Ltd.



Rev. 0

24.05.2019