ABSTRACT

PRADESIGN OF ETHYL CHLORIDE PLANT FROM HCl AND ETHYLENE CAPACITY 60.000 TONS/YEAR (Design Distillation (DC-301))

By
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A plant to produce ethyl chloride from ethylene and HCl is planned to be located at Cilegon, Banten. The plant is established by considering availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Capacity of the plant is 60,000 tons/year operating 24 hour/day and 330 working days/ year. The plant required 8,422,6769 kg/hr HCl and ethylene.

Quantity of labor is around 164 people. The plant is managed as a Limited Liability Company (PT), which is headed by a Director who is assisted by a Director of Production and Director of Finance. The company is organized in the form of line and staff structure. From analysis of the plant economy is obtained:

- Fixed Capital Investment (FCI) = Rp. 591,411,318,774,-
- Working Capital Investment (WCI) = Rp. 107,594,539,498,-
- Total Capital Investment (TCI) = Rp. 699,005,858,273 ,-  
- Break Even Point (BEP) = 44,16%
- Shut Down Point (SDP) = 29,69%
- Pay Out Time after Taxes (POT) \(_a\) = 2,44 years
- Return on Investment after Taxes (ROI) \(_a\) = 25,51%

By considering above the summary, it is suitable study further the maltose plant since plant is profitable and has good prospects.