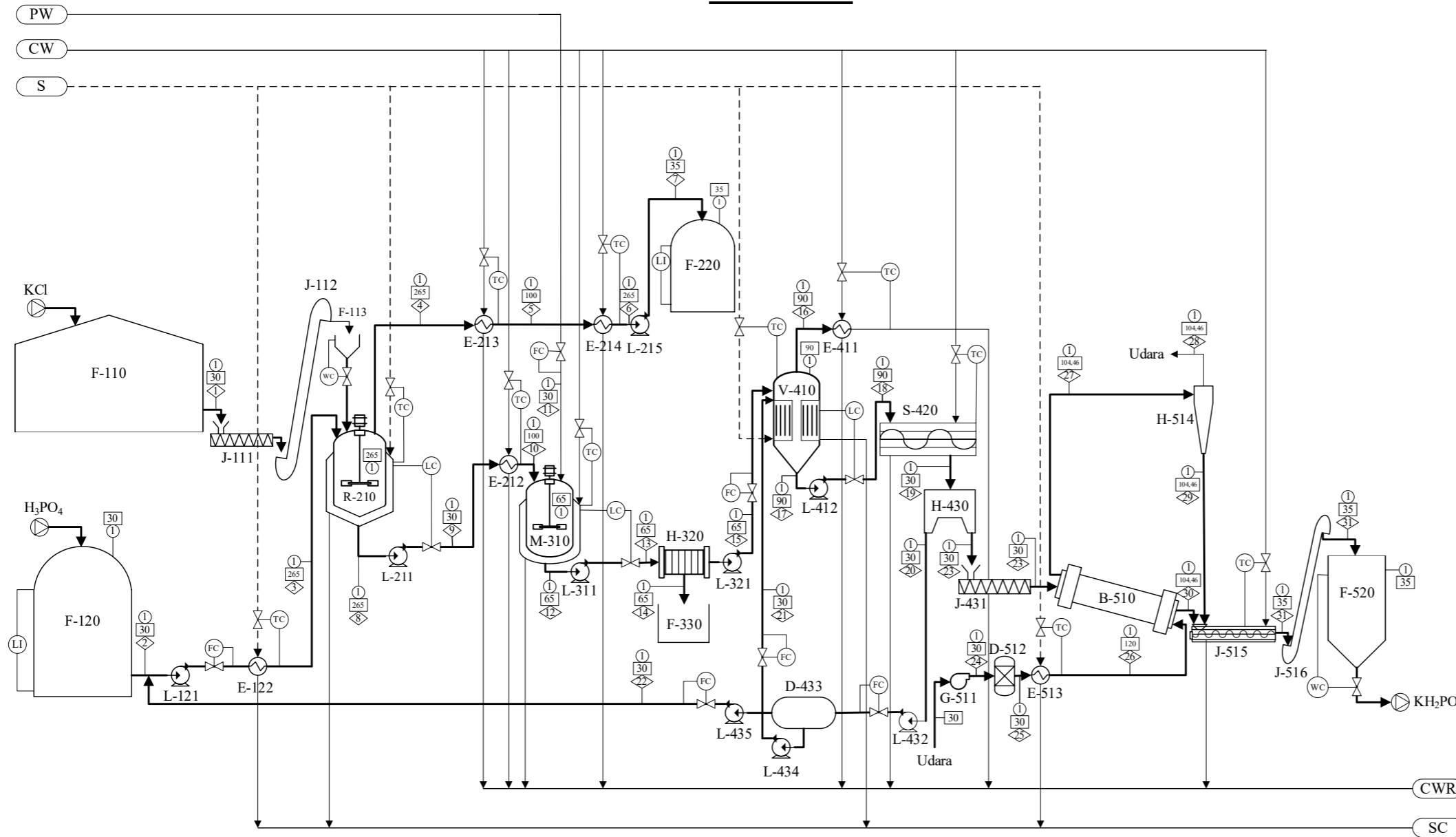


**FLWSHEET PRA RANCANGAN PABRIK MONOPOTASSIUM PHOSPHATE DARI POTASSIUM CHLORIDE DAN PHOSPHORIC ACID DENGAN PROSES KRISTALISASI**

**SKALA 1:150**




Keterangan			
○	Tekanan (atm)	○ PW	Process Water
□	Temperatur (°C)	○ CW	Cooling Water
◇	Aliran Massa (kg/jam)	○ S	Steam
		○ CWR	Cooling Water Return
		○ SC	Steam Condensate

NO	KODE	NAMA ALAT
1	F-110	GUDANG PENYIMPANAN KCl
2	J-111	SCREW CONVEYOR-1
3	J-112	BUCKET ELEVATOR-1
4	F-113	HOPPER
5	F-120	TANGKI PENYIMPANAN H <sub>3</sub> PO <sub>4</sub>
6	L-121	POMPA-1
7	E-122	HEATER-1
8	R-210	REAKTOR
9	L-211	POMPA-2
10	E-212	COOLER-1
11	E-213	COOLER-2
12	E-214	CONDENSOR-1
13	L-215	POMPA-3
14	F-220	TANGKI PENYIMPANAN HCl
15	M-310	MIXER
16	L-311	POMPA-4
17	H-320	FILTER PRESS
18	L-321	POMPA-5
19	F-330	TANGKI PENYIMPANAN IMPURITIES
20	V-410	EVAPORATOR
21	E-411	CONDENSOR-2
22	L-412	POMPA-6
23	S-420	COOLING CRYSTALLIZER
24	H-430	CENTRIFUGE
25	J-431	SCREW CONVEYOR-2
26	L-432	POMPA-7
27	D-433	DECANTER
28	L-434	POMPA-8
29	L-435	POMPA-9
30	B-510	ROTARY DRYER
31	G-511	BLOWER
32	D-512	MOLECULAR SIEVE
33	E-513	HEATER-2
34	H-514	CYCLONE
35	J-515	COOLING SCREW CONVEYOR
36	J-516	BUCKET ELEVATOR-2
37	F-520	TANGKI PENYIMPANAN KH <sub>2</sub> PO <sub>4</sub>

**FLWSHEET PRA RANCANGAN PABRIK MONOPOTASSIUM PHOSPHATE DARI POTASSIUM CHLORIDE DAN PHOSPHORIC ACID DENGAN PROSES KRISTALISASI**

Nama : AULIA ROSA  
NPM : 21031010078

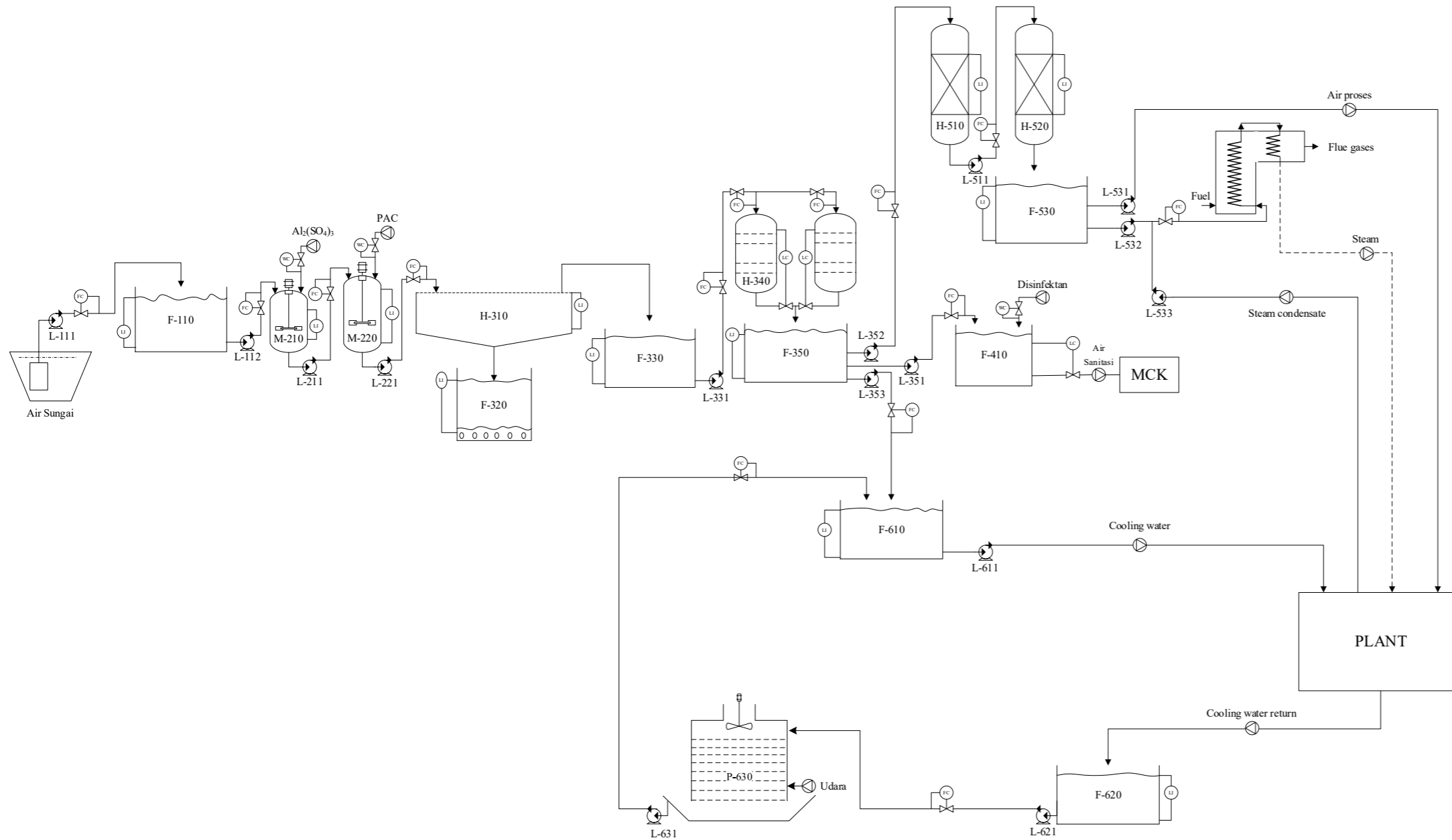
Dosen Pembimbing  
Prof. Dr. Ir. Srie Muljani, M.T.

	<p><b>PROGRAM STUDI TEKNIK KIMIA FAKULTAS TEKNIK &amp; SAINS UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN" JAWA TIMUR 2025</b></p>
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Nomor Komponen	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	25	26	27	28	29	30	31		
KCl	3339,484							133,579	133,579	133,579		133,579	133,579	2,672	130,908		130,908	130,908	130,908	128,290	128,290												
H <sub>2</sub> O	103,283	2562,574	2562,574	2665,857	2665,857	2665,857	2665,857					10662,772	10662,772	213,255	10449,517	8916,515	1533,002	1533,002	1533,002	1502,342	1502,342				30,660			0,026	0,0003	0,026	2,618	2,618	
H <sub>3</sub> PO <sub>4</sub>		6144,454	6144,454					1931,114	1931,114	1931,114		1931,114	1931,114	38,622	1892,492		1892,492	1892,492	1892,492	1854,642	18,546	1836,096	37,850				0,378	0,004	0,375	37,850	37,846		
CaO		45,208	45,208					45,208	45,208	45,208		45,208	45,208	45,208																			
MgO		135,623	135,623					135,623	135,623	135,623		135,623	135,623	135,623																			
Fe <sub>2</sub> O <sub>3</sub>		54,249	54,249					54,249	54,249	54,249		54,249	54,249	54,249																			
Al <sub>2</sub> O <sub>3</sub>		99,457	99,457					99,457	99,457	99,457		99,457	99,457	99,457																			
HCl				1567,694	1567,694	1567,694	1567,694																										
KH <sub>2</sub> PO <sub>4</sub>								5851,551	5851,551	5851,551		5851,551	5851,551	117,031	5734,520		5734,520	5734,520	5734,520	5734,520	1355,384	1355,384			4379,136			43,791	0,438	43,353	4335,344	4378,698	
Air Proses											10662,772																						
Udara																										21995,242	21995,242	21995,242	21995,242	21995,242			
Total	3442,768	9041,566	9041,566	4233,551	4233,551	4233,551	4233,551	8250,782	8250,782	8250,782	10662,772	18913,555	18913,555	706,118	18207,436	8916,515	9290,922	9290,922	9290,922	4840,658	3004,562	1836,096	4450,264	21995,242	21995,242	21995,242	22070,068	22026,313	43,754	4375,843	4419,192		

**UNIT PENGOLAHAN AIR PABRIK *MONOPOTASSIUM PHOSPHATE* DARI *POTASSIUM CHLORIDE*  
DAN *PHOSPHORIC ACID* DENGAN PROSES KRISTALISASI**

**SKALA 1:250**



NO	KODE	NAMA ALAT
1	L-111	POMPA AIR SUNGAI
2	F-110	BAK PENAMPUNG AIR SUNGAI
3	L-112	POMPA TANGKI KOAGULASI
4	M-210	TANGKI KOAGULASI
5	L-211	POMPA TANGKI FLOKULASI
6	M-220	TANGKI FLOKULASI
7	L-221	POMPA CLARIFIER
8	H-310	CLARIFIER
9	F-320	BAK PENAMPUNG FLOK
10	F-330	BAK PENAMPUNG AIR BERSIH-1
11	L-331	POMPA SAND FILTER
12	H-340	SAND FILTER
13	F-350	BAK PENAMPUNG AIR BERSIH-2
14	L-351	POMPA BAK AIR SANITASI
15	F-410	BAK PENAMPUNG AIR SANITASI
16	L-352	POMPA KATION EXCHANGER
17	H-510	TANGKI KATION EXCHANGER
18	L-511	POMPA ANION EXCHANGER
19	H-520	TANGKI ANION EXCHANGER
20	F-530	BAK PENAMPUNG AIR LUNAK
21	L-531	POMPA AIR PROSES
22	L-532	POMPA AIR UMPAN BOILER
23	L-533	POMPA STEAM CONDENSATE
24	L-353	POMPA BAK PENAMPUNG AIR PENDINGIN-1
25	F-610	BAK PENAMPUNG AIR PENDINGIN
26	L-611	POMPA AIR PENDINGIN
27	F-620	BAK PENAMPUNG CWR
28	L-621	POMPA COOLING TOWER
29	P-630	COOLING TOWER
30	L-631	POMPA BAK PENAMPUNG AIR PENDINGIN-2

**UNIT PENGOLAHAN AIR PABRIK *MONOPOTASSIUM PHOSPHATE* DARI *POTASSIUM CHLORIDE* DAN *PHOSPHORIC ACID* DENGAN PROSES KRISTALISASI**

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