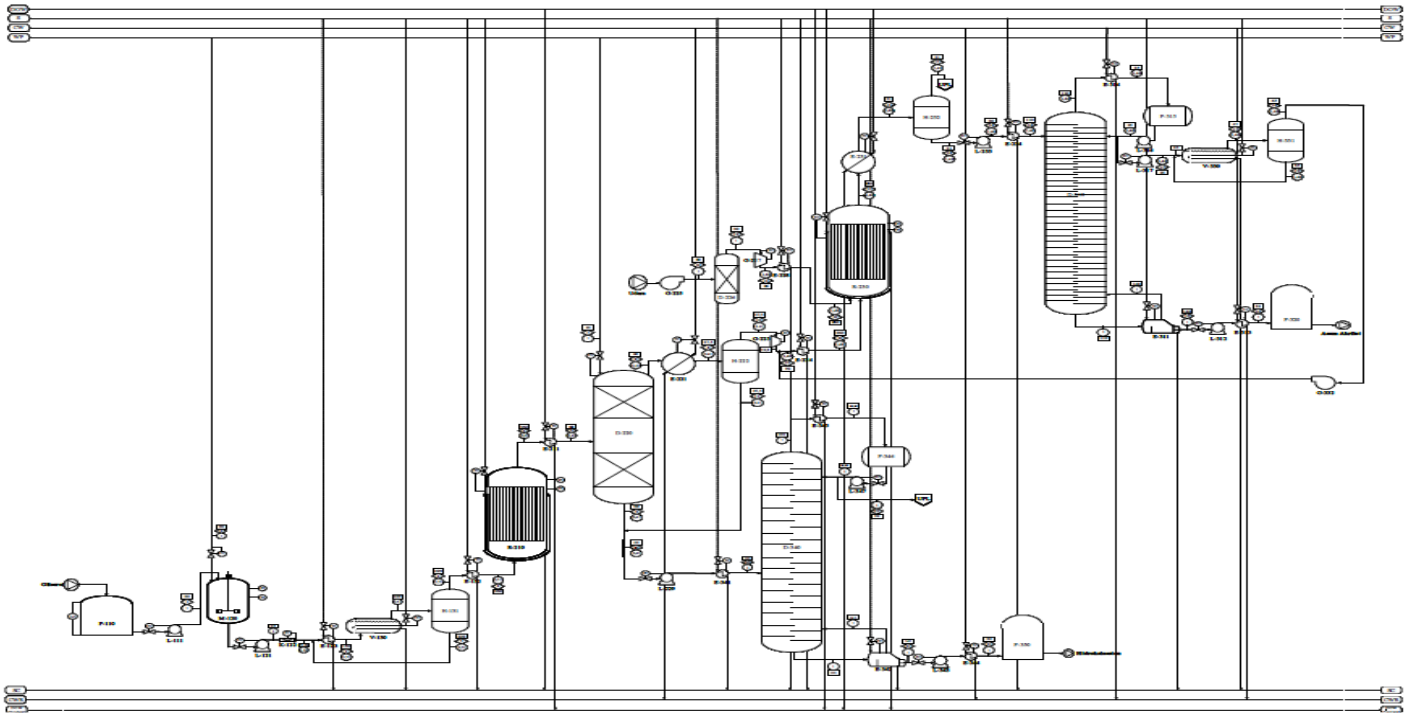
FLOWSHEET PRA RANCANGAN PABRIK ASAM AKRILAT DARI GLISEROL DENGAN PROSES DEHIDRASI-OKSIDASI



KETERANGAN :

- TEKANAN (atm)
- SUHU (°C)
- ALIRAN MASSA (Kg/jam)

DOW	DOWTHERM
S	STEAM
CW	COOLING WATER
WP	WATER PROCESS
SC	STEAM CONDENSATE
CWR	COOLING WATER RETURN
DOW Condensat	DOWTHERM CONDENSAT

No.	KODE ALAT	NAMA ALAT
1.	F-110	TANGKI PENYIMPANAN GLISEROL
2.	L-111	POMPA-1
3.	M-120	TANGKI PENGENCERAN
4.	L-121	POMPA-2
5.	K-122	EXPANSION VALVE
6.	E-123	HEATER-1
7.	V-130	VAPORIZER-1
8.	H-131	SEPARATOR-1
9.	E-132	HEATER-2
10.	R-210	REAKTOR-1
11.	E-211	COOLER-1
12.	D-220	ABSORBER
13.	E-221	KONDENSOR-1
14.	H-222	SEPARATOR-2
15.	G-223	KOMPRESSOR-1
16.	E-224	HEATER-3
17.	G-225	BLOWER-1
18.	D-226	MOLECULAR SIEVE
19.	G-227	KOMPRESSOR-2
20.	E-228	HEATER-4
21.	R-230	REAKTOR-2
22.	E-231	KONDENSOR-2
23.	H-232	SEPARATOR-3
24.	L-233	POMPA-3
25.	E-234	HEATER-5
26.	D-310	MENARA DISTILASI-1
27.	E-311	REBOILER-1
28.	L-312	POMPA-4
29.	E-313	COOLER-2
30.	F-320	TANGKI PENYIMPANAN ASAM AKRILAT
31.	E-314	KONDENSOR DISTILASI-1
32.	F-315	AKUMULATOR-1
33.	L-316	POMPA-5
34.	L-317	POMPA-6
35.	V-330	VAPORIZER-2
36.	H-331	SEPARATOR-4
37.	G-332	BLOWER-2
38.	L-229	POMPA-7
39.	E-341	HEATER-6
40.	D-340	MENARA DISTILASI-2
41.	E-342	REBOILER-2
42.	L-343	POMPA-8
43.	E-344	COOLER-3
44.	F-350	TANGKI PENYIMPANAN HIDROKSIASETON
45.	E-345	KONDENSOR DISTILASI-2
46.	F-346	AKUMULATOR-2
47.	L-347	POMPA-9

FLOWSHEET
PRA-RANCANGAN PABRIK ASAM AKRILAT DARI GLISEROL DENGAN PROSES DEHIDRASI-OKSIDASI

DIKERJAKAN OLEH :
AKREN ALVINDO PRATAMA (21031010155)

DOSEN PEMBIMBING :
ERWAN ADI SAPUTRO, ST., MT., Ph.D

PROGRAM STUDI TEKNIK KIMIA
FAKULTAS TEKNIK & SAINS
UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN"
JAWA TIMUR
2025

Aliran Massa (kg/jam)

Komponen	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
$C_3H_8O_3$	23.473,1121		23.473,1121	13.211,5719	10.261,5402	26,4211		6,2642	26,1589	0,0000	0,2642									26,4211	26,4211	0,0000
$C_3H_4O_2$	70,6312	3.507,1380	3.577,7692		26,1954		2.087,9849		12.185,1682		10,4563		91,5353	91,5353		91,5363	0,0092	0,0055		12.195,6245	0,4586	12.195,1659
$H_2O_{(l)}$				5.551,5738		10.199,1750		101,9918		91,5353		101,9616	91,5353					0,0037				
$C_3H_4O_{(l)}$						6.433,4611		6.433,4611		6.336,5493			1.525,0918	1.525,0918			1.525,0918	1.219,2871	305,8048	78,9118	78,9118	0,0000
$CH_3COOH_{(l)}$									2.083,0936		8,4853									2.091,5307	2.091,5216	0,2092
$CH_3COCH_2OH_{(l)}$						2.104,0864		21,0409		12,5557												
$N_{2(g)}$												1.815,5595	432,0443		432,0443							
$C_3H_4O_{2(g)}$												6.930,0598	6.930,0598		6.930,0598							
$C_3H_8O_{3(g)}$														6.209,3025		6.209,3025						
$CH_4O_{(g)}$														5,3133		5,3133						
$CH_2O_{(g)}$													5,3133									
$C_3H_6O_{(g)}$														8,9301		8,9301						
$C_3H_4O_{(g)}$													6,9301									
Total	23.543,7433	3.507,1380	29.050,8813	18.763,1457	10.287,7356	18.763,1457	2.087,9849	6.566,7580	14.294,3727	6.438,6385	98,1175	8.747,6869	15.180,2276	7.838,1725	7.262,1041	6.315,0725	1.525,0010	1.219,2508	305,8303	14.392,4901	2.118,2033	12.274,2869