

ABSTRAK

PRARANCANGAN PABRIK ASETAT ANHIDRID DARI METIL ASETAT DAN KARBON MONOKSIDA KAPASITAS 20.000 TON/TAHUN

Oleh

MUHAMAD FATH WARGANEGARA

Pabrik Asetat Anhidrid berbahan baku metil asetat dan karbon monoksida, akan didirikan di Bontang, Kalimantan Timur. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan, dan kondisi lingkungan.

Pabrik direncanakan memproduksi asetat anhidrid sebanyak 20.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah metil asetat sebanyak 2.261,7838 kg/jam dan karbon monoksida sebanyak 770,224 kg/jam.

Penyediaan kebutuhan utilitas pabrik asetat anhidrid berupa : pengadaan air, pengadaan *steam*, pengadaan listrik, dan kebutuhan bahan bakar.

Bentuk perusahaan adalah Perseroan Terbatas (PT) menggunakan struktur organisasi *line* dan *staff* dengan jumlah karyawan sebanyak 129 orang.

Dari analisis ekonomi diperoleh :

<i>Fixed Capital Investment</i>	(FCI)	= Rp. 205.761.232.753
<i>Working Capital Investment</i>	(WCI)	= Rp. 36.310.805.780
<i>Total Capital Investment</i>	(TCI)	= Rp. 242.072.038.533
<i>Break Even Point</i>	(BEP)	= 38,78 %
<i>Shut Down Point</i>	(SDP)	= 23,01 %
<i>Pay Out Time before taxes</i>	(POT) _b	= 1,79 years
<i>Pay Out Time after taxes</i>	(POT) _a	= 2,15 years
<i>Return on Investment before taxes</i>	(ROI) _b	= 38,90 %
<i>Return on Investment after taxes</i>	(ROI) _a	= 31,12 %
<i>Discounted cash flow</i>	(DCF)	= 56,36 %

Mempertimbangkan paparan di atas, sudah selayaknya pendirian pabrik asetat anhidrid ini dikaji lebih lanjut karena merupakan pabrik yang menguntungkan dan mempunyai masa depan yang baik.

ABSTRACT

MANUFACTURE OF ACETIC ANHYDRIDE FROM METHYL ACETIC AND CARBON MONOXIDE CAPACITY 20.000 TONS/YEAR (Design Heater 101 (HE-101))

By

MUHAMAD FATH WARGANEGARA

Acetic Anhydride plant produced by reacting methyl acetic and carbon monoxide was plan to be in industrial plant in the region of Bontang in East Kalimantan 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 20,000 tons/year, with operating time of 24 hours/day and 330 working days in a year. The raw materials used are much methyl acetic 2.261,7838 kg/hr and carbon monoxide as 770,224 kg/hr.

Provision of utility plant needs a treatment system and water supply, steam supply systems, and power generation systems. Labor needed as many as 129 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 :

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