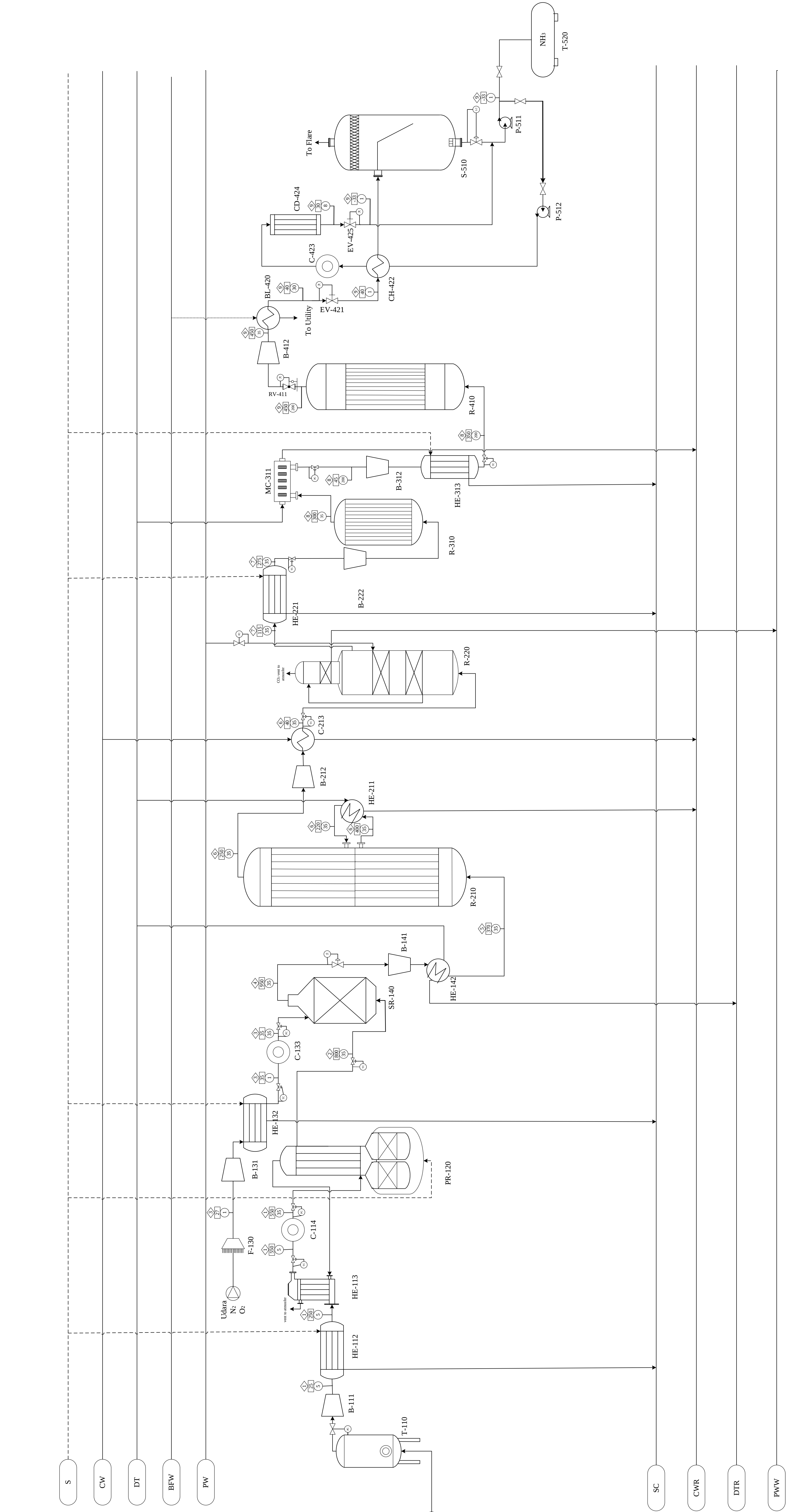


FLWSHEET PRA RANCANGAN PABRIK AMONIA DARI METANA DENGAN PROSES HABER BOSCH



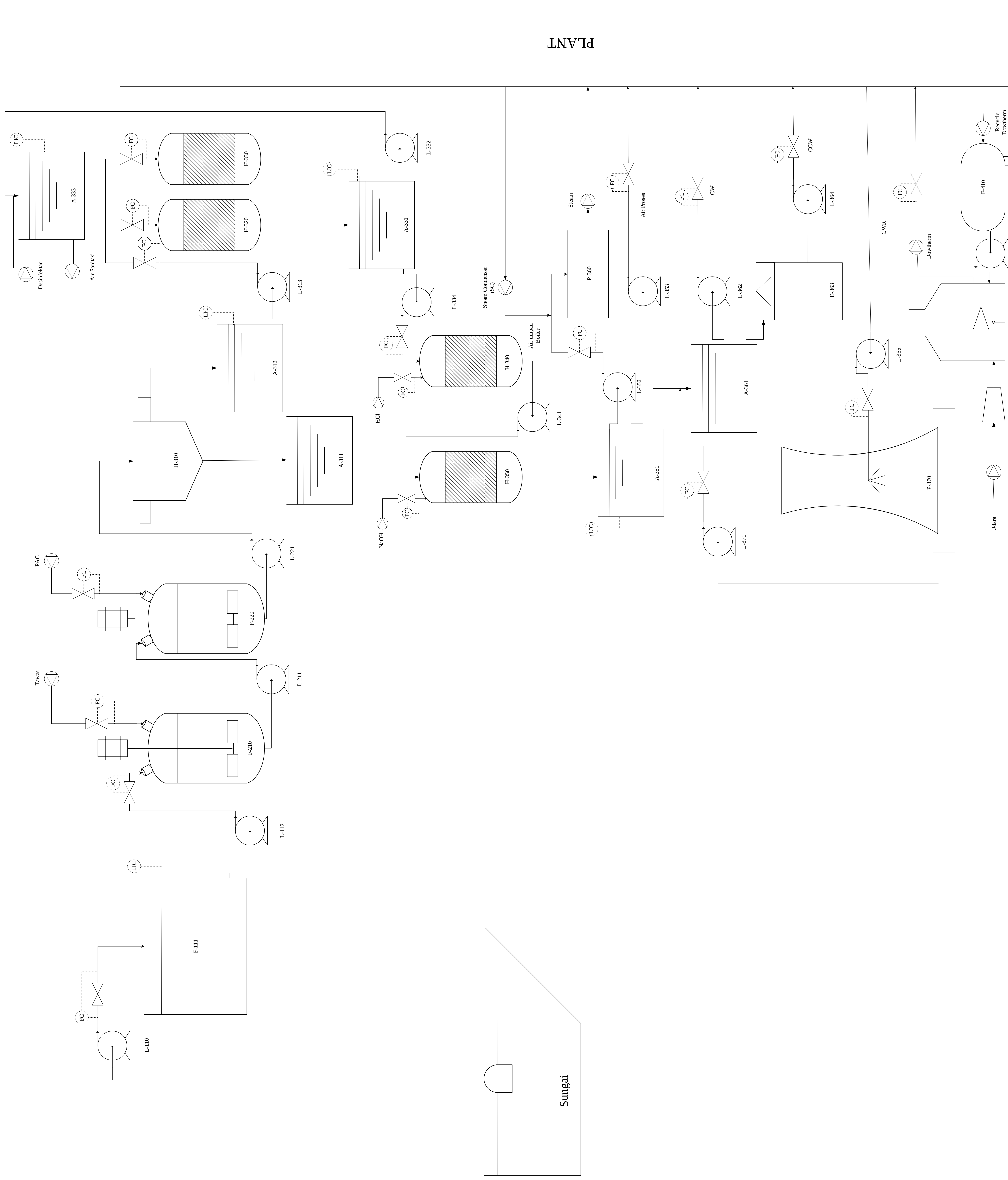
	Tekanan (atm)	S	Steam
		CW	Cooling Water
	Suhu (°C)	DW	Dowtherm
		BFW	Boiler Feed Water
		SC	Steam Condensat
		CWR	Cooling Water Return
	Aliran Massa (kg/j)	DWR	Dowtherm Return
		PW	Process Water
		PWW	Process Waste Water

No	Kode Alat	Nama Alat
1	T-110	Tangki Buffer
2	B-111	Blower-1
3	HE-112	Heat Exchanger-1
4	HE-113	Preheater Coil
5	C-114	Compressor-1
6	PR-120	Primary Reformer
7	F-130	Filter Udara
8	B-131	Blower-2
9	HE-132	Heat Exchanger-2
10	C-133	Compressor-2
11	SR-140	Secondary Reformer
12	B-141	Blower-3
13	HE-142	Heat Exchanger-3
14	R-210	Water Gas Shift Reaktor
15	HE-211	Heat Exchanger-4
16	B-212	Blower-4
17	C-213	Cooler
18	R-220	Reaktor CO ₂ Removal
19	HE-221	Heat Exchanger-5
20	B-222	Blower-5
21	R-310	Reaktor Methanator
22	MC-311	Compressor Multistage
23	B-312	Blower-6
24	HE-313	Heat Exchanger-6
25	R-410	Reaktor Haber Bosch
26	RV-411	Reduction Valve
27	B-412	Blower-7
28	BL-420	Waste Heat Boiler
29	EV-421	Expansion Valve-1
30	CH-422	Refrigeran
31	C-423	Compressor-3
32	CD-424	Condenser
33	EV-425	Expansion Valve-2
34	S-510	Separator Flash Drum
35	P-511	Pompa-1
36	P-512	Pompa-2
37	T-520	Tangki Penyimpanan Amonia

Aliran Massa (kg/jam)								
Komponen	1	2	3	4	5	6	7	8
CH ₄	14066,4455	703,3223					419,1801	419,1801
H ₂ O	15824,7512	791,2376		791,2376				
CO		23385,4657		24616,2796	492,3256	492,3256		
H ₂		5011,1712		5187,0018	6910,1414	6910,1414	6735,7174	6636,4988
CO ₂					37909,0707	379,0907		
N ₂			2315,1025	2315,1025	2315,1025	2315,1025	2315,1025	1852,0820
O ₂			703,3223					
NH ₃								562,2392
TOTAL	29891,1967	29891,1967	3018,4248	32909,6215	47626,6401	10096,6601	9470,0000	9470,0000

Flowsheet Pra Rancangan Pabrik Amonia dari Metana dengan Proses Haber Bosch	Digambar Oleh : Nadindra Putri Meylia Sasikirana 22031010199	Dosen Pembimbing Dr. Ir. Sintha Soraya Santi, M.T. NIP. 19660621 199203 2 001	Program Studi Teknik Kimia Fakultas Teknik dan Sains Universitas Pembangunan Nasional "Veteran" Jawa Timur Surabaya 2026
--	---	---	---

UNIT PENGOLAHAN AIR PABRIK AMONIA DARI METANA DENGAN PROSES HABER BOSCH



No	Kode A lat	Nama A lat
1	L-110	Pompa-1
2	F-111	Bak penampung air sungai
3	L-112	Pompa-2
4	F-210	Tangki koagulasi
5	L-211	Pompa-3
6	F-220	Tangki flokulasi
7	L-221	Pompa-4
8	H-310	Clarifier
9	A-311	Bak penampung flok
10	A-312	Bak penampung air bersih-1
11	L-313	Pompa-5
12	H-320	Sand filter-1
13	H-330	Sand filter-2
14	A-331	Bak penampung air bersih-2
15	L-332	Pompa-6
16	A-333	Bak penampung air sanitasi
17	L-334	Pompa-7
18	H-340	Tangki kation exchanger
19	L-341	Pompa-8
20	H-350	Tangki anion exchanger
21	A-351	Bak penampung air lunak
22	L-352	Pompa-9
23	L-353	Pompa-10
24	E-360	Waste Heat Boiler
25	A-361	Bak penampung air pendingin
26	L-362	Pompa-11
27	E-363	Chiller
28	L-364	Pompa-12
29	L-365	Pompa-13
30	P-370	Cooling tower
31	L-371	Pompa-14
32	F-410	Tangki dowtherm
33	L-411	Pompa-15
34	F-420	Air Fin Cooler
35	G-421	Blower