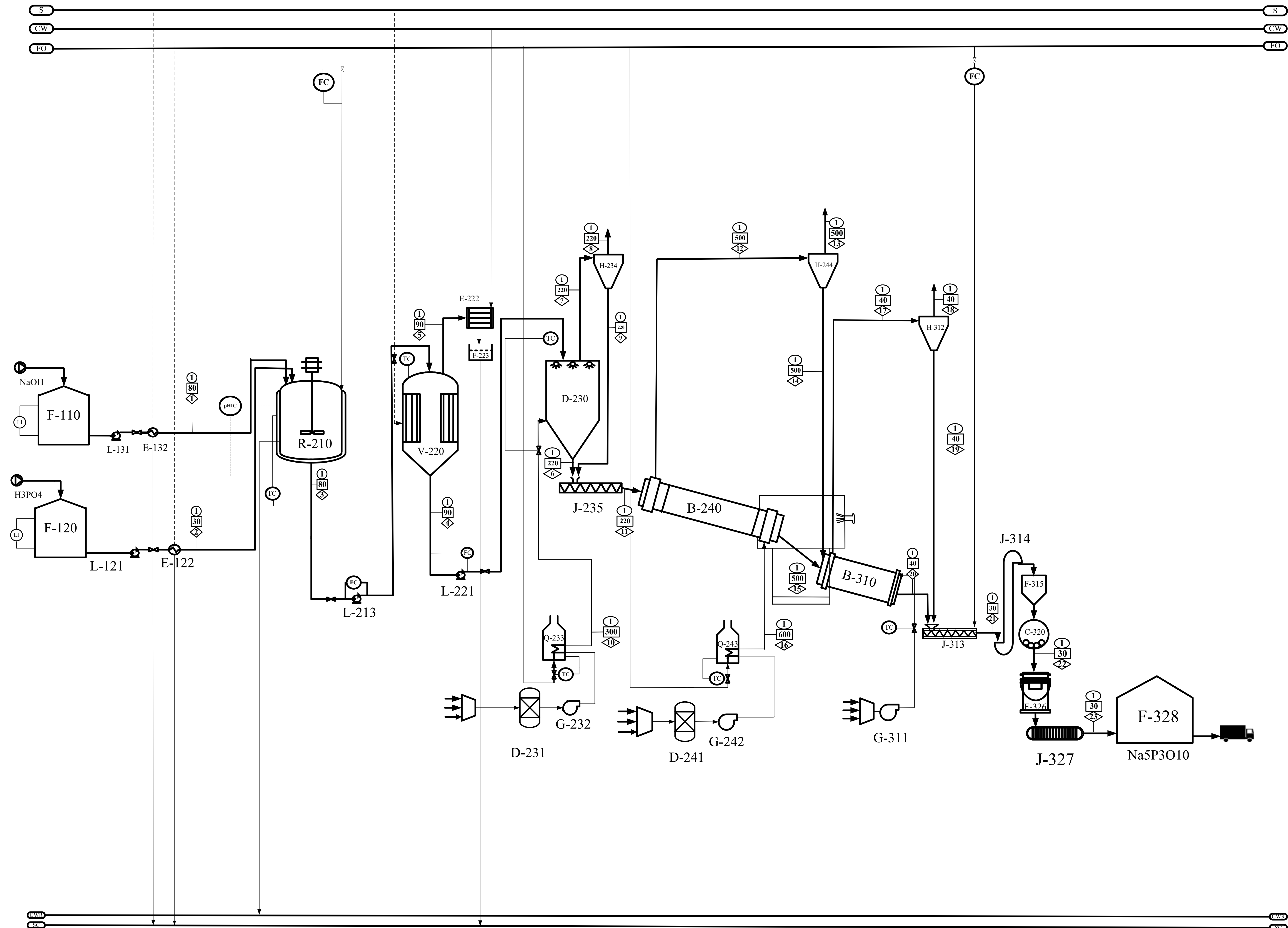
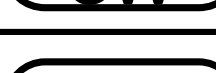


FLOWSHET PENGEMBANGAN PRA RANCANGAN PABRIK PENTASODIUM TRIPHOSPHATE DARI PHOSPORIC ACID DAN SODIUM HYDROXIDE DENGAN PROSES GANDA KAPASITAS 85.000 TON/TAHUN



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
NaOH	5784,3137		115,6863	115,6863		114,5294	1,1569	0,0116	1,1453		115,6747	0,2313	0,0023	0,2290	115,4434		0,2313	0,0023	0,2290	115,4410	115,6701	115,6701	115,6701
H ₂ O	3007,8431	1500,5190	7059,2445	5029,8740	2029,3706	237,1226	4792,7513	4792,7513		2824,8043	237,1226	1247,0180	1247,0180			33,8864							
H ₃ PO ₄		8502,9412	170,0588	170,0588		168,3582	1,7006	0,0170	1,6836		170,0418	0,3401	0,0034	0,3367	169,7017		0,3401	0,0034	0,3367	169,6983	170,0350	170,0350	170,0350
NaH ₂ PO ₄			3401,1765	3401,1765		3367,1647	34,0118	0,3401	33,6716		3400,8364	0,1354	0,0014	0,1340	67,5480		0,1354	0,0014	0,1340	67,5467	67,6807	67,6807	67,6807
Na ₂ HPO ₄			8049,4510	8049,4510		7968,9565	80,4945	0,8049	79,6896		8048,6461	0,0064	0,0001	0,0063	3,1973		0,0064	0,0001	0,0063	3,1972	3,2036	3,2036	3,2036
Udara										188320,2883						33886,3581							
Na ₄ P ₂ O ₇												0,2941	0,0029	0,2911	146,7369		0,2941	0,0029	0,2911	146,7339	147,0251	147,0251	147,0251
Na ₃ P ₃ O ₁₀												20,4433	0,2044	20,2389	10201,2257		20,4429	0,2044	20,2385	10201,0217	10221,2602	10221,2602	10221,2602
TOTAL	8792,1569	10003,4602	18795,6171	16766,2466	2029,3706	11856,1315	4910,1151	4793,9250	116,1901	191145,0926	11972,3216	1268,4686	1247,2325	21,2361	10703,8530	33920,2444	21,4502	0,2145	21,2357	10703,6389	10724,8746	10724,8746	10724,8746

	Temperatur °C
	Aliran Massa : kg/jam
	Tekanan : atm
	Steam °C
	Cooling Water Return
	Cooling Water
	Fuel Oil
	Steam Condensate

33	F-328	Silo Sodium Tripolyphosphate
32	J-327	Roller Belt Conveyor
31	F-326	Packaging
30	C-320	Ball Mill
29	F-314	Hopper Sodium Tripolyphosphate
28	J-314	Bucket Elevator Rotary Cooler
27	E-313	Cooling Conveyor Rotary Cooler
26	J-312	Cyclone Rotary Cooler
25	J-311	Blower Rotary Cooler
24	B-310	Rotary Cooler
23	H-244	Cyclone Rotary Kiln
22	Q-243	Burner Rotary Kiln
21	G-242	Blower Rotary Kiln
20	D-241	Molecular Sieve 2
19	B-240	Rotary Kiln
18	J-235	Screw Conveyor Spray Dryer
17	H-234	Cyclone Spray Dryer
16	Q-233	Burner Spray Dryer
15	G-232	Blower Spray Dryer
14	D-231	Molecular Sieve 1
13	D-230	Spray Dryer
12	L-221	Pompa Larutan Orthophosphate
11	E-222	Kondensor
10	V-220	Evaporator
9	L-213	Pompa Larutan Orthophosphate
8	R-210	Mixer
7	E-132	Heater Sodium Hydroxide
6	L-131	Pompa Larutan Sodium Hydroxide
5	M-130	Tangki Pelarutan Sodium Hydroxide
4	E-122	Heater Phosphoric Acid
3	L-121	Pompa Larutan Phosphoric Acid
2	F-120	Tangki Penyimpanan H3PO4
1	F-110	Tangki Penyimpanan Sodium Hydroxide
No	Kode	Nama Peralatan

Digambar Oleh :
Dea Vanny Pratiwi (22031010074)
Mengetahui,
Dosen Pembimbing :

Ir. Suprihatin, M.T.
IP. 19630508 199203 2 001

**FLowsheet pra-rancangan pabrik
pentasodium triphosphate dari phosphoric acid dan
sodium hydroxide dengan proses ganda kapasitas 85.000
ton/tahun**



**PROGRAM STUDI TEKNIK KIMIA
FAKULTAS TEKNIK DAN SAINS
UNIVERSITAS PEMBANGUNAN
NASIONAL "VETERAN" JAWA TIMUR
2026**

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