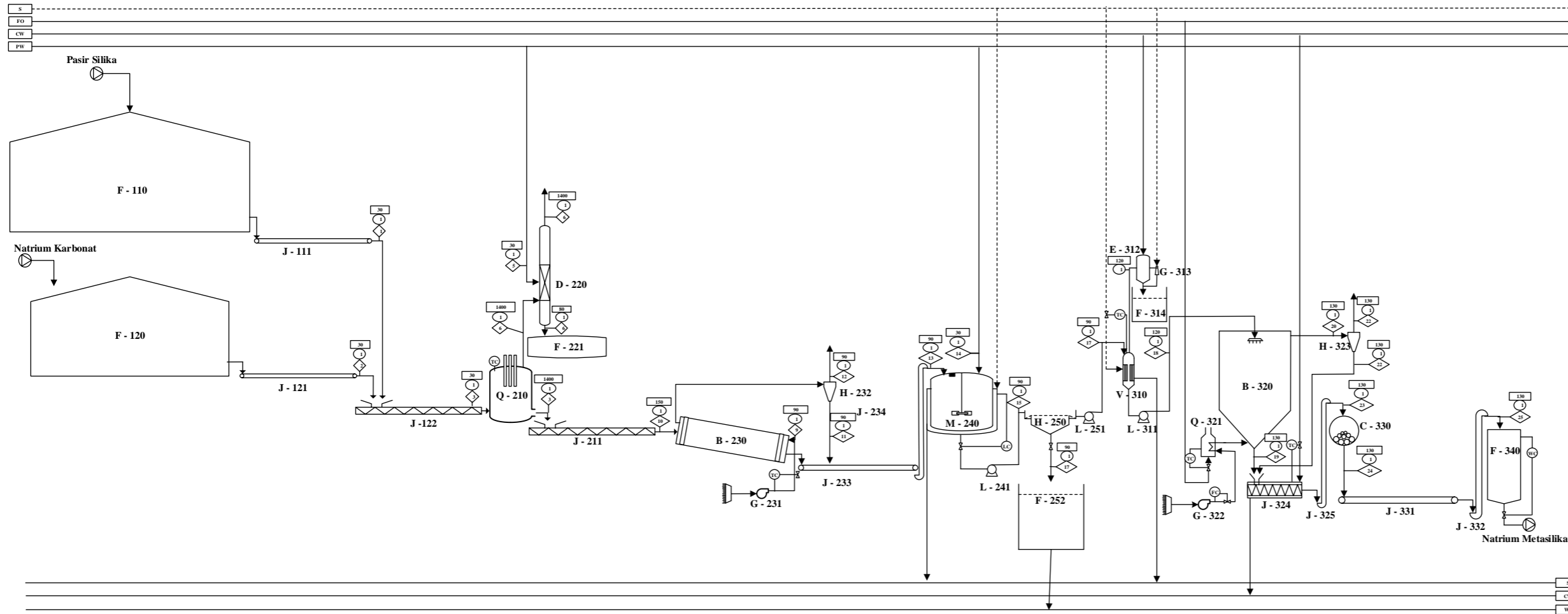


FLOWSHEET PABRIK NATRIUM METASILIKAT DARI NATRIUM KARBONAT DAN PASIR SILIKA DENGAN PROSES BAKER SKALA 1 : 350



KETERANGAN :

	Temperatur : °C
	Aliran Massa : kg/jam
	Tekanan : atm
S	Steam : 148 °C – 4,5 atm
SC	Steam Condensate
CW	Cooling Water
CWR	Cooling Water Return
PW	Process Water
WTP	Waste Treatment Process
FO	Fuel Oil

34	F - 340	BIN NATRIUM METASILIKAT
33	F - 332	BUCKET ELEVATOR - 3
32	F - 331	BELT CONVEYOR - 4
31	C - 330	BALL MILL
30	J - 325	BUCKET ELEVATOR - 2
29	J - 324	COOLING CONVEYOR
28	H - 323	CYCLONE - 2
27	G - 322	BLOWER
26	Q - 321	BURNER
25	B - 320	SPRAY DRYER
24	F - 314	HOT WELL
23	G - 313	STEAM JET EJECTOR
22	E - 312	BAROMETRIK KONDENSOR
21	L - 311	POMPA - 3
20	V - 310	EVAPORATOR
19	F - 252	BAK PENAMPUNG IMPURITAS
18	L - 251	POMPA - 2
17	H - 250	SETTLING TANK
16	L - 241	POMPA - 1
15	M - 240	TANGKI PELARUT
14	J - 234	BUCKET ELEVATOR - 1
13	J - 233	BELT CONVEYOR - 3
12	H - 232	CYCLONE - 1
11	G - 231	BLOWER - 1
10	B - 230	ROTARY COOLER
09	F - 221	TANGKI PENAMPUNG
08	D - 220	ABSORBER
07	J - 211	SCREW CONVEYOR
06	Q - 210	FURNACE ELECTRIC
05	J - 122	SCREW CONVEYOR - 1
04	F - 121	BELT CONVEYOR - 2
03	F - 120	STORAGE NATRIUM KARBONAT
02	J - 111	BELT CONVEYOR - 1
01	F - 110	STORAGE PASIR SILIKA
NO	KODE	NAMA ALAT

Aliran Massa (kg / jam)

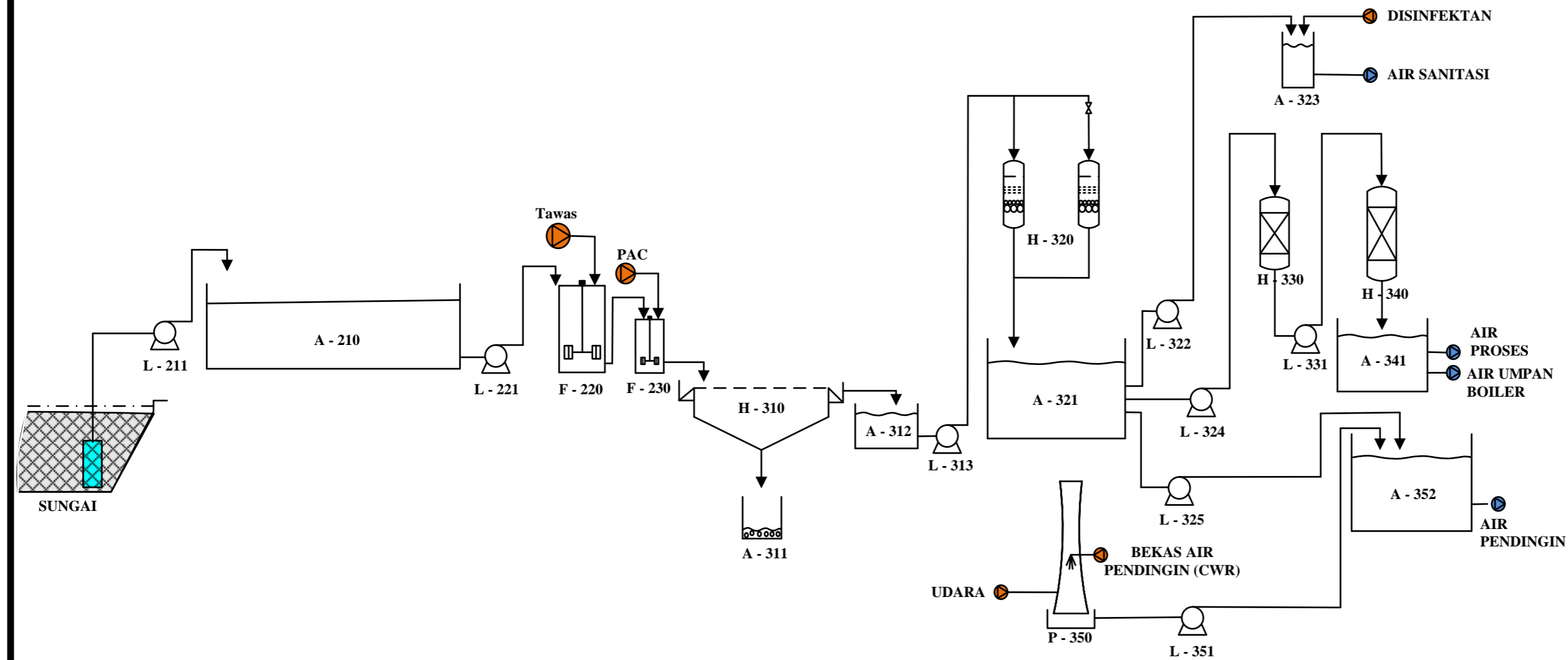
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
SiO ₂	8323.7747		8323.7747	5773.2543					5715.5217	57.7325	57.1552	0.5773	5772.6769		5772.6769		5772.6769									
Fe ₂ O ₃	1.6681	0.1826	1.8507	1.8507					1.8322	0.0185	0.0183	0.0002	1.8505		1.8505		1.8505									
Al ₂ O ₃	4.1702		4.1702	4.1702					4.1285	0.0417	0.0413	0.0004	4.1698		4.1698		4.1698									
H ₂ O	10.8426	0.4564	11.2990	11.2990		764.5774	7.6458		11.1860		0.0011		11.1872	9931.3716	9942.5388	9445.4309	497.1279	7569.9765		37.8499		75.3213			113.1711	
Na ₂ CO ₃		4543.8608	4543.8608	45.4386					44.9842	0.4544	0.4498	0.0045	45.4341		45.4341		45.4341									
NaCl		18.2576	18.2576	18.2576					18.0750	0.1826	0.1808	0.0018	18.2558		18.2558	17.3430	0.9128	17.3430		17.1696	0.1734	0.1717	0.0017	17.3413		
Na ₂ SO ₄		1.8258	1.8258	1.8258					1.8075	0.0183	0.0181	0.0002	1.8256		1.8256		1.8256									
Na ₂ SiO ₃				5179.9756					5128.1758	51.7998	51.2818	0.5180	5179.4576		5179.4576	4920.4847	258.9729	4920.4847		4871.2799	49.2048	48.7128	0.4920	4919.9926		
CO ₂					1868.9671			18.6897																		
H ₂ CO ₃							2607.2091																			
H ₂ O (g)											0.1330	0.1119							1875.4554		7532.1266		7456.8053			

DIGAMBAR : Siti Mariyam
NPM : 17031010118
DOSEN PEMBIMBING : Ir. Kindriani Nurma, MT

FLOWSHEET PABRIK NATRIUM METASILIKAT DARI NATRIUM KARBONAT DAN PASIR SILIKA DENGAN PROSES BAKER

FLOWSHEET UTILITAS UNIT PENGOLAHAN AIR

SKALA 1:350



22	A - 352	BAK PENAMPUNG AIR PENDINGIN
21	L - 351	POMPA - 8
20	P - 350	COOLING TOWER
19	A - 341	BAK PENAMPUNG AIR DEMINERALISASI
18	H - 340	ANION EXCHANGER
17	L - 331	POMPA - 7
16	H - 330	KATION EXCHANGER
15	L - 325	POMPA - 6
14	L - 324	POMPA - 5
13	A - 323	BAK PENAMPUNG AIR SANITASI
12	L - 322	POMPA - 4
11	A - 321	BAK PENAMPUNG AIR BERSIH
10	H - 320	SAND FILTER
09	L - 313	POMPA - 3
08	A - 312	BAK PENAMPUNG AIR JERNIH
07	A - 311	BAK PENAMPUNG FLOK
06	H - 310	CLARIFIER
05	F - 230	TANGKI FLOKULASI
04	F - 220	TANGKI KOAGULASI
03	L - 221	POMPA - 2
02	A - 210	BAK PENAMPUNG AIR SUNGAI
01	L - 211	POMPA - 1
NO	KODE	NAMA ALAT

DIGAMBAR OLEH : Siti Mariyam
 NPM : 17031010118
 DOSEN PEMBIMBING : Ir. Kindriari Nurma Wahyusi, M.T

FLOWSHEET UTILITAS
 UNIT PENGOLAHAN AIR

PROGRAM STUDI TEKNIK KIMIA
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 UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN"
 JAWA TIMUR
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