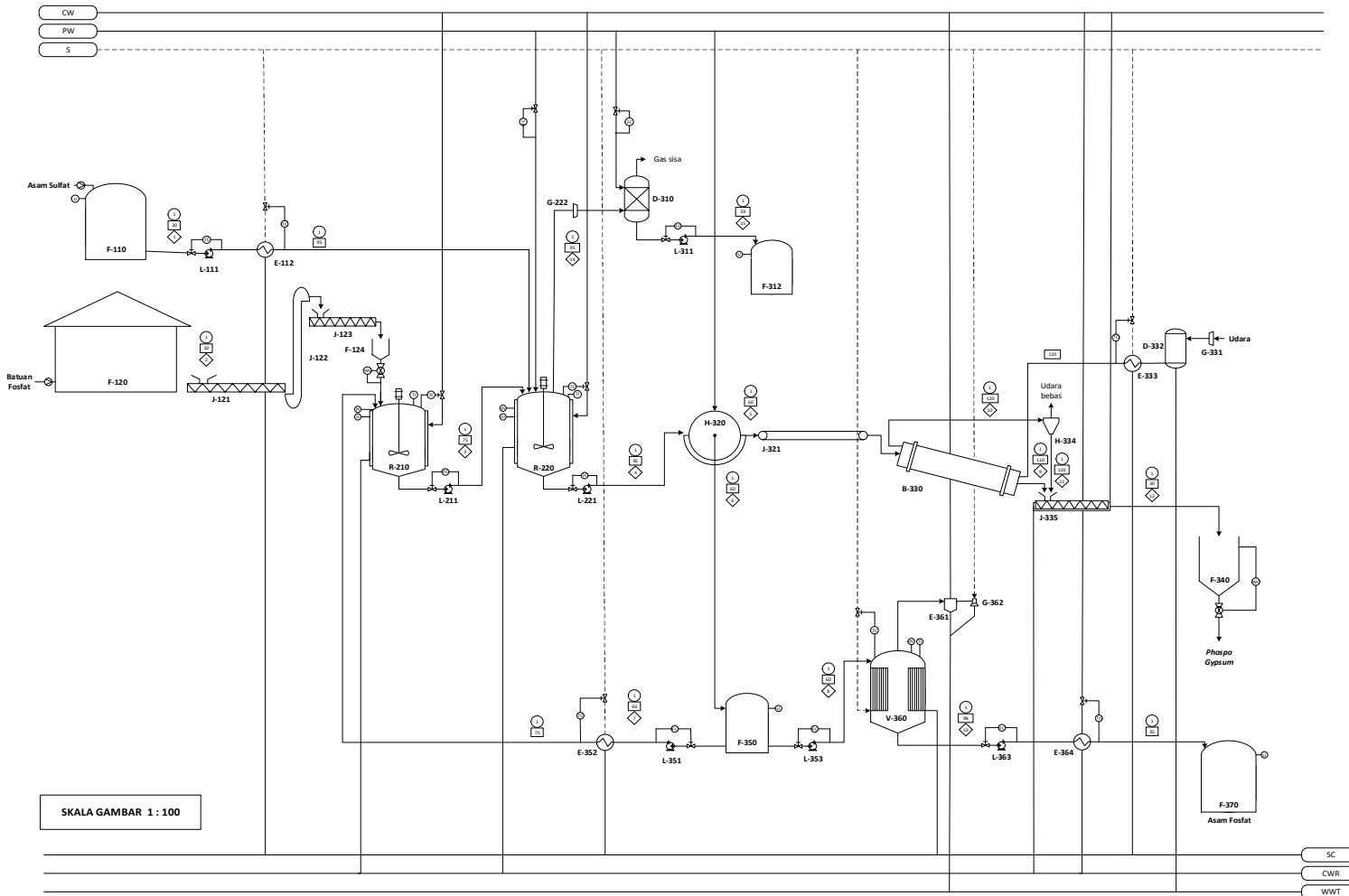


FLWSHEET PRA RENCANA PABRIK ASAM FOSFAT DARI BATUAN FOSFAT DAN ASAM SULFAT

MENGGUNAKAN PROSES PRAYON *HEMIHYDRATE* KAPASITAS 37.500 TON/TAHUN



SKALA GAMBAR 1 : 100

KETERANGAN		
	Cooling Water	Aliran Massa (Kg/Jam) Temperatur (°C) Tekanan (atm)
	Process Water	
	Steam	
	Steam Condensate	
	Cooling Water Return	
	Waste Water Treatment	

35	F-370	Tangki Penyimpanan Asam Fosfat
34	E-364	Cooler Asam Fosfat
33	L-363	Pompa
32	G-362	Steam Jet Ejector
31	E-361	Kondensor
30	V-360	Evaporator
29	L-353	Pompa
28	E-352	Heater
27	L-351	Pompa
26	F-350	Tangki Penampung Filtrat
25	F-340	Silo <i>Phospo Gypsum</i>
24	J-335	Cooling Screw Conveyor
23	H-334	Cyclone
22	E-333	Heater
21	D-332	Molecular Sieve
20	G-331	Blower
19	B-330	Rotary Dryer
18	J-321	Belt Conveyor
17	H-320	Rotary Drum Vacuum Filter
16	F-312	Tangki Larutan HF
15	L-311	Pompa
14	D-310	Scrubber
13	G-222	Blower
12	L-221	Pompa
11	R-220	Reaktor II
10	L-211	Pompa
9	R-210	Reaktor I
8	F-124	Hopper
7	J-123	Screw Conveyor
6	J-122	Bucket Elevator
5	J-121	Screw Conveyor
4	F-120	Gudang Batuan Fosfat
3	E-112	Heater
2	L-111	Pompa
1	F-110	Tangki Asam Sulfat
NO	KODE	NAMA ALAT

Komponen	Aliran Massa (Kg/Jam)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ca ₃ (PO ₄) ₂	17243,8707		13019,1223	781,1473	781,1473				773,3359	7,8115	7,7334	781,0692			
CaF ₂	2715,7551		2715,7551	162,9453	162,9453				161,3159	1,6295	1,6132	162,9290			
CaCO ₃	2870,8313		2870,8313	172,2499	172,2499				170,5274	1,7225	1,7053	172,2327			
Impuritis	2395,2960		2395,2960	2395,2960	2395,2960				2371,3430	23,9530	23,7134	2395,0565			
H ₂ SO ₄		22044,0741	535,3075	1354,7629	499,5180	855,2449	514,6925	340,5524	494,5228	4,9952	4,9452	499,4680	340,5524		
H ₂ O	1052,8774	449,8791	5195,4494	4892,4655	4135,2059	7080,0527	4260,8266	2819,2262	20,3849	4114,8210		20,3849	369,6749	4159,9114	
Ca(H ₂ PO ₄) ₂			9567,0107	574,0206	574,0206				568,2804	5,7402	5,6828	573,9632			
H ₃ PO ₄			740,3336	16010,4819	5903,2646	10107,2174	6082,5960	4024,6214	5844,2319	59,0326	58,4423	5902,6743	4024,6214		
CaSO ₄ ·1/2H ₂ O				30693,1805	30693,1805				30386,2487	306,9318	303,8625	30690,1112			
HF				1309,1332										1309,1332	1296,0419
CO ₂				1187,3758										1187,3758	
Total	26278,6304	22493,9532	37039,1059	59533,0591	45316,8281	18042,5150	10858,1150	7184,3999	40790,1910	4526,6372	407,6981	41197,8890	4734,8487	2496,5090	5455,9533

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 NPM : 19031010007
 Dosen Pembimbing : Ir. Lucky Indrati Utami, MT

Flowsheet Pabrik Asam Fosfat dari Batuan Fosfat dan Asam Sulfat menggunakan Proses Prayon *Hemihydrate* Kapasitas 37.500 Ton/Tahun