File Ref. No. PUR/IICT/1005/24-25/EQPT **Dt: 24-09-2024**
CPPP Tender ID : 2024_CSIR_208310_1

Minutes of Pre-Bid Conference (PBC) held on 24-09-2024 for proposed procurement of **"Supply, installation and commissioning of "Customized Continuous Depolymerization Pilot Plant - 1 No."**

Chairpersons / Members of the Technical Sub Committee (TSC) present during PBC including domain experts present during PBC:-

1. Dr. N.Lingaiah, Chairman
2. Dr.PratyayBasak, Member
3. Dr.G.Jithender Reddy, Member
4. Sri. D. Venkateswara Rao, Member
5. Dr.SreepriyaVedantam, Member
6. IO Dr. Vineet Aniya

Representatives of the following firm attended the PBC:

1. M/s Borosil Scientific
2. M/s DS Ray Scientific equipment

The following points were discussed during the PBC:

Query raised by M/s. Borosil Scientific and response of CSIR-IICT:

Query-1: Utility supply to condensers
Response: Common utility to be used for condensers.

Query-2: How to Transfer and maintain the reaction mixture from R-101 to R-102 under pressurised and temperature condition.
Response: To maintain controlled flow rate under pressure and high temperature pumps are introduced with tag no (P-102, P-103 and P-104). This has been updated in Revised P&ID.

Query raised by M/s. DS Ray Scientific Equipment and the response of CSIR-IICT:

Query-1: Agitation of heterogeneous reaction mixture in the Reactor in R-101
Response: Anchor with scraper-type arrangement for agitation has selected instead of two stage pitch blad in Reactor R-101. This has been updated in Revised P&ID.

Query-2: What if the Transfer of liquid through an overflow and dip leg is not possible due to heterogeneity of reaction mixture. Also, the dip leg is not possible to install when anchor type stirred is used
Response: To maintain controlled flow rate of reaction mixture, pumps are introduced with tag no (P-102, P-103 and P-104) and Anchor with scraper-type arrangement for agitation has selected instead of two stage pitch blad in Reactor R-101. This has been updated in Revised P&ID.

Query-3: How to mitigate solvent loss from the vent through the condenser (E-101, E-102 and E-103)
Response: To mitigate the loss of solvent the vent line above condenser (E-101, E-102 and E-103) are connected to a common Trap (CT-101) and updated in Revised P&ID.

Points clarified by CSIR-IICT Team during PBC:
The representatives of the participating firm/further informed that they do not have any issue or suggestion with respect to other points of tendered specifications and related requirements given in the tender document. Participating bidders have been informed that points raised by them during PBC will be examined by CSIR-IICT's **Technical Sub Committee (TSC)/Technical team** constituted for the purpose of procurement of said equipment and **post PBC changes** in tendered specifications and requirements to be agreed after due consideration of the same by TSC, **if any**, will be uploaded in **CPPP** as part of **revised/amended tendered specifications** along with CSIR-IICT website www.iict.res.inon or before **25-09-2024**. All bidders are requested kindly to take a note of the changes, if any, in tendered specifications subsequent to **PBC** held today, i.e. 24-09-2024 before they start submitting their online bids through CPPP.

(Dr.Pratyay Basak) 24/09/2024
Member

(Dr Jithender Reddy)
Member

(Dr.Sreepriya Vedantam)
Member

(Sri. D. VenkateswaraRao)
Member

(Dr. Vineet Aniya)
IO/PL

(Dr N Lingaiah)
Chairperson

File Ref. No. PUR/IICT/1005/24-25/EQPT **Dt: 24-09-2024**
CPPP Tender ID : 2024_CSIR_208310_1

The following changes has been made in tendered specification subsequent to PBC held on 24.09.2024

S. No.	Existing Specifications	Revised/Amended Specifications
1	Reactors (R-101, R-102 and R-103) Band heater range 30 – 500 °C	Reactors (R-101, R-102 and R-103) with Band heater temperature range from 30 C – 600 °C
2	Transfer of liquid through an overflow and dip leg at the bottom of the reactor (R-101, R-102 and R-103)	Pumps for discharge/transfer of product from R-101, R-102 and R-103 with tag No. P-102, P-103 and P-104.
3	Reactors assembly (R-101, R-102 and R-103) were fixed type	Reactors (R-101, R-102 and R-103) should have screw type movable system to unload the material.
4	E-101, E-102 and E-103 are venting to atmosphere	E-101, E-102 and E-103 should be connected to Common vent Trap (CT-101)

All the other tender terms remain unchanged. Bidders may please submit their bids accordingly.

26/09/2024
(Dr.Pratyay Basak)
Member

(Dr Jithender Reddy)
Member

(Dr.Sreepriya Vedantam)
Member

(Sri. D. VenkateswaraRao)
Member

(Dr. Vineet Aniya)
IO/PL

(Dr N Lingaiah)
Chairperson

Technical Specifications for Customised Continuous Depolymerisation Pilot Plant Equipment

The pilot reactor system is used for the depolymerisation of the polymer to other valuable chemicals Refer P&ID No. "DE-DOTP-FD-HCP0054"

Reactors (Tag No- R-101) 1 Nos

MOC: SS - 316
H/D: 1.5
Volume: 10 L
Working Volume: 2L – 10L
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temperature Range: ambient – 450 °C
Band Heater (30 - 600 °C) with complete Insulation, Internal Cooling Coil, Anchor with scrapers, Torri spherical KR=0.10 D and Overflow siphon pipe. Screw type Up-Down motion to unload material and filter mesh of 250 µm or less in reactor bottom to discharge product.

Reactors (Tag No- R-102 and R-103): 2 Nos

MOC: SS - 316
H/D: 1.5
Volume: 10 L
Working Volume: 2L – 10L
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temperature Range: ambient – 450 °C
Band Heater (30 - 600 °C) with complete Insulation, Internal Cooling Coil, two stage Pitch Blade, Torri spherical KR=0.10 D and Overflow siphon pipe. Screw type Up-Down motion to unload material and filter mesh of 250 µm in reactor bottom to discharge product.

Evaporators Unit (Tag No – EV-201, EV-202 and EV-203): 3 Nos

MOC: Borosilicate Glass
H/D: 1.5
Volume: 10 L
Working Volume: 3L – 10L
Design Pressure: 4 bar
Working Pressure Range (Abs): 0-2 bar
Temperature Range: -30°C– 250 °C
Lid: Borosilicate Glass lid, with PTFE/PEEK Seal
High temp. hose connectors for the jacketed vessels, compatible with the reactor and complete utility for heating and cooling the jacketed vessel.
Reactor holder to laboratory stand
FEP/ Viton/silicone coated O-ring - 4 Sets (high temperature 250 °C)

Stirred Vessel (Tag No – SV-201): 1 Nos

MOC: Borosilicate Glass
Volume: 10 L ml

Working volume: 3L – 10 L
Design Pressure: 3 bar
Working Pressure Range (Abs): 0-2 bar
Temp Range: 80 C to 250 °C
Lid: Borosilicate Glass lid, with PTFE/PEEK Seal
High temp. hose connectors for the jacketed vessels, compatible with the reactor and utility
Reactor holder to laboratory stand
FEP coated silicone O-ring - 4 Sets

Decanter (Tag No- D-101, D-102 and D-103): 3 Nos
MOC: SS – 316
H/D = 2.5
Volume: 2 L
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temp Range: 30 °C – 200 °C
With both side view glass, display light and dip tube

Condenser (Tag No- E-101, E-102 and E-103): 3 Nos
MOC: SS – 316 (Coil type)
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temp Range: -30 °C – 250 °C

Condenser (Tag No- E-201, E-202, E-203 and E-204): 4 Nos
MOC: Borosilicate Glass (Coil type)
Design Pressure: 4 bar
Working Pressure Range (Abs): 0-2 bar
Temp Range: -30 °C – 180 °C

Dossing Pump (Tag No- P-101): 2 Nos
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temp Range: Up to 60 °C
Flow Rate: 10 – 200 ml/min

Transfer Pump (Tag No- P-201, P-202 and P-203): 4 Nos
Design Pressure: 8 bar
Working Pressure Range (Abs): 0-5 bar
Temp Range: Up to 60 °C
Flow Rate: 1 - 3 L/min

Pump (Tag No- P-102, P-103 and P-104): 3 Nos
Design Pressure: 5 bar
Working Pressure Range (Abs): 0-2 bar
Temp Range: Up to 250 °C
Flow Rate: 10 - 75 mL/min

Storage Tank (Tag No- ST-201 and ST-202): 2 Nos
MOC: Borosilicate Glass
H/D = 1.5
Volume: 5 L
Design Pressure: 4 bar
Working Pressure Range (Abs): 0-3 bar
Temp Range: Up to 180 °C

Storage Tank (Tag No- ST-203): 1 Nos
MOC: Borosilicate Glass
H/D = 1.5
Volume: 20 L
Design Pressure: 2 bar
Working Pressure Range (Abs): 0-1 bar
Temp Range: Up to 100 °C

Melt Feeder (Tag No- MF-101): 1 Nos
MOC: SS – 316
L/D = 20 - 30
Temp Range: Up to 350 °C
Flow Rate: 0.3 to 2 Kg/hr

Gravity Feeder (Tag No- GF-101): 1 Nos
MOC: SS – 316
Temp Range: Up to 80 °C
Flow Rate: 0.3 to 2 Kg/hr

Phase Separator (Tag No- SP-201): 1 Nos
MOC: Borosilicate Glass
L/D: 3
Volume: 15 L
Temp Range: Up to 80 °C
Pressure Range (Abs): Up to 2 bars

Vacuum Pump (Tag No- VP-201 and VP-202): 3 Nos
Pressure: 0.1 – 0.001 mbar

Basket centrifuge Filter (Tag No- BCF-201): 1 Nos
MOC: SS – 316
Volume: 3L
Temperature: Up to 50 °C

Nitrogen Generator (Tag No- NG-101): 1 Nos
Flow Rate: Up to 3 L/min
Purity ≥ 98%

Tank (Cold water supply and Storage Tank): 1 Nos
MOC: SS 304

Tank Capacity: 30 L
With suitable circulation pump
For cooling coils and condensers (if requires)

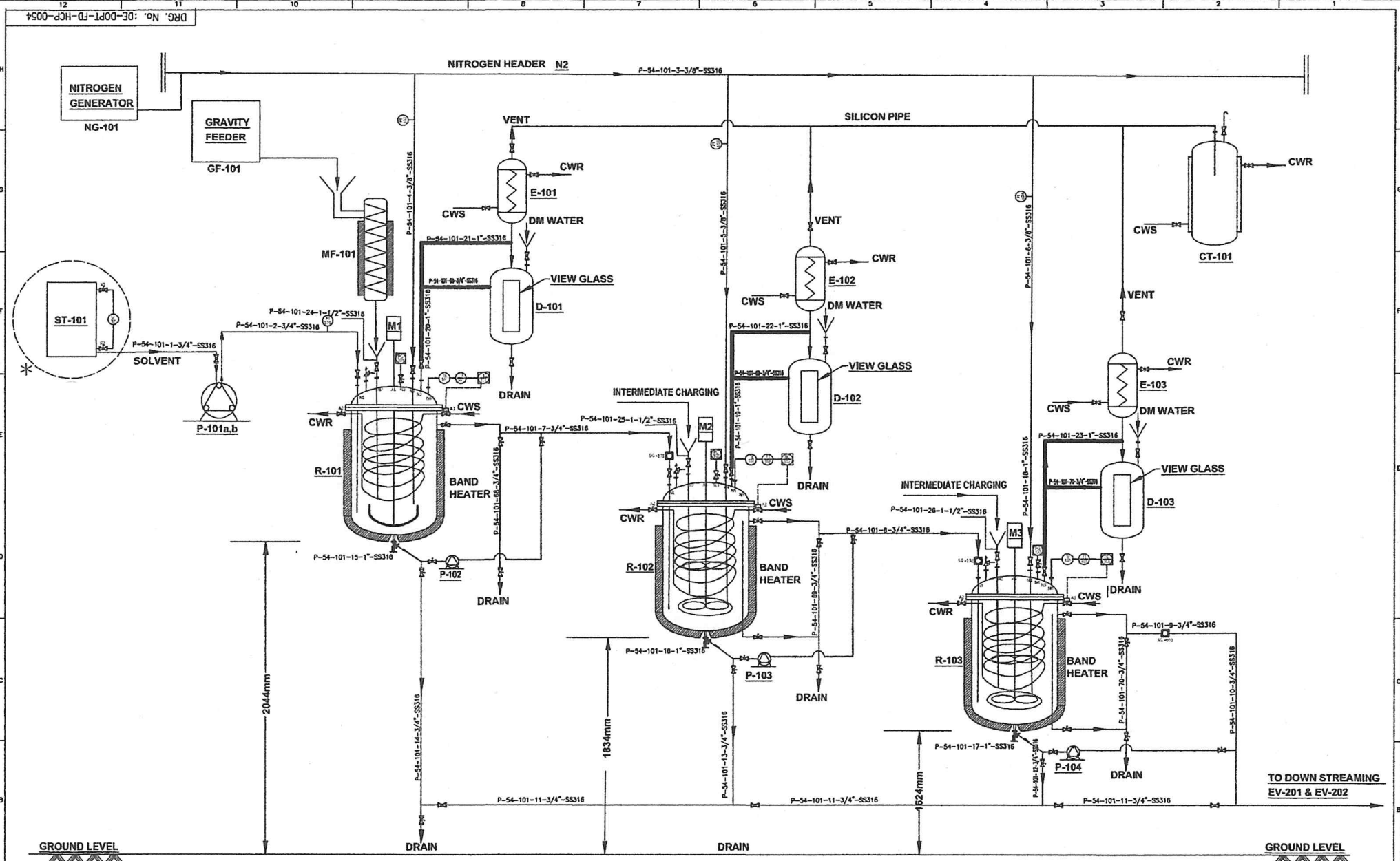
Heating Utility System: 4 Nos (Ev-201,202,203 and Sv-201)
Temp range: -20 to 200 °C
Capacity: 10 L
Should Provide Oil for each system

Chilling Utility System: 1 Nos (E-101,102 &103)
Temp range: -30 to 30 °C
Capacity: 10 L

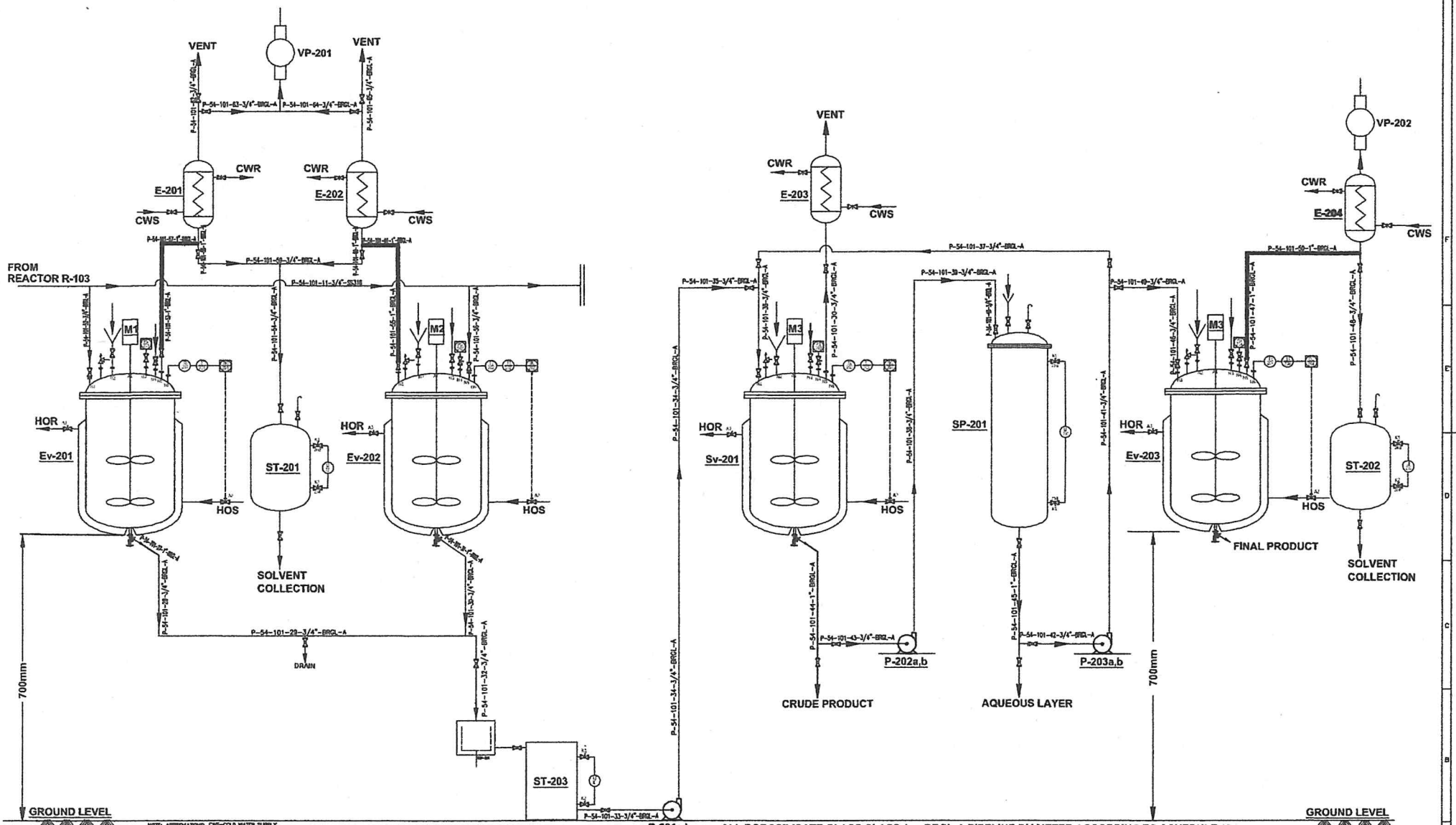
Common Trap: 1 Nos (CT-101)
MOC: SS-
L/D: 2.5
Temp range: -20 to 80°C
Capacity: 5 L
With utility jacket

Note:

- Each reactor should be provided with Dip Leg, Compound Gauge (Analog), and digital pressure transmitter Digital & Vent Valve, Safety valve and View glass. Refer P&ID for Detailed specification.
- View glass should be provided in Feed line. Refer P&ID for Detailed specification and sizing of Piping.
- All feeders and pumps should be rate controllable with drive of reputed make
- All the system should be skid mounted. Refer P&ID for reactors base heights.
- Adequate Spare and accessories like O-rings, seals, gaskets, nuts and ferrules, including tool box should be provided for hassle free operation of plant.
- Overhead motor supplied should be capable of generating a 1000 rpm (variable)
- All motor supplied should be of with reputed make
- Temperature should be PLC controlled
- Separate control panel should be provided with HMI controlled by PLC with an emergency alarm and stop button along with adequate wiring for hassle free operation
- Adequate Tubing/Piping should be provided for all input and output Refer P&ID for Detailed specification and sizing of Piping.
- Installation and demonstration should be provided before Handed Over the Plant/FAT.
- Warranty and Service for 2-year duration.
- Supplier should have experience of commissioning of similar reactor system in reputed institutions
- All instrument should be controlled by PLC HMI.


DRG. No. :DE-DOPT-FD-HCP-0054
NITROGEN HEADER N2
P-54-101-3-3/8"-SS316
NITROGEN GENERATOR
NG-101
GRAVITY FEEDER
GF-101
VENT
SILICON PIPE
CWR
CWS
E-101
DM WATER
MF-101
VIEW GLASS
D-101
DRAIN
ST-101
SOLVENT
P-101a,b
M1
CWS
CWR
R-101
BAND HEATER
P-102
INTERMEDIATE CHARGING
M2
E-102
D-102
R-102
P-103
M3
E-103
D-103
R-103
P-104
CT-101
TO DOWN STREAMING EV-201 & EV-202
2044mm
1834mm
1624mm
GROUND LEVEL
NOTE: ABBREVIATIONS
ALL SS-316 PIPELINE DIAMETER ACCORDING TO SCHEDULE 10
LEGEND
NOT IN VENDOR SCOPE
ITEM IDENTIFICATION LINE
GATE VALVE
BALL VALVE
GLOBE VALVE
DO NOT SCALE
CSIR–INDIAN INSTITUTE OF CHEMICAL TECHNOLOGY
HYDERABAD – 500 007
PROCESS FLOW DIAGRAM
SECTION-100
DE-DOPT-FD-HCP-0054
1 of 2
REV/RO

DRG. No. :DE-DOPT-FD-HCP-0054



NOTE: ABBREVIATIONS: CWS–COLD WATER SUPPLY; CWR–COLD WATER RETURN; HOS–HOT OIL SUPPLY; HOR–HOT OIL RETURN; TE–TEMPERATURE ELEMENT; TT–TEMPERATURE TRANSMITTER; TIC–TEMPERATURE INDICATOR CONTROL; FI–FLOW INDICATOR; LI–LEVEL INDICATOR; PG–PRESSURE GAUGE; PSV–PRESSURE SAFETY VALVE; GF–GRAVITY FEEDER; BCF–BASKET CENTRIFUGE FILTER; BOTTOM FLUSH VALVE; GATE VALVE; BALL VALVE; GLOBE VALVE

LEGEND

01	E-201	CONDENSOR FOR Ev-201	11	P-202ab	CENTRIFUGAL PUMP-2
02	E-202	CONDENSOR FOR Ev-202	12	P-202ab	CENTRIFUGAL PUMP-3
03	E-203	CONDENSOR FOR Ev-203	13	SP-201	PHASE SEPARATION
04	E-204	CONDENSOR FOR E-204	14	ST-201	STORAGE TANK FOR SOLVENT
05	Ev-201	EVAPORATOR FOR RECOVERY OF SOLVENT	15	ST-202	STORAGE TANK FOR SOLVENT+WATER
06	Ev-202	EVAPORATOR FOR RECOVERY OF SOLVENT	16	VP-201	VACUUM PUMP-1
07	Sv-201	STIRRED VESSEL FOR WASHING RM	17	VP-202	VACUUM PUMP-2
08	Ev-203	EVAPORATOR FOR RECOVERY OF SOLVENT	18	ST-203	STORAGE TANK–REACTION MIXTURE
09	BCF-201	BASKET CENTRIFUGE FILTER-1			
10	P-201ab	CENTRIFUGAL PUMP-1			

ITEM IDENTIFICATION LINE
P 54 101 1" SS 316 MOC
LINE SIZE(IN INCH)
SECTION
PROJECT CODE
LINE LEGEND

No.	STATUS	DESCRIPTION	BY	CHD	APD	DATE

DO NOT SCALE

CSIR–INDIAN INSTITUTE OF CHEMICAL TECHNOLOGY
HYDERABAD – 500 007

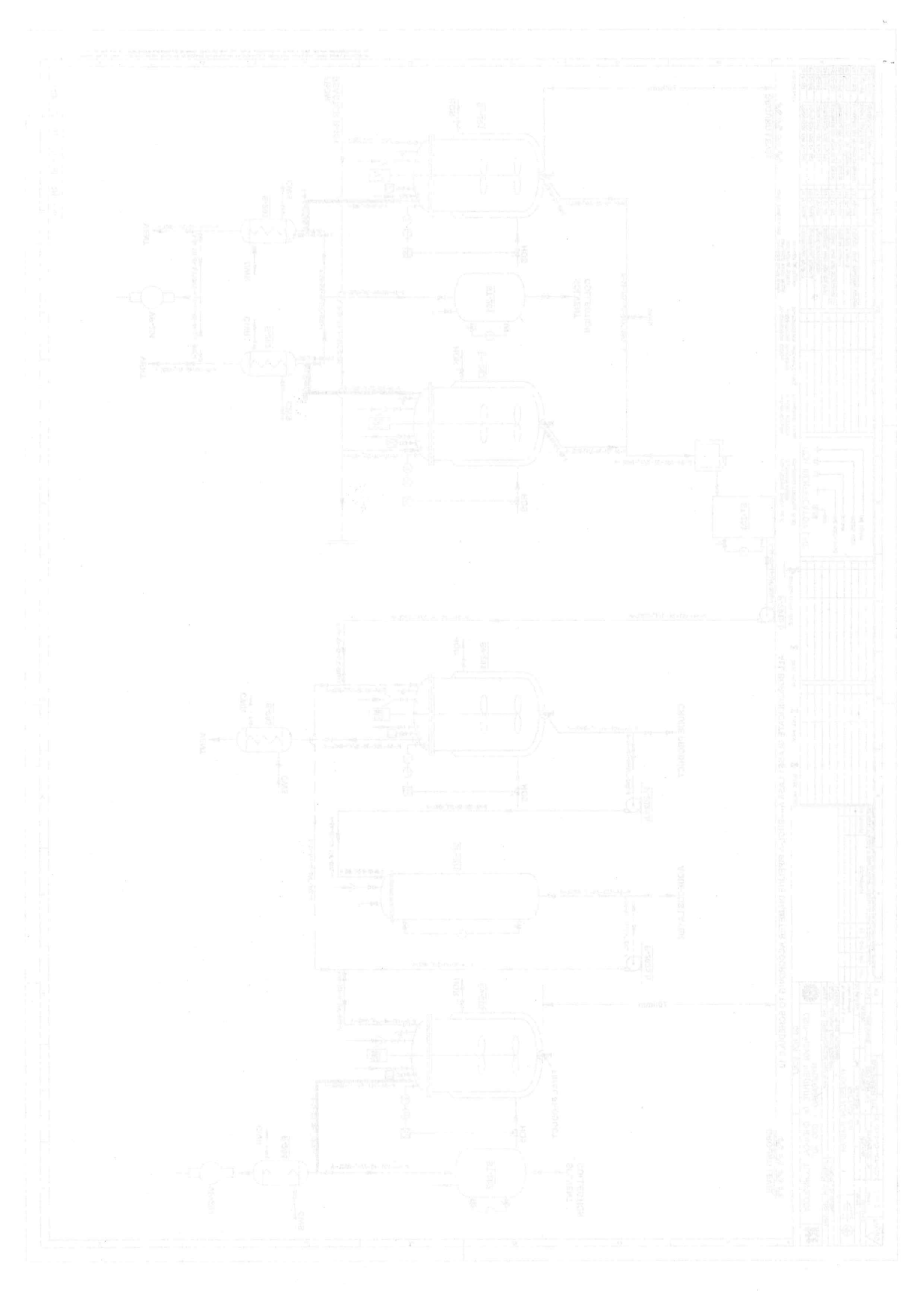
PROJECT : PET DEPOLYMERIZATION PILOT PLANT — PROJECT CODE : HCP-0054
CLIENT : In-House Project (CSIR-HCT) — CAPACITY : 25 KG/Day
LOCATION : CSIR–IICT, HYDERABAD

PROCESS FLOW DIAGRAM
SECTION-200

DESIGN	PREPARED	CHD	APPROVED
VA/SH/SMS	SMS 28.09.2024	MN	VA/AK

SCALE	REFERENCES	SOFT COPY REF	DWG/DOC/SK No.	SHEET
NTS	-	CD/FP/FOLDER/FILE	DE-DOPT-FD-HCP-0054	2 of 2

REV/RD



EQUIPMENT SUMMARY SHEET

S.No.	UNIT No.	DESCRIPTION	No. Req'd.	M.O.C. Shell/Jacket Shell/Tubes	CAPACITY PUMPS ml/min	CAPACITY BLOWERS cu.m / h	CAPACITY HEAT TRANSFER AREA EXCHANGERS sq. m.	MAJOR DIMENSIONS D x L (mm)	OPERATING CONDITIONS TEMP. °C	OPERATING CONDITIONS PRESS. in bar	NOMINAL CAPACITY Litres	REMARKS	R	
01	01	BCF–201	BASKET CENTRIFUGE FILTER	01	SS–316	–	–	–	–	50	–	3	0.1 TO 0.5 MICRON FILTER BAG, CENTRIFUGE 2000RPM		1
02	02	CT–101	COMMON TRAP	01	SS–316	–	–	–	136X340	UP TO 80	UP TO 2	5	WITH UTILITY JACKET		2
03	03	D–101	DECANTER–1	01	SS–316	–	–	–	100X250	30–200	5	2	WITH VIEW GLASS AND DEEP LAG	1	3
04	04	D–102	DECANTER–2	01	SS–316	–	–	–	100X250	30–200	5	2	WITH VIEW GLASS AND DEEP LAG	1	4
05	05	D–103	DECANTER–3	01	SS–316	–	–	–	100X250	30–200	5	2	WITH VIEW GLASS AND DEEP LAG	1	5
06	06	E–101	CONDENSER–1	01	SS–316	–	–	–	–	5–200	0–5	–	COIL TYPE		6
07	07	E–102	CONDENSER–2	01	SS–316	–	–	–	–	5–200	0–5	–	COIL TYPE		7
08	08	E–103	CONDENSER–3	01	SS–316	–	–	–	–	5–200	0–5	–	COIL TYPE		8
09	09	E–201	CONDENSER–4	01	BOROSILICATE GLASS	–	–	–	–	5–160	0–2	–	COIL TYPE		9
10	10	E–202	CONDENSER–5	01	BOROSILICATE GLASS	–	–	–	–	5–160		–	COIL TYPE		10
11	11	E–203	CONDENSER–6	01	BOROSILICATE GLASS	–	–	–	–	5–160		–	COIL TYPE	1	11
12	12	E–204	CONDENSER–7	01	BOROSILICATE GLASS	–	–	–	–	5–160		–	COIL TYPE	1	12
13	13	P–101	DOSING PUMP	02	–	1– 100	–	–	–	UP TO 60	5	–	DOSING PUMP	1	13
14	14	P–102	DOSING PUMP	01	–	10 to 75	–	–	–	UP TO 250	2	–	DOSING PUMP	1	14
15	15	P–103	DOSING PUMP	01	–	10 to 75	–	–	–	UP TO 250	2	–	DOSING PUMP	1	15
16	16	P–104	DOSING PUMP	01	–	10 to 75	–	–	–	UP TO 250	2	–	DOSING PUMP	1	16
17	17	P–201	REACTION MIXTURE PUMP–1	02	–	200–1000	–	–	–	UP TO 60	–	–	CENTRIFUGAL PUMP	1	17
18	18	P–202	REACTION MIXTURE PUMP–2	01	–	200–1000	–	–	–	UP TO 60	–	–	CENTRIFUGAL PUMP		18
19	19	P–203	REACTION MIXTURE PUMP–3	01	–	200–1000	–	–	–	UP TO 60	–	–	CENTRIFUGAL PUMP		19

Notes : 1. NOT IN VENDORS SCOPE

S.No	STATUS	DESCRIPTION	BY	CHD	APD	DATE

REVISION

DATE	TR. No.	1	2	3	4	5	6	7	8

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CLEARANCES

ISSUE STATUS KEY : P= PRELIMINARY ; R= REVISION ; I= INFORMATION : C= COMMENTS ; CH= CHECKING ; A= APPROVAL ; E= ENGINEERING ;
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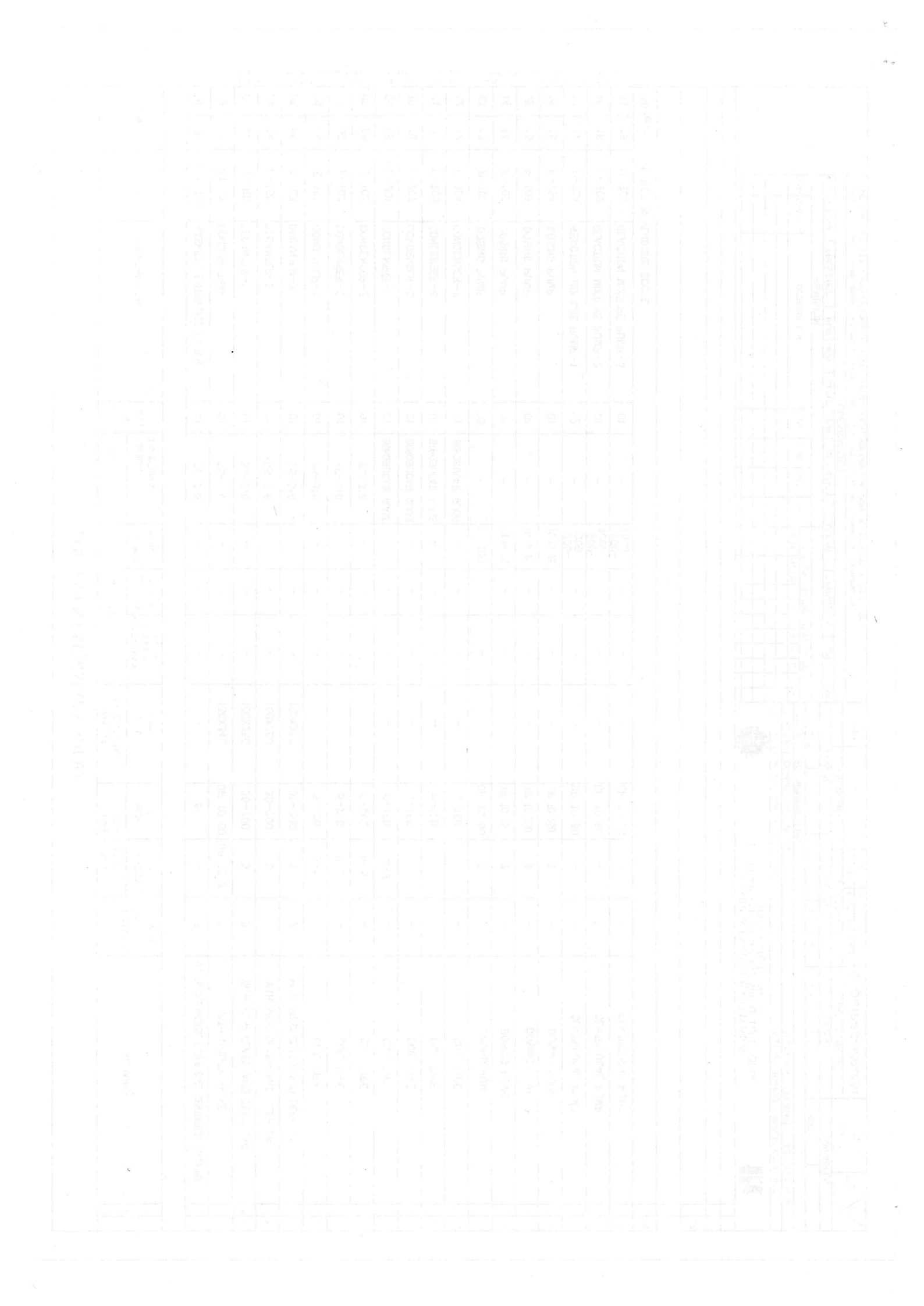
DESIGN & ENGINEERING DIVISION
INDIAN INSTITUTE OF CHEMICAL TECHNOLOGY
HYDERABAD - 500 007

PROJECT : PET DEPOLYMERIZATION PILOT PLANT | CLIENT : IN-HOUSE PROJECT CSIR-IICT
LOCATION : CSIR-IICT, HYDERABAD | CAPACITY :25 KG/DAY | CODE : HCP-0054
TITLE: EQUIPMENT LIST

SMS/VA		SMS	26.09.2024	MN/VA		SMS	
DESIGN		PREPARED		VER/CHD		APPROVED	

SCALE	REFERENCES	SOFT COPY REF CD/FP	FOLDER	FILE	DWG/DOC/SK No.	SHEET	REV
1:1	–	–	–	–	DE-DOTP-FD-HCP-0054	1 OF 2	0



EQUIPMENT SUMMARY SHEET

S.No.		UNIT No.	DESCRIPTION	No. Req'd.	M.O.C. Shell/Jacket Shell/Tubes	CAPACITY PUMPS lpm	CAPACITY BLOWERS cu.m / h	CAPACITY HEAT TRANSFER AREA EXCHANGERS sq. m.	MAJOR DIMENSIONS D x L (mm)	OPERATING CONDITIONS TEMP. °C	OPERATING CONDITIONS PRESS. IN BARM(ABS)	NOMINAL CAPACITY Litres	REMARKS	R	
20	20	R-101	REACTOR-1	01	SS-316	–	–	– –	210X310	250-300	1-5	10	BAND HEATER (30-600°C), WITH COOLING COIL AND ANCHOR WITH SCRAPER	1	1
21	21	R-102	REACTOR-2	01	SS-316	–	–	–	210X310	250-300	1-5	10	BAND HEATER (30-600°C), WITH COOLING COIL AND 2 STAGE PITCH BLADE IMPELLER	1	2
22	22	R-103	REACTOR-3	01	SS-316	–	–	–	210X310	250-300	1-5	10	BAND HEATER (30-600°C), WITH COOLING COIL AND 2 STAGE PITCH BLADE IMPELLER	1	3
23	23	ST-101	SOLVENT STORAGE TANK	01	PLASTIC	–	–	–	280X415	30	1	25	NVS	1	4
24	24	ST-201	SOLVENT RECOVERY TANK-1	01	GLASS	–			165X245	100-180	0-2	5			5
25	25	ST-202	SOLVENTRECOVERY TANK-2	01	GLASS	–	–	–	165X245	100-180	0-2	5			6
26	26	ST-203	REACTION MIXTURE STORAGE TANK	01	GLASS	–	–	–	257X386	30-80	ATM	20			7
27	27	SP-201	PHASE SEPARATOR	01	GLASS	–	–	–	234X350	AMB	ATM	15			8
28	28	VP-201	VACUUM PUMP-1	01	–	–	–	–	–	–	0.1 -0.001 mbar	–	DIGITAL VACUUM GAUGE		9
29	29	VP-202	VACUUM PUMP-2	02	–	–	–	–	–	–	0.1 -0.001 mbar	–	DIGITAL VACUUM GAUGE		10
30	30	Ev-201	EVAPORATOR-1	01	GLASS REACTOR	–	–	–	210X310	UPTO 250	0-2	10	STIRRED VESSEL WITH JACKETTED		11
31	31	Ev-202	EVAPORATOR-2	01	GLASS REACTOR	–	–	–	210X310	UPTO 250	0-2	10	STIRRED VESSEL WITH JACKETTED		12
32	32	Ev-203	EVAPORATOR-3	01	GLASS REACTOR	–	–	–	210X310	UPTO 250	0-2	10	STIRRED VESSEL WITH JACKETTED		13
33	33	Sv-201	STIRRED VESSEL	01	GLASS REACTOR	–	–	–	210X310	UPTO 250	ATM	10	STIRRED VESSEL WITH JACKETTED		14
34	34	GF-101	GRAVITY FEEDER	01	SS-304	–	–	–	–	–	–	–	FLOW RATE 0.3 KG/HR TO 2 KG/HR		15
35	35	MF-101	MELT FEEDER	01	SS-316	–	–	–	–	–	–	–	FLOW RATE 0.3 KG/HR TO 2 KG/HR		16
36	36	NG-101	NITROGEN GENERATOR	01	–	–	–	–	–	–	–	–	FLOW RATE UPTO 3 LITERS PER MINUTE		17
															18
															19

Notes : 1. NOT IN VENDORS SCOPE

S.No	STATUS	DESCRIPTION	BY	CHD	APD	DATE

REVISION

DATE | TR. No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8

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CLEARANCES

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DESIGN & ENGINEERING DIVISION
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HYDERABAD - 500 007

PROJECT : PET DEPOLYMERIZATION PILOT PLANT | CLIENT : IN-HOUSE PROJECT CSIR-IICT
LOCATION : CSIR-IICT, HYDERABAD | CAPACITY :25 KG/DAY | CODE : HCP-0054
TITLE: EQUIPMENT LIST

SMS/VA		SMS	26.09.2024	MN/VA		SMS	
DESIGN		PREPARED		VER/CHD		APPROVED	

SCALE	REFERENCES	SOFT COPY REF CD/FP	FOLDER	FILE	DWG/DOC/SK No.	SHEET	REV
1:1	–	–	–	–	DE-DOTP-FD-HCP-0054	2 OF 2	0