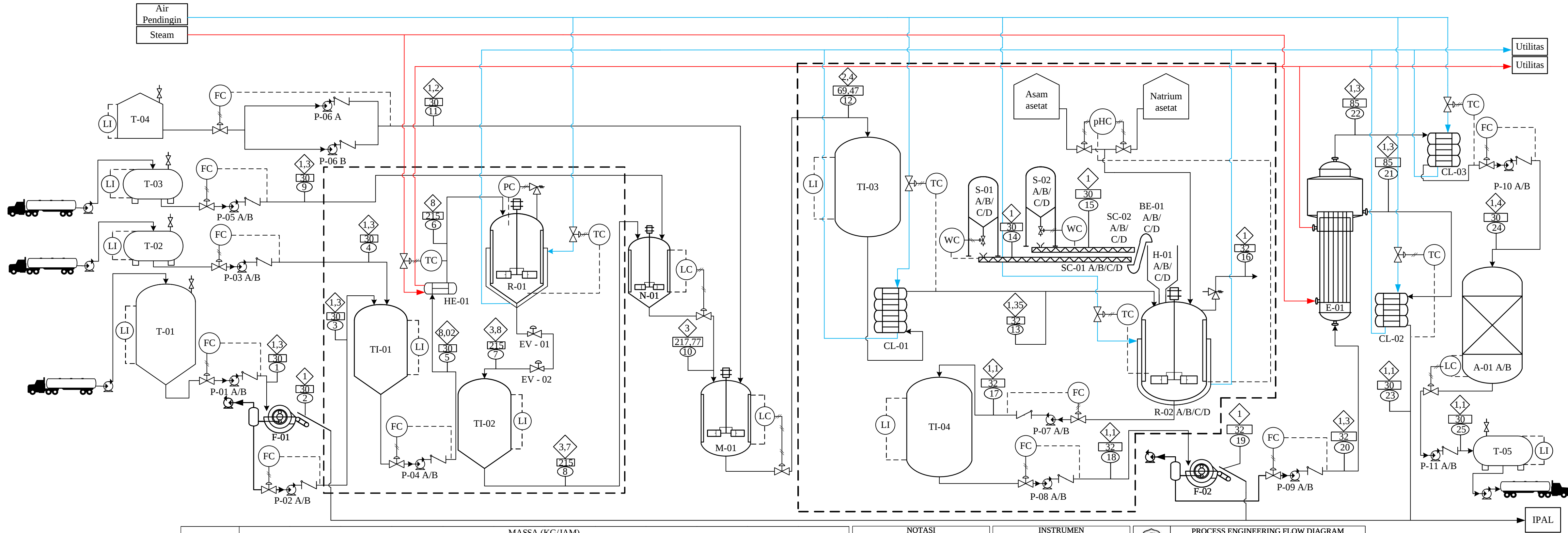


PROCESS ENGINEERING FLOW DIAGRAM
PRARANCANGAN PABRIK BIOETANOL DARI TETES TEBU DENGAN KAPASITAS 24.000 TON/TAHUN



SENYAWA	MASSA (KG/JAM)											
	1	2	3	4	5	6	7	8	9	10	11	12
C6H12O6 (G)	3.264,70	1.142,64	2.122,05		2.122,05	2.122,05	6.031,10	6.031,10		6.031,10		6.031,10
C6H12O6 (F)	4.197,47	1.469,11	2.728,35		2.728,35	2.728,35	6.637,40	6.637,40		6.637,40		6.637,40
C12H22O11	16.323,48	5.713,22	10.610,26		10.610,26	10.610,26	3.183,08	3.183,08		3.183,08		3.183,08
H2O	9.327,70	3.264,70	6.063,01	1,08	6.064,09	6.064,09	5.673,18	5.673,18	19,49	5.712,16	39.579,00	45.291,16
Abu	5.596,62	5.596,62										
NaOH												
Na2SO4												
Yeast												
(NH4)2.SO4												
CO2												
C2H5OH												

SENYAWA	MASSA (KG/JAM)													
	13	14	15	16	17	18	19	20	21	22	23	24	25	
C6H12O6 (G)	6.031,10				603,11	603,11	211,09	392,02	392,02		392,02			
C6H12O6 (F)	6.637,40				663,74	663,74	232,31	431,43	431,43		431,43			
C12H22O11	3.183,08				3.183,08	3.183,08	1.114,08	2.069,00	2.069,00		2.069,00			
H2O	45.291,16				45.291,16	45.291,16	15.851,91	29.439,25	29.300,78	138,48	29.300,78	138,48	15,23	
Abu														
Ns														
H2SO4														
NaOH														
Na2SO4	76,87				76,87	76,87	26,90	49,97	49,97		49,97			
Yeast		1.900,27					1.924,98							
(NH4)2.SO4			24,70											
CO2				5.574,14										
C2H5OH					5.827,51	5.827,51	2.039,63	3.787,88	757,58	3.030,30	757,58	3.030,30	3.030,30	

NOTASI	
—	: ALIRAN PROSES
—	: ALIRAN STEAM
—	: ALIRAN PENDINGIN
—	: ELECTRIC CONNECTION
—	: PROSES BATCH
◇	: TEKANAN, ATM
□	: SUHU, CELCIUS
○	: NOMOR ARUS
⊗	: CONTROL VALVE
⊕	: VENTING
⊖	: PRESSURE RELIEF VALVE
⊕	: EXPANSION VALVE
⊖	: CHECK VALVE

INSTRUMEN	
LI	: LEVEL INDICATOR
LC	: LEVEL CONTROLLER
FC	: FLOW CONTROLLER
TC	: TEMPERATURE CONTROLLER
PI	: PRESSURE INDICATOR
WC	: WEIGHT CONTROLLER
pHC	: pH CONTROLLER
KETERANGAN ALAT	
T	: TANGKI PENYIMPANAN
TI	: TANGKI INTERMEDIAT
S	: SILO
N	: NETRALIZER
M	: MIXER
F	: ROTARY DRUM VACUUM FILTER
SC	: SCREW CONVEYOR
BE	: BUCKET ELEVATOR
R	: REAKTOR
E	: EVAPORATOR
A	: ADSORBER
HE	: HEAT EXCHANGER
CD	: CONDENSOR
EV	: EXPANSION VALVE
P	: POMPA

	PROCESS ENGINEERING FLOW DIAGRAM PRARANCANGAN PABRIK BIOETANOL DARI TETES TEBU DENGAN KAPASITAS 24.000 TON/ TAHUN	
	Dikerjakan Oleh : Gintra Ari Wardhani (210606002) Nugro Asmoro (210606005) Mochammad Renaldi Aprilian (210606014)	
	Dosen Pembimbing : Alviani Hesthi Permata Ningtyas, S.T., M.Sc. Benny Arif Pambudiarto, S.T., M.Eng.	
	PROGRAM STUDI TEKNIK KIMIA FAKULTAS TEKNIK UNIVERSITAS MUHAMMADIYAH GRESIK 2025	