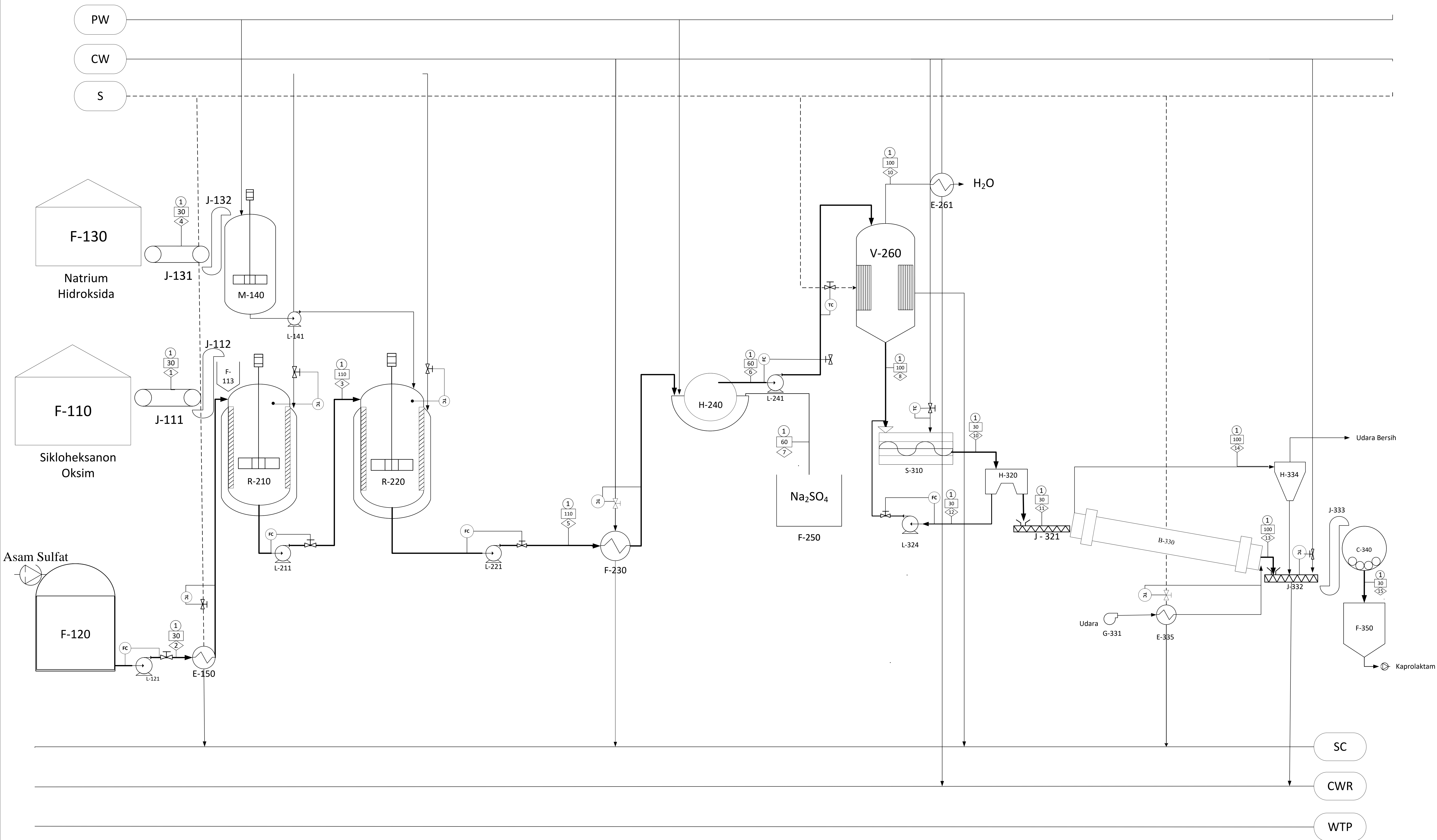


Process Engineering Flow Diagram
PRA RANCANGAN PABRIK KAPROLAKTAM DARI SIKLOHEKSANON OKSIM DAN ASAM SULFAT
Kapasitas : 99.000 ton/ tahun



KETERANGAN	
UTILITY	
S	: Steam
SC	: Steam Condensate
CW	: Cooling Water
CWR	: Cooling Water Return
PW	: Process Water
WTP	: Waste Treatment Process
LINE AND SYMBOL	
PC	: Pressure Control
TC	: Temperature Control
FC	: Flow Control
←	: Material Flow
□	: Temperature (°C)
○	: Pressure (atm)
◇	: Nomor Aliran

NO.	NAMA ALAT	KODE
1	Gudang Siklohexanon Oxim	F-110
2	Belt Conveyor 1	J-111
3	Bucket Elevator 1	J-112
4	Hopper	F-113
5	Tangki Penyimpanan Asam Sulfat	F-120
6	Pompa 1	L-121
7	Gudang NaOH	F-130
8	Belt Conveyor 2	J-131
9	Bucket Elevator 2	J-132
10	Tangki Pelarutan NaOH	M-140
11	Pompa 2	L-141
12	Heater-1	E-150
13	Reaktor	R-210
14	Pompa 3	L-211
15	Netralizer	R-220
16	Pompa 4	L-221
17	Cooler	E-230
18	Rotary Drum Vacum Filter	H-240
19	Pompa 5	L-241
20	Penampung Cake	F-250
21	Evaporator	V-260
22	Condenser	E-261
23	Crystallizer	S-310
24	Centrifuge-1	H-320
25	Screw Conveyor 1	J-321
26	Pompa 6	L-324
27	Rotary Drier	B-330
28	Blower	G-331
29	Cooling Screw Conveyor	J-332
30	Bucket Elevation 3	J-333
31	Cyclone	H-334
32	Heater Udara	E-335
33	Ball Mill	C-340
34	Silo Kaprolaktam	F-350

Aliran Massa (kg/jam)

Komponen	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C₆H₁₁NO	12,500.30				11,281.52	10,940.31		10,940.31		12,625.47	12,625.47		12,499.21	126.25	12,499.21
C₆H₁₁NO.H₂SO₄			22,174.20		1,108.71	1,075.18		1,075.18		1,075.18	53.76	1,021.42	53.22	0.54	53.22
NaOH				8,407.28	420.36	407.65		122.45		122.45	20.38	387.27	20.18	0.20	20.18
C₆H₁₀O	126.27		126.27		126.27	122.45		407.65		407.65	6.12	116.32	6.06	0.06	6.06
H₂SO₄		11,599.84	1,300.92		1,300.92	1,261.57		1,261.57		1,261.57	63.08	1,198.49	62.45	0.63	62.45
H₂O		236.73	236.73	5,604.85	9,198.97	8,920.75		1,911.68	7,009.06	226.53	11.33	215.21	1.26	10.06	1.26
Na₂SO₄					14,176.78		14,176.78								
Total	12,626.57	11,836.57	23,838.12	14,012.14	37,613.52	22,727.91	14,176.78	15,718.84	7,009.06	15,718.84	12,780.13	2,938.71	12,642.38	137.75	12,642.38

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FLOWSHEET
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 PROGRAM STUDI TEKNIK KIMIA
 FAKULTAS TEKNIK
UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN"
 JAWA TIMUR
 SURABAYA
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