

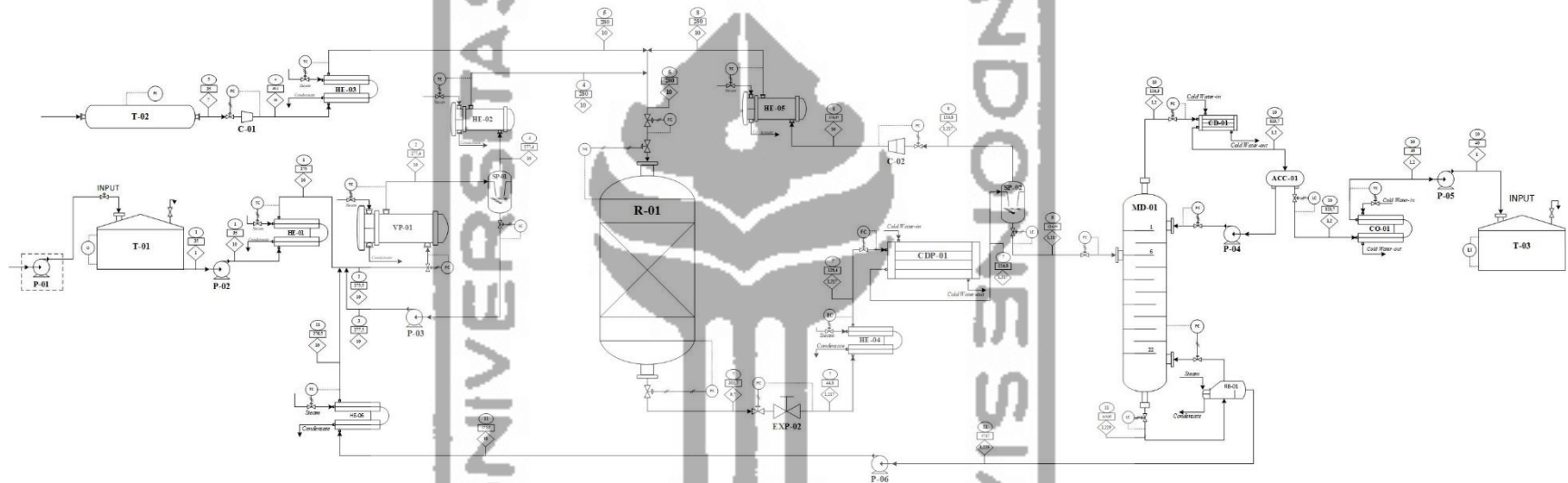


**LAMPIRAN**

**B**

لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

*PROCESS ENGINEERING FLOW DIAGRAM*  
**PRARANCANGAN PABRIK N-BUTANOL DENGAN PROSES**  
**HIDROGENASI N-BUTIL BUTIRAT KAPASITAS 40.000 TON/TAHUN**



**KETERANGAN ALAT**

- T : TANGKI PENYIMPANAN
- HE : HEATER
- R : REAKTOR
- CO : COOLER
- VP : VAPORIZER
- MD : MENARA DISTILASI
- RB : REBOLER
- CD : CONDENSER
- CDP : CONDENSER PARSIAL
- ACC : ACCUMULATOR
- P : POMPA
- EXP : EXPANDER VALVE
- SP : SEPARATOR
- C : KOMPRESOR

KOMPONEN	ARUS (Kg/Jam)										
	1	2	3	4	5	6	7	8	9	10	11
C <sub>4</sub> H <sub>9</sub> OH	0,0000	8,1772	4,3628	6,5144	0,0000	8,5992	5050,2751	1,2185	5048,5966	5041,7722	6,6145
C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	4954,9688	6538,8335	10893,0056	5449,0279	0,0000	5449,0854	544,9085	0,0375	544,8510	50,7506	494,0637
H <sub>2</sub> O	1,3649	1,6379	0,2730	1,3649	0,0000	1,3680	0,1365	0,0001	0,1364	0,1364	0,0000
H <sub>2</sub>	0,0000	0,0000	0,0000	0,0000	136,5001	1137,5011	1001,0010	1001,0010	0,0000	0,0000	0,0000
<b>TOTAL</b>	<b>4956,3337</b>	<b>6548,6486</b>	<b>10914,414</b>	<b>5457,2072</b>	<b>136,5001</b>	<b>6596,5907</b>	<b>6596,5511</b>	<b>1002,9771</b>	<b>5593,5740</b>	<b>5092,6992</b>	<b>500,8782</b>

- KETERANGAN SIMBOL**
- : Nomor Arus
  - : Arus gas, air
  - : Suhu, °C
  - : Control Valve
  - : Arus Sinyal Pneumatic
  - : Arus Sinyal Listrik
  - : Arus Proses
  - : Arus Steam
  - : Arus Cold Water

- KETERANGAN INSTRUMEN**
- TC : TEMPERATURE CONTROLLER
  - TIC : TEMPERATURE INDICATOR CONTROLLER
  - FC : FLOW CONTROLLER
  - LI : LEVEL INDICATOR
  - LC : LEVEL CONTROLLER
  - PI : PRESSURE INDICATOR
  - PC : PRESSURE CONTROLLER

**JURUSAN TEKNIK KIMIA**  
**FAKULTAS TEKNOLOGI INDUSTRI**  
**UNIVERSITAS ISLAM INDONESIA**  
**YOGYAKARTA**

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 HIDROGENASI N-BUTIL BUTIRAT DENGAN PROSES  
 40.000 TON/TAHUN

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Gambar *PROCESS ENGINEERING FLOW DIAGRAM*