

BAB V

NERACA PANAS

Kapasitas Produksi	: 87.000 Ton/Tahun
Operasi Pabrik	: 300 Hari/Tahun
Basis	: 1 Jam Operasi
Satuan	: Kilo Joule (kJ)
Temperatur Referensi	: 25 ⁰ C

5.1 *Cooler (CO-01)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₁	221.415,6370	-
Q ₂	-	-369.071,8002
Q _{a in}	80.521,0142	-
Q _{a out}	-	671.008,4514
Total	301.936,6512	301.936,6512

5.2 *Cooler (C-02)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₃	13.437,7198	-
Q ₄	-	-22.175,6908
Q _{a in}	4.856,3742	-
Q _{a out}	-	40.469,7848
Total	18.294,0940	18.294,0940

5.3 *Reactor (R-01)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₅	885.975,9036	-
Q _{a-in}	68.300,0776	-
Q ₆	-	410.022,8047
Q _{a-out}	-	569.167,3137
Q _{reaksi}	-	-24.914,1371

Total	954.275,9813	954.275,9813
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5.4 *Centrifuge (CF-01)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₇	409.454,8708	-
Q ₈	-	263.734,7072
Q ₉	-	145.720,1636
Total	409.454,8708	409.454,8708

5.5 *Cooler (C-03)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₁₀	-199.055,3329	-
Q ₁₁	-	-23.841,9815
Q _{a in}	23.892,7297	-
Q _{a out}	-	199.106,0811
Total	-175.162.6031	175.264,0996

5.6 *Crystallizer (CR-01)*

Komponen	Input (kJ/jam)	Output (Kj/jam)
Q ₁₂	267.611,4190	-
Q ₁₃	-	-206.606,6196
Q _{crystallization}	-445.923,2651	-
Q _{serap}	-	28.294,7735
Total	-178.311,8461	-178.311,8461