

ABSTRACT

MANUFACTURE OF ACROLEIN FROM OXYDATION OF PROPYLENE CAPACITY 60,000 TONS/YEAR (Design Heater -102 (HE-102))

By

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Acrolein plant produced by reacting propylene and oxygen was plan to be in industrial plant in the region of Cilegon in Banten Province. Plant was established by considering the availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Plant's 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 propylene 6,699.0403 kg / hr and oxygen as 5,596.5000 kg / hr.

Provision of utility plant needs a treatment system and water supply, steam supply systems, instrument air and oxygen supply systems, and power generation systems. Labor needed as many as 155 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 196.571.625.298
<i>Working Capital Investment</i>	(WCI)	= Rp 34.689.110.346
<i>Total Capital Investment</i>	(TCI)	= Rp 231.260.735.645
<i>Break Even Point</i>	(BEP)	= 44,05 %
<i>Shut Down Point</i>	(SDP)	= 35,45 %
<i>Pay Out Time before taxes</i>	(POT) _b	= 1,10 years
<i>Pay Out Time after taxes</i>	(POT) _a	= 1,33 years
<i>Return on Investment before taxes</i>	(ROI) _b	= 69,10 %
<i>Return on Investment after taxes</i>	(ROI) _a	= 55,28 %
<i>Discounted cash flow</i>	(DCF)	= 63,38 %

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