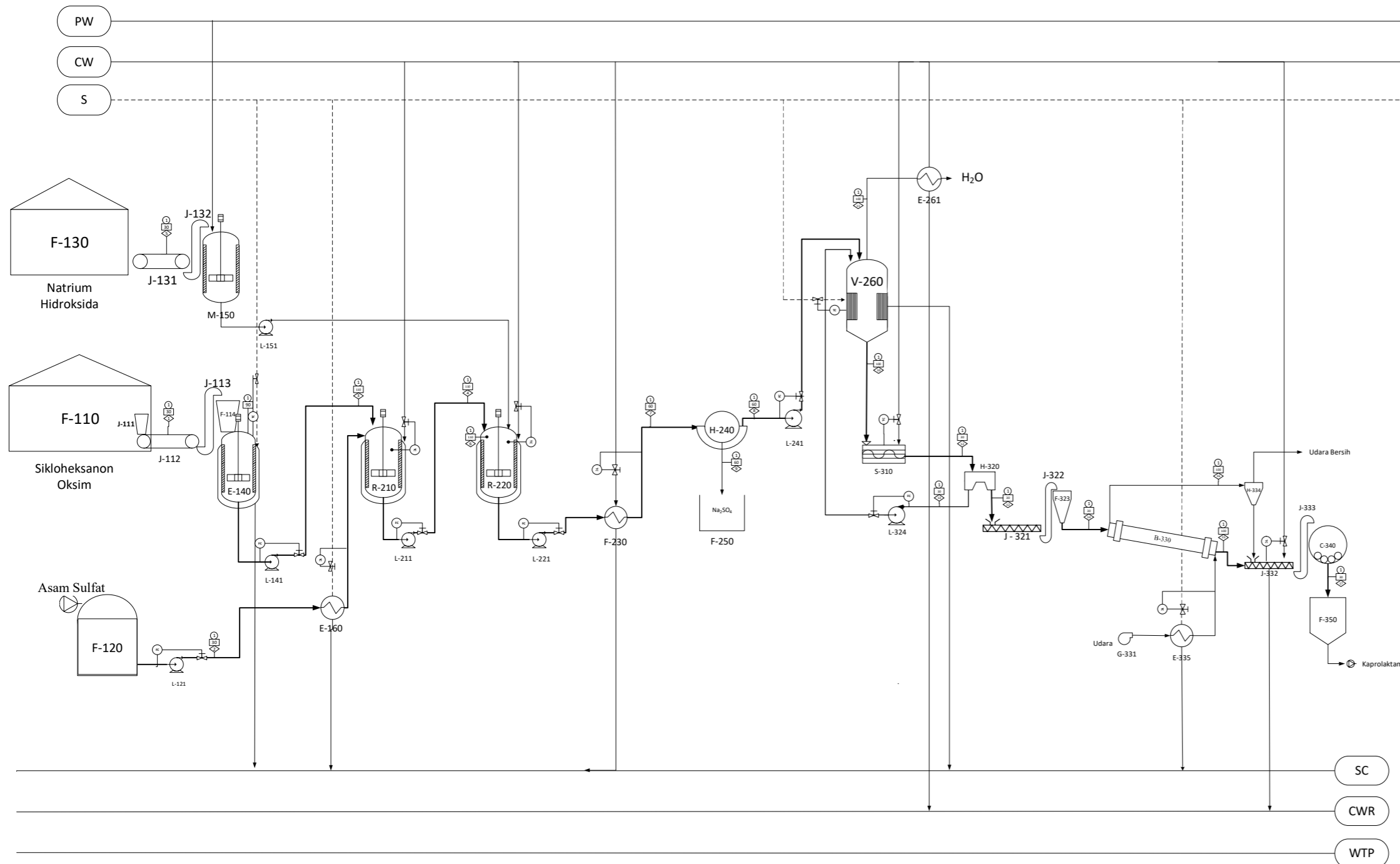


Process Engineering Flow Diagram
PRARANCANGAN PABRIK KAPROLAKTAM DARI SIKLOHEKSANON OKSIM DAN ASAM SULFAT
Kapasitas : 100.000 ton/ tahun



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	Hopper	F-111
3	Belt Conveyor 1	J-112
4	Bucket Elevator 1	J-113
5	Hopper	F-114
6	Tangki Penyimpanan Asam Sulfat	F-120
7	Pompa 1	L-121
8	Gudang NaOH	F-130
9	Belt Conveyor 2	J-131
10	Bucket Elevator 3	J-132
11	Melter	E-140
12	Pompa 3	L-141
13	Tangki Pelarutan NaOH	M-150
14	Pompa 2	L-151
15	Heater-1	E-160
16	Reaktor	R-210
17	Pompa 4	L-211
18	Netralizer	R-220
19	Pompa 5	L-221
20	Cooler	E-230
21	Rotary Vacum Filter	H-240
22	Pompa 6	L-241
23	Penampung Cake	F-250
24	Evaporator	V-260
25	Condenser	E-261
26	Crystallizer	S-310
27	Centrifuge-1	H-320
28	Screw Conveyor 1	J-321
29	Bucket Elevator 2	J-322
30	Hopper	F-323
31	Pompa 7	L-324
32	Rotary Drier	B-330
33	Blower	G-331
34	Screw Conveyor 2	J-332
35	Bucket Eletvator 3	J-333
36	Cyclone	H-334
37	Heater Udara	E-334
38	Ball Mill	C-340

Aliran Massa (kg/jam)																
Komponen	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$C_6H_{11}NO$	12,626.26		12,626.26			11,395.20	11,038.78		11,038.78		12,794.45	12,794.45		12,666.50	127.94	12,666.50
$C_6H_{11}NO.H_2SO_4$				22,397.65		1,119.88	1,084.85		1,084.85		1,084.85	54.24	1,030.61	53.70	0.54	53.70
NaOH					8,492.00	424.60	411.32		122.31		122.31	20.57	390.75	20.36	0.21	20.36
$C_6H_{10}O$	126.26		126.26	126.26		126.26	122.31		411.32		411.32	6.12	116.20	6.05	0.06	6.05
H_2SO_4		11,716.72		1,314.03		1,314.03	1,272.92		1,272.92		1,272.92	63.65	1,209.28	63.01	0.64	63.01
H_2O		239.12		239.12	4,880.46	8,510.79	8,244.59		1,930.12		174.46	8.72	165.74	1.28	7.44	1.28
Na_2SO_4						14,319.63		14,319.63		6,314.46						
Total	12,752.53	11,955.84	12,752.53	24,077.05	13,372.46	37,210.40	22,174.78	14,319.63	15,860.32	6,314.46	15,860.32	12,947.74	2,912.58	12,810.91	136.83	12,810.91

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PABRIK KAPROLAKTAM DARI SIKLOHEKSANON
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PROGRAM STUDI TEKNIK KIMIA
FAKULTAS TEKNIK
UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN"
JAWA TIMUR
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