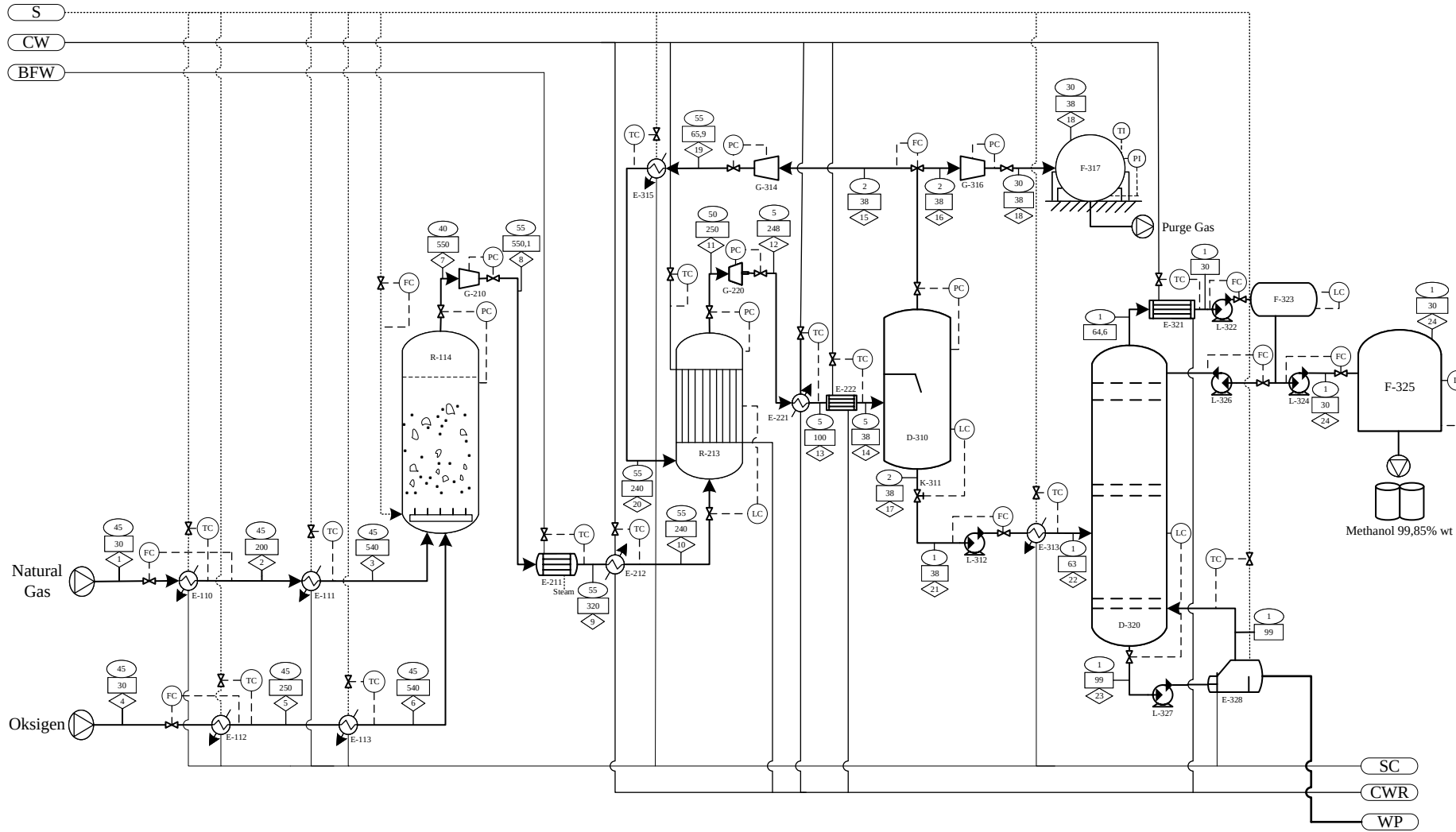


FLOWSHEET PRA RENCANA PABRIK METANOL DARI NATURAL GAS MELALUI PROSES LURGI DENGAN KAPASITAS 100.000 TON/TAHUN



KETERANGAN :

	Temperatur; Celcius
	Aliran Massa; kg/jam
	Tekanan; atm
	Steam; 400°C
	Steam Condensate
	Cooling Water
	Cooling Water Return
	Water Process
	Boiler Feed Water ; 82°C

KODE ALAT PROSES

NO.	NAMA ALAT	KODE
1	HEATER-1	E-110
2	HEATER-2	E-111
3	HEATER-3	E-112
4	HEATER-4	E-113
5	COMBINED REFORMER	R-114
6	KOMPRESSOR-1	G-210
7	STEAM DRUM/WHB	E-211
8	COOLER-1	E-212
9	REAKTOR METHANOL	R-213
10	EXPANDER-2	G-220
11	COOLER-2	E-221
12	CONDENSOR-1	E-222
13	FLASH DRUM	D-310
14	EXPANSION VALVE	K-311
15	POMPA-1	L-312
16	HEATER-5	E-313
17	KOMPRESSOR-2	G-314
18	HEATER-6	E-315
19	KOMPRESSOR-3	G-316
20	TANGKI PURGE GAS	F-317
21	KOLOM DISTILASI	D-320
22	CONDENSOR-2	E-321
23	POMPA-2	L-322
24	AKUMULATOR	F-323
25	POMPA DISTILAT	L-324
26	TANGKI METHANOL	F-325
27	POMPA REFLUX	L-326
28	POMPA BOTTOM	L-327
29	REBOILER	E-328

Neraca Massa (kg/jam)																								
Komponen	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CH ₄	10360,0374	10360,0374	10360,0374																					
C ₂ H ₆	79,8877	79,8877	79,8877																					
C ₃ H ₈	45,8640	45,8640	45,8640																					
C ₄ H ₁₀	26,3301	26,3301	26,3301																					
C ₅ H ₁₂	4,1506	4,1506	4,1506																					
C ₆ H ₁₄	4,9577	4,9577	4,9577																					
O ₂				1034,4126	1034,4126	1034,4126																		
CO ₂	52,9373	52,9373	52,9373				52,9373	52,9373	52,9373	52,9373														
N ₂	66,3086	66,3086	66,3086				66,3086	66,3086	66,3086	66,3086	116,0172	116,0172	116,0172	116,0172	49,7086	54,4129		54,4129	49,7086	49,7086				
H ₂ O							533,5519	533,5519	533,5519	533,5519	616,5228	616,5228	616,5228	616,5228	61,2956	40,7057	554,1671	40,7057	61,2956	61,2956	554,1671	554,1671	553,0587	1,1083
CO							18398,1156	18398,1156	18398,1156	18398,1156	7307,4661	7307,4661	7307,4661	7307,4661	4437,7159	3427,1062		3427,1062	4437,7159	4437,7159				
H ₂							3828,5620	3828,5620	3828,5620	3828,5620	3109,3425	3109,3425	3109,3425	3109,3425	1518,3978	1458,4409		1458,4409	1518,3978	1518,3978				
CH ₃ OH											22672,4084	22672,4084	22672,4084	22672,4084	4875,1637	4693,0770	12651,5658	4693,0770	4875,1637	4875,1637	12651,5658	12651,5658	25,3031	12626,2626
Total	10640,4735	10640,4735	10640,4735	1034,4126	1034,4126	1034,4126	22879,4754	22879,4754	22879,4754	22879,4754	33821,7570	33821,7570	33821,7570	33821,7570	10942,2816	9673,7426	13205,7328	9673,7426	10942,2816	10942,2816	13205,7328	13205,7328	578,3619	12627,3710

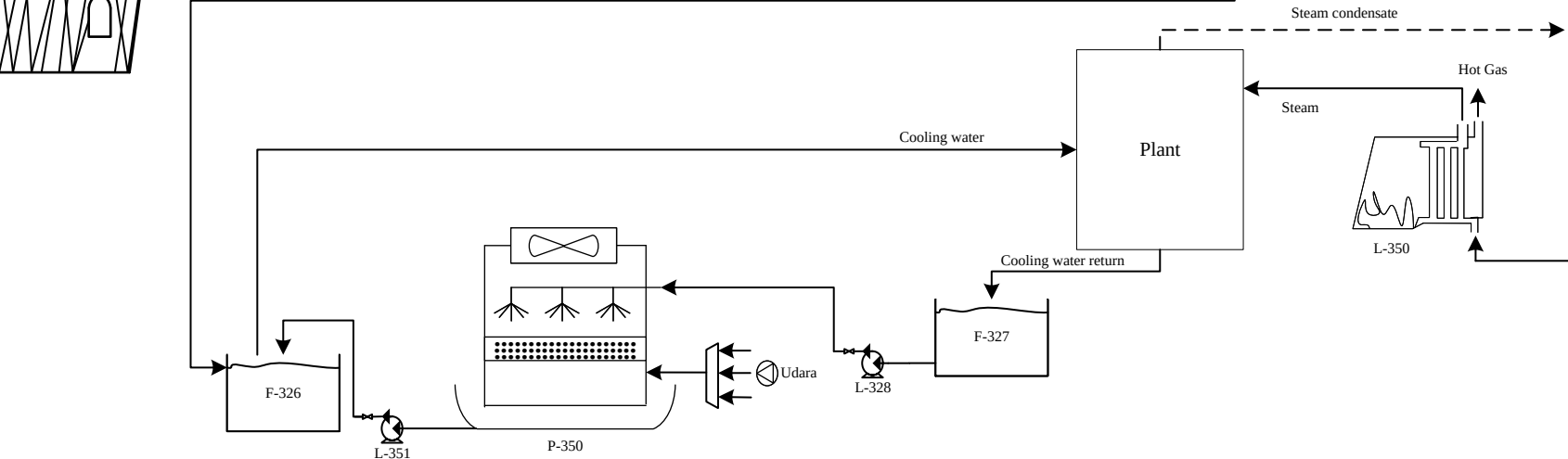
DISUSUN OLEH :
ERISA NUR JANNAH / 22031010107

DOSEN PEMBIMBING : Dr. T. Ir. Susilowati, M.T.

FLOWSHEET PRA RANCANGAN PABRIK METHANOL DARI NATURAL GAS MELALUI PROSES LURGI
DENGAN KAPASITAS 100.000 TON/TAHUN



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No.	Nama Alat	Kode Alat
1	Bak penampung air sungai	F-110
2	Pompa-1	L-111
3	Pompa-2	L-112
4	Tangki koagulasi	M-210
5	Tangki flokulasi	M-220
6	Pompa-3	L-221
7	Clarifier	H-310
8	Bak penampung flok	F-311
9	Bak penampung air clarifier	F-312
10	Pompa-4	L-313
11	Sand filter-1	H-320
12	Sand filter-2	H-320
13	Penampung air sand filter	F-321
14	Pompa-5	L-322
15	Pompa-6	L-323
16	Pompa-7	L-324
17	Bak air sanitasi	F-325
18	Bak air pendingin	F-326
19	Bak air bekas pendingin	F-327
20	Pompa-8	L-328
21	Tangki kation exchanger	H-330
22	Pompa-9	L-331
23	Tangki anion exchanger	H-340
24	Bak Air Demineralisasi	F-341
25	Pompa-10	L-342
26	Cooling tower	P-350
27	Pompa-11	L-351
28	Boiler	E-350

DISUSUN OLEH :
ERISA NUR JANNAH / 22031010107

**FLOWSHEET UNIT PENGOLAHAN AIR
PRA RANCANGAN PABRIK METHANOL DARI
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