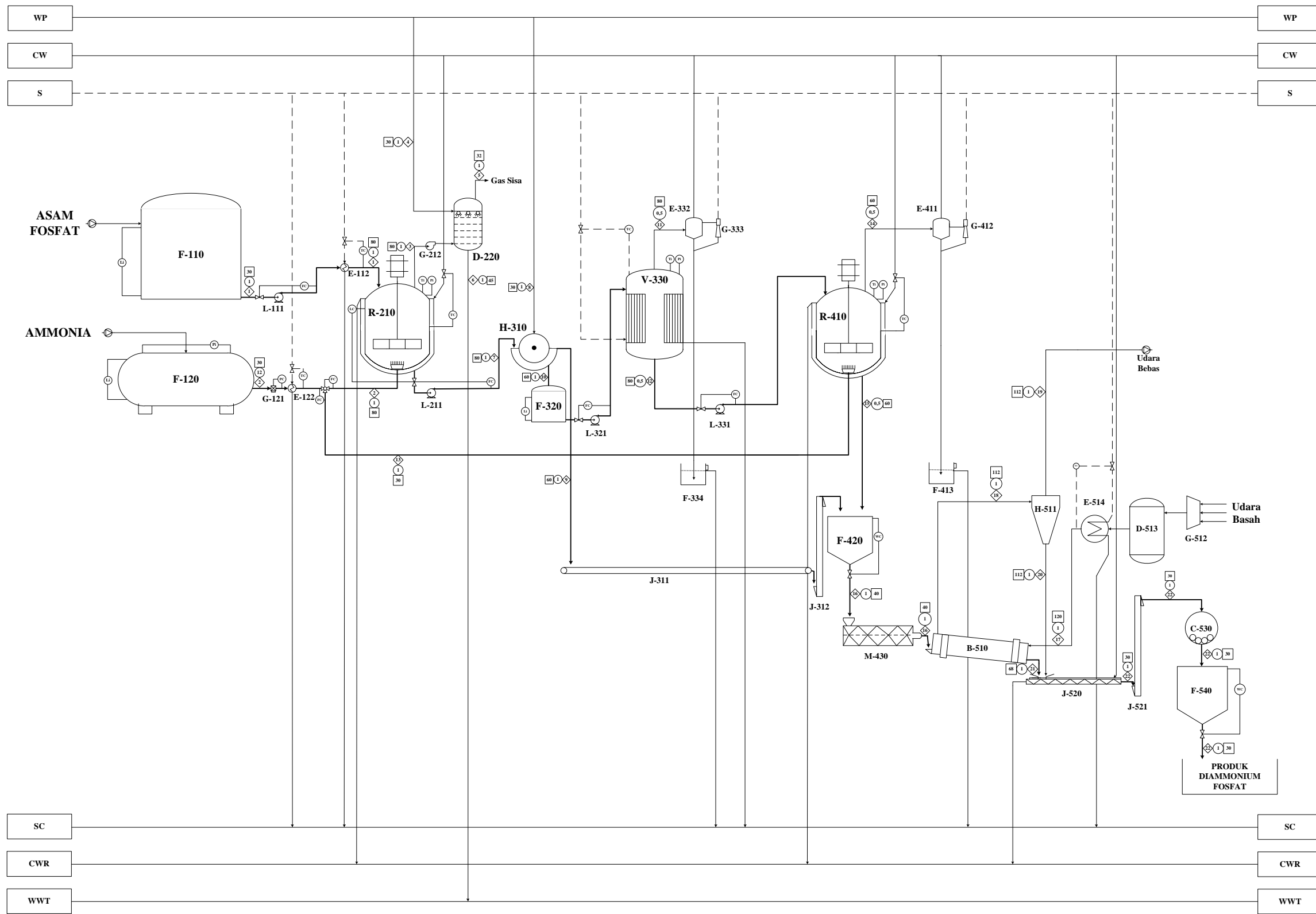


**FLWSHEET PRA RENCANA PABRIK DIAMONIUM FOSFAT DARI ASAM FOSFAT DAN AMONIA DENGAN PROSES KRISTALISASI VAKUM
KAPASITAS 60.000 TON/TAHUN**



KETERANGAN	
CW	Cooling Water
WP	Water Process
S	Steam (148°C; 4,5 atm)
CWR	Cooling Water Return
SC	Steam Condensate
WWT	Waste Water Treatment
◇	Aliran Massa (Kg/jam)
□	Temperatur (°C)
○	Tekanan (atm)

35	F-540	SILO PRODUK
34	C-530	BALL MILL
33	J-521	BUCKET ELEVATOR - 2
32	J-520	COOLING CONVEYOR
31	E-514	HEATER UDARA
30	D-513	MOLECULAR SIEVE UDARA
29	G-512	BLOWER UDARA
28	H-511	CYCLONE
27	B-510	ROTARY DRYER
26	M-430	MIXER ROTOR
25	F-420	HOPPER
24	F-413	HOT WELL - 2
23	G-412	JET EJECTOR - 2
22	E-411	BAROMETRIC CONDENSOR - 2
21	R-410	BUBBLE REAKTOR-2
20	F-334	HOT WELL - 1
19	G-333	JET EJECTOR - 1
18	E-332	BAROMETRIC CONDENSOR - 1
17	L-331	POMPA - 4
16	V-330	EVAPORATOR
15	L-321	POMPA - 3
14	F-320	TANGKI PENAMPUNG FILTRAT
13	J-312	BUCKET ELEVATOR - 1
12	J-311	BELT CONVEYOR
11	H-310	ROTARY DRUM VACUUM FILTER
10	D-220	SCRUBBER
9	G-212	BLOWER
8	L-211	POMPA - 2
7	R-210	BUBBLE REAKTOR - 1
6	E-122	HEATER AMMONIA
5	G-121	EXPANDER
4	F-120	TANGKI BAHAN AMMONIA
3	E-112	HEATER ASAM FOSFAT
2	L-111	POMPA - 1
1	F-110	TANGKI BAHAN ASAM FOSFAT
NO	KODE	NAMA ALAT

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
H ₃ PO ₄	5.047,2693																					
H ₂ O	4.207,4037	6.1705	6.1705	430,4617		261,9793	4.207,4037	329,5349	210,3702	4.326,5684	3.400,0304	926,5380	3,9978	239,6100	694,9035	905,2737		1.066,6171	1.066,6171		7,5008	7,5008
H ₂ SO ₄	403,7815																					
CaO	70,6618						70,6618			70,6618						70,6618		0,7066	0,0071	0,6996	69,9552	70,6547
MgO	171,6072						171,6072			171,6072						171,6072		1,7161	0,0172	1,6989	169,8911	171,5900
Fe ₂ O ₃	60,5672						60,5672			60,5672						60,5672		0,6057	0,0061	0,5996	59,9616	60,5612
Al ₂ O ₃	131,2290						131,2290			131,2290						131,2290		1,3123	0,0131	1,2992	129,9167	131,2159
Cl ₂	1,0095		1,0095		1,0095																	
F ₂	1,0095		1,0095		1,0095																	
NH ₃		1.227,9285	166,7619		1,6676								795,5531									
NH ₄ OH						339,7472																
(NH ₄) ₂ HPO ₄							5.628,1430		281,4072	5.346,7359						281,4072		1,1256	0,0113	1,1144	111,4372	112,5516
(NH ₄) ₂ HPO ₄							340,0726		323,0690	17,0036						6.155,3149	6.478,3839	64,7838	0,6478	64,1360	6.413,6001	6.477,7361
(NH ₄) ₂ SO ₄							544,0018		544,0018							544,0018		5,4400	0,0544	5,3856	538,5617	543,9474
Udara																	16.439,3566	16.439,3566	16.439,3566			
Total	10.094,5386	1.234,0990	174,9513	430,4617	3,6865	601,7265	11.153,6863	329,5349	1.792,9133	9.690,3079	3.400,0304	6.290,2775	799,5509	239,6100	6.850,2184	8.643,1317	16.439,3566	17.581,6639	17.506,7306	74,9332	7.500,8244	7.575,7576

NAMA : ALVI NUR DIANA
 NPM : 1903101014
 DOSEN PEMBIMBING : Ir. Mu'tasim Billah, MS

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DARI ASAM FOSFAT DAN AMONIA DENGAN PROSES
KRISTALISASI VAKUM KAPASITAS 60.000 TON/TAHUN**

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

2023