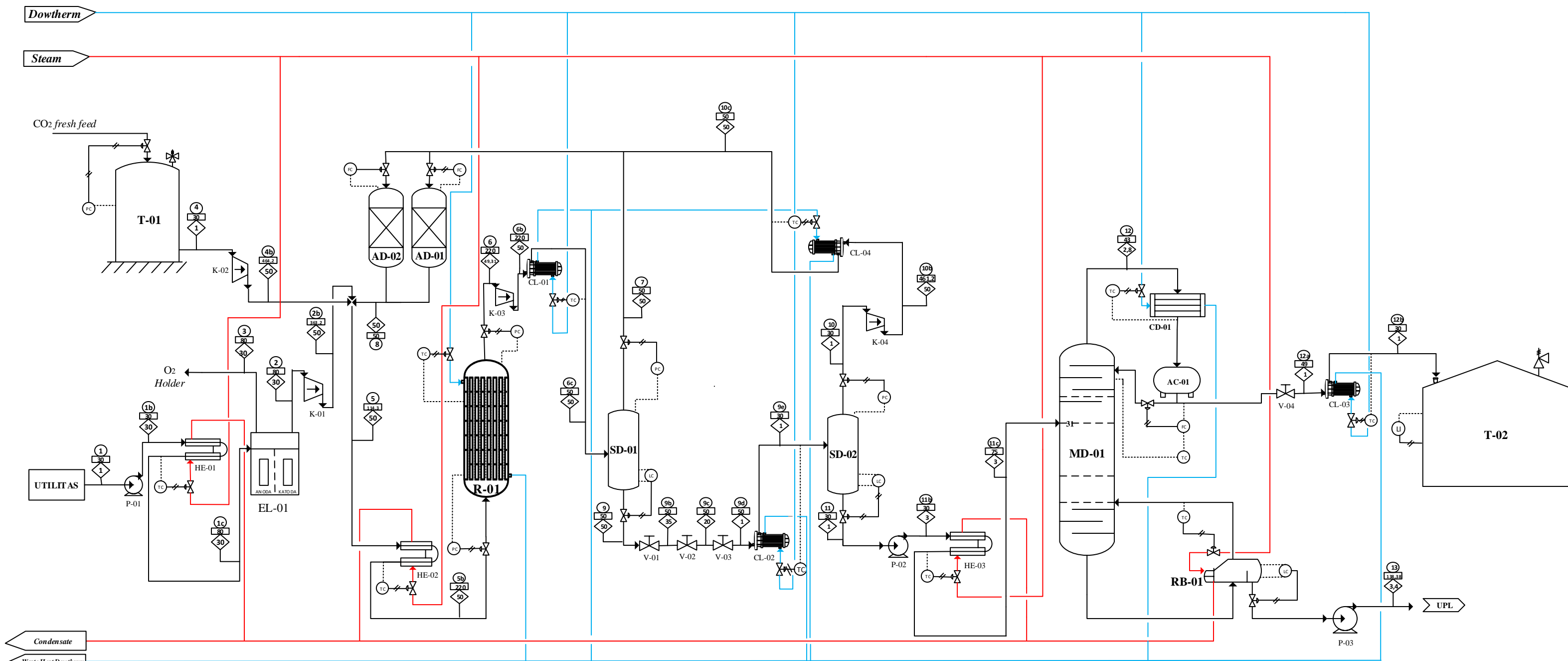


PROCESS ENGINEERING FLOW DIAGRAM PRA PERANCANGAN PABRIK METANOL DARI CO2 DAN H2 KAPASITAS 55.000 TON/TAHUN



Komponen	Arus (kg/jam)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
CO2	0	0	0	10.451,215	20.922,004	10.712,066	8.681,793	10.470,790	2.030,273	1.788,996	241,277	241,277	0
H2	0	1.339,358	0	0	2.853,001	1.513,642	1.513,642	1.513,642	0	0	0	0	0
CH3OH	0	0	0	0	0	7.002,161	148,666	0	6.853,495	149,814	6.703,681	6.702,340	1,341
H2O	12.054,244	0	0	0	0	4.176,793	20,074	0	4.156,719	18,079	4.138,641	0,828	4.137,813
CO	0	0	0	0	0	370,342	370,333	0	0,009	0,009	0	0	0
O2	0	0	10.714,866	0	0	0	0,000	0	0	0	0	0	0
Total	12.054,244	1.339,358	10.714,866	10.451,215	23.775,005	23.775,005	10.734,508	10.195,436	13.040,496	1.956,898	11.083,598	6.944,444	4.139,154

T-01	K-02	P-01	HE-01	EL-01	K-01	HE-02	R-01	K-03	CL-01	SD-01	AD-01	AD-02	V-01	V-02
CO ₂ Storage	CO ₂ Compressor	Pump 1 atm to 30 atm	Water Heater	Electrolyzer	Hydrogen Compressor	Feed Heater	Fixedbed Reactor	Reactor Product Compressor	Cooler	High Pressure Sep Drum	Adsorption of Gas Fluid	Adsorption of Gas Fluid	Expansion Valve	Expansion Valve
V-03	CL-02	SD-02	CL-04	K-04	P-02	HE-03	MD-01	CD-01	AC-01	V-04	CL-03	RB-01	P-02	T-02
Expansion Valve	Cooler	Low Pressure Sep Drum	Cooler	Compressor	Pump 1 atm to 30atm	Methanol Heater	Distillation Tower	Condenser	Accumulator	Expansion Valve	Methanol Cooler	Reboiler	Flow Pump	Methanol Storage

KETERANGAN ALAT

AC : Accumulator
 AD : Adsorber
 CD : Kondensor
 EL : Electrolyzer
 HE : Heat Exchanger
 K : Kompresor
 MD : Menara Distilasi
 R : Reaktor
 SD : Separator
 T : Tangki Penyimpanan
 V : Expansion Valve

KETERANGAN INSTRUMEN

FC : Flow Controller
 LC : Level Controller
 PC : Pressure Controller
 TC : Temperature Controller
 LI : Level Indicator

KETERANGAN SIMBOL

○ : Nomor Arus
 ◇ : Tekanan, atm
 □ : Suhu, °C
 ⊗ : Control Valve
 + : Arus Sinyal Pneumatic
 - - : Arus Sinyal Listrik
 → : Arus Proses
 → : Arus Dowtherm, Process Water, Steam



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**PROCESS ENGINEERING FLOW DIAGRAM
PRA PERANCANGAN PABRIK METANOL DARI KARBON DIOKSIDA
DAN HIDROGEN DENGAN KAPASITAS 55.000 TON/TAHUN**

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