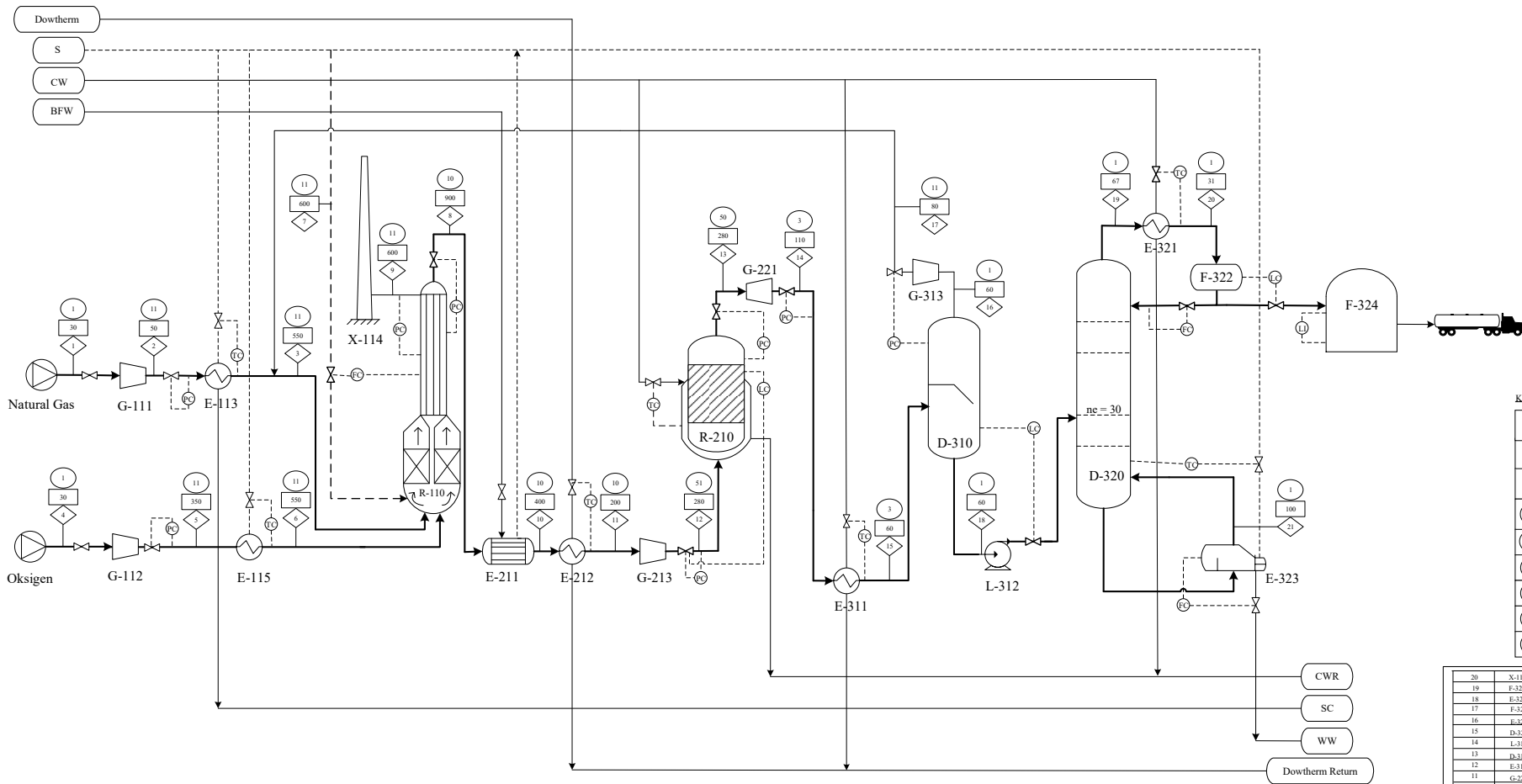


FLOWSHEET PENGEMBANGAN PABRIK METHANOL DARI NATURAL GAS DAN OKSIGEN MENGUNAKAN PROSES HALDOR TOPSOE DENGAN KAPASITAS 70.000 TON/TAHUN



KETERANGAN:

	Temperatur ; °C
	Tekanan ; atm
	Aliran Massa
	Boiling Feed Water
	Steam
	Steam Condensate
	Cooling Water
	Cooling Water Return
	Waste Water

Senyawa	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	
CH ₄ (g)	4.334.2778	4.334.2778	4.334.2778					8.6772		8.6772	8.6772	8.6772	8.6772	8.6772	8.6772	8.6772	8.6772					
C ₂ H ₆ (g)	33.1266	33.1266	33.1266					0.6692		0.6692	0.6692	0.6692	0.6692	0.6692	0.6692	0.6692	0.6692					
C ₃ H ₈ (g)	2.2342	2.2342	2.2342					1.2798		1.2798	1.2798	1.2798	1.2798	1.2798	1.2798	1.2798	1.2798					
N-C ₄ H ₁₀ (g)	84.3129	84.3129	84.3129					0.0758		0.0758	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758					
i-C ₄ H ₁₀ (g)	10.6227	10.6227	10.6227					0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
CO ₂ (g)	14.1398	14.1398	14.1398					7.883.8877		7.883.8877	7.883.8877	7.883.8877	166.1809	166.1809	166.1809	166.1809	166.1809					
CO ₂ (g)								21.9997		21.9997	21.9997	21.9997	0.2860	0.2860	0.2860	0.2860	0.2860					
O ₂ (g)				1.288.5691	1.288.5691	1.288.5691																
H ₂ (g)										1.900.2549	1.900.2549	1.900.2549	1.900.2549	794.4445	794.4445	794.4445	794.4445					
H ₂ O(g)										4.559.9690	989.1132	63.3427	989.1132	989.1132	989.1132	989.1132	989.1132			1.0080	1.0080	1.006.9643
CH ₃ OH(g)																						
H ₂ O(l)																						
CH ₃ OH(l)																						
TOTAL	4.478.7140	4.478.7140	4.478.7140	1.288.5691	1.288.5691	1.288.5691	4.559.9690	10.806.1721	209.0723	10.806.1721	10.806.1721	10.806.1721	10.806.1721	10.806.1721	10.806.1721	10.806.1721	971.8280	971.8280	9.834.3441	8.818.5326	8.818.5326	1.015.8115

20	X-114	Van Stank	
19	F-324	Tangki Penyimpanan Methanol	
18	E-323	Reboiler	
17	F-322	Akumulator	
16	E-321	Kondensator	
15	D-320	Distilasi	
14	L-312	Pompa 1	
13	D-310	Flash Drum	
12	E-311	Kondensator Methanol	
11	G-221	Expander	
10	R-210	Reaktor Methanol	
9	G-213	Kompresor Syngas	
8	E-312	Cooler	
7	E-211	Waste Heat Boiler	
6	R-110	Reformer	
5	E-115	Heater Oksigen	
4	G-313	Kompresor Flash Drum	
3	E-113	Heater Natural Gas 1	
2	G-112	Kompresor Oksigen	
1	G-111	Kompresor Natural Gas	
NO	KODE	NAMA ALAT	
Doen Pembimbing I	: Drlr. Sintha Senyasa Sani, MT	Mengetahui:	
Doen Pembimbing II	: Ika Nawang Pujiwati, S.T., M.T.	1. _____	2. _____
Digambar Oleh	: Teodora Mery Meriba Vica Juliana Bb. Lumbanraja	(2201101044)	
FLOWSHEET PRARANCANGAN PABRIK METHANOL DARI GAS ALAM DAN OKSIGEN DENGAN PROSES HALDOR TOPSOE			
PROGRAM STUDI TEKNIK KIMIA FAKULTAS TEKNIK DAN SAINS UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN" JAWA TIMUR 2026			