

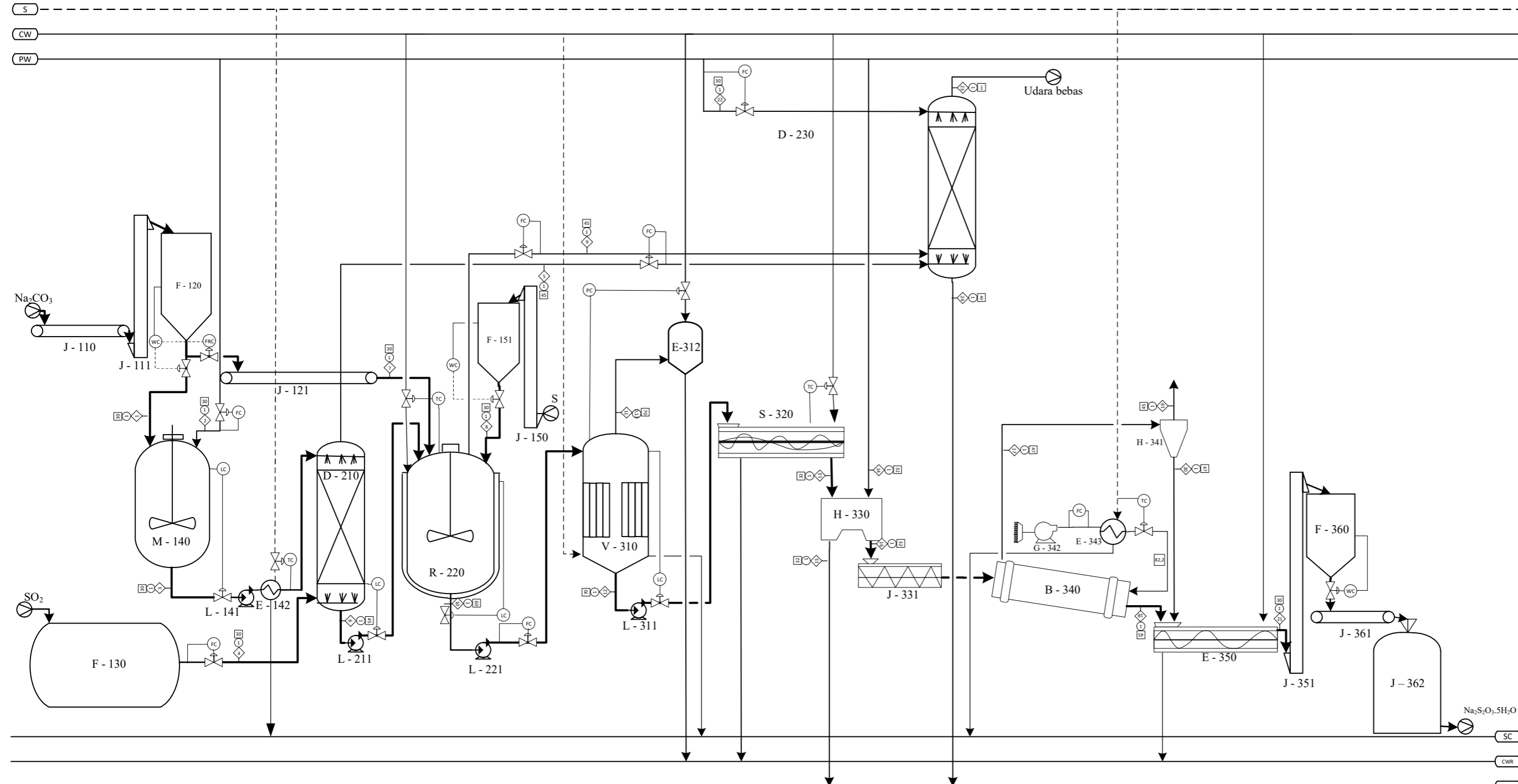
# PRA RANCANGAN PABRIK SODIUM HYPOSULPHATE DARI SODA ASH, SULFUR DIOKSIDA DAN SULFUR DENGAN PROSES ABSORBSI

Keterangan :

	Temperature : °C
	Aliran massa : Kg/jam
	Tekanan : atm
	Steam : 120 °C
	Steam Condensate
	Cooling Water
	Cooling Water Return
	Process Water
	Waste Treatment Plant

30	J-362	ROTARY PACKING
29	J-361	BELT CONVEYOR 3
28	F-360	HOPPER SODIUM HYPOSULPHATE
27	J-351	BUCKET ELEVATOR 3
26	E-350	COOLING CONVEYOR
25	E-343	HEATER 2
24	G-342	BLOWER
23	H-341	CYCLONE
22	B-340	ROTARY DRYER
21	J-331	SCREW CONVEYOR
20	H-330	CENTRIFUGE
19	S-320	CRYSTALIZER
18	E-312	KONDENSOR
17	L-311	POMPA 4
16	V-310	EVAPORATOR
15	D-230	SCRUBBER
14	L-221	POMPA 3
13	R-220	REAKTOR
12	L-211	POMPA 2
11	D-210	KOLOM ABSORBSI
10	J-151	HOPPER SULFUR
9	J-150	BUCKET ELEVATOR 2
8	E-142	HEATER 1
7	L-141	POMPA 1
6	M-140	TANGKI PELARUTAN SODA ASH
5	F-130	TANGKI GAS SULFUR DIOXIDE
4	J-121	BELT CONVEYOR 2
3	F-120	HOPPER SODA ASH
2	J-111	BUCKET ELEVATOR 1
1	J-110	BELT CONVEYOR 1
NO	KODE	NAMA ALAT

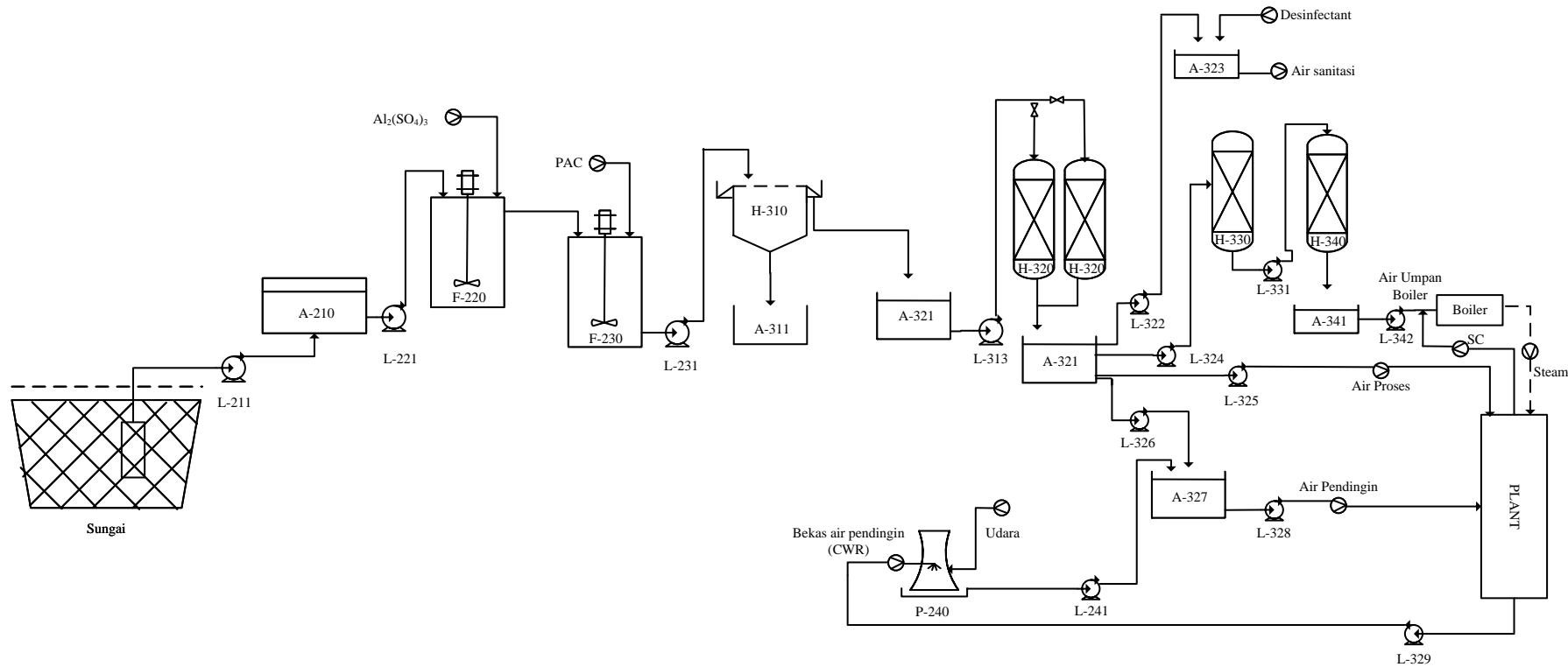
FLOWSHEET  
 PABRIK SODIUM HYPOSULPHATE  
 DENGAN PROSES ABSORBSI  
 NAMA : HALIN HIJRA YASIROH  
 NPM : 19031010084  
 Skala 1 : 100  
 DOSEN PEMBIMBING : TTD :  
 Dr. Ir. Srie Mujani, M.T  
 PROGRAM STUDI TEKNIK KIMIA  
 FAKULTAS TEKNIK  
 UNIVERSITAS PEMBANGUNAN NASIONAL  
 "VETERAN"  
 JAWA TIMUR  
 2023



Tabel 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	23	24
N <sub>2</sub> S <sub>2</sub> O <sub>3</sub> .5 H <sub>2</sub> O													4.396,4097			4.396,4097	43,9641	4.352,4456	0,4396	43,5245	4.395,9701			
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>										2.886,7006		2.886,7006	57,7340		54,8473	2,8867	0,0289	2,8578	0,0003	0,0286	2,8864			
NaHSO <sub>3</sub>						2.000,1123				100,0056		100,0056	100,0056		95,0053	5,0003	0,0500	4,9503	0,0005	0,0495	4,9998			
Na <sub>2</sub> CO <sub>3</sub>	1.072,9348		1.072,9348			53,6467	923,8236			9,1468		9,1468	9,1468			9,1468	0,0915	9,0553	0,0009	0,0906	9,1459			
NaCl	2,1523		2,1523			2,1523	1,8532			4,0055		4,0055	4,0055			4,0055	0,0401	3,9655	0,0004	0,0397	4,0051			
H <sub>2</sub> O	1,0762	4.183,3209	4.184,3970			4.011,3104	0,9266	0,5852		4.177,2545	1.106,2964	3.070,9581	1.503,5149	1.315,5756	2.678,1360	140,9545	138,7699	2,1846	138,7699		2,1846	836,8598		836,8598
SO <sub>2</sub>				1.243,1467	12,3084																		0,000002	12,3084
CO <sub>2</sub>					423,1007				401,9457														0,2475	824,7988
O <sub>2</sub>				1,2444	1,2444																		1,2444	
S								584,6482																
<b>TOTAL</b>	<b>1.076,1632</b>	<b>4.183,3209</b>	<b>5.259,4841</b>	<b>1.244,3911</b>	<b>436,6535</b>	<b>6.067,2218</b>	<b>926,6035</b>	<b>585,2335</b>	<b>401,9457</b>	<b>7.177,1130</b>	<b>1.106,2964</b>	<b>6.070,8166</b>	<b>6.070,8166</b>	<b>1.315,5756</b>	<b>2.827,9886</b>	<b>4.558,4036</b>	<b>182,9444</b>	<b>4.375,4592</b>	<b>139,2116</b>	<b>43,7327</b>	<b>4.419,1919</b>	<b>836,8598</b>	<b>1,4919</b>	<b>1.673,9670</b>

# PRA RANCANGAN UTILITAS PABRIK SODIUM HYPOSULPHATE DENGAN PROSES ABSORBSI



NO	KODE	NAMA ALAT
1	L-211	POMPA-1
2	A-210	BAK PENAMPUNG AIR SUNGAI
3	L-221	POMPA-2
4	F-220	TANGKI KOAGULASI
5	F-230	TANGKI FLOKULASI
6	L-231	POMPA-3
7	P-240	COOLING TOWER
8	L-241	POMPA-4
9	H-310	CLARIFIER
10	A-311	BAK PENAMPUNG FLOK
11	A-312	BAK PENAMPUNG AIR JERNIH
12	L-313	POMPA-5
13	H-320	SAND FILTER
14	A-321	BAK PENAMPUNG AIR BERSIH
15	L-322	POMPA-6
16	A-323	BAK PENAMPUNG AIR SANITASI
17	L-324	POMPA-7
18	H-330	TANGKI KATION EXCHANGER
19	L-331	POMPA-8
20	H-340	TANGKI ANION EXCHANGER
21	A-341	BAK PENAMPUNG AIR DEMINERALISASI
22	L-342	POMPA-9
23	L-325	POMPA-10
24	L-326	POMPA-11
25	A-327	BAK PENAMPUNG AIR PENDINGIN
26	L-328	POMPA-12
27	L-329	POMPA-13

FLOWSHEET UTILITAS PABRIK SODIUM HYPOSULPHATE DENGAN PROSES ABSORBSI	
NAMA : HALIN HIJRA YASIROH	
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DOSEN PEMBIMBING :	TTD
Dr. Ir. Srie Muljani, MT	
PROGRAM STUDI TEKNIK KIMIA FAKULTAS TEKNIK UNIVERSITAS PEMBANGUNAN NASIONAL VETERAN JAWA TIMUR 2023	

