

ABSTRACT

MANUFACTURE OF ETHYLE CHLORIDE FROM ETHYLENE AND HYDROGEN CHLORIDE CAPACITY 60.000 TONS/YEAR (Design Reactor -201 (RE-201))

By

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Ethyl chloride plant produced by reacting ethylene and hydrogen chloride is planned to be in industrial factory in the region of Cilegon in Banten Province. Plant will be established by considering the availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Production capacity is planned 60,000 tons/year, with operating time of 24 hours/day and 330 working days in a year. The raw materials used are much ethylene 3.656,355 kg/hr and hydrogen chloride as 4.766,32 kg/hr.

Provision of utility plant needs a treatment system and water supply, steam supply systems, instrument air supply systems, and power generation systems.

Labor needed as many as 164 people with a business entity form Limited Liability Company (PT) which is headed by a Director who is assisted by the Director of Production and Director of Finance with line and staff organizational structure.

From the economic analysis is obtained:

<i>Fixed Capital Investment</i>	(FCI)	= Rp 591.411.318.775
<i>Working Capital Investment</i>	(WCI)	= Rp 107.594.539.498
<i>Total Capital Investment</i>	(TCI)	= Rp 699.005.858.273
<i>Break Even Point</i>	(BEP)	= 44,16 %
<i>Shut Down Point</i>	(SDP)	= 29,69 %
<i>Pay Out Time before taxes</i>	(POT) _b	= 2,05 years
<i>Pay Out Time after taxes</i>	(POT) _a	= 2,44 years
<i>Return on Investment before taxes</i>	(ROI) _b	= 31,8 %
<i>Return on Investment after taxes</i>	(ROI) _a	= 25,51 %
<i>Discounted cash flow</i>	(DCF)	= 41 %

Consider the summary above, it is proper establishment of ethyle chloride plant to studied further, because the plant is profitable and has good prospects.