ABSTRAK

PRARANCANGAN PABRIK ETIL KLORIDA DARI ETILEN DAN HIDROGEN KLORIDA DENGAN KAPASITAS 37.000 TON/TAHUN
(Tugas Khusus Perancangan Reaktor (R-301))

Oleh

ATIKA PUTRI KARINA

Etil klorida merupakan salah satu produk kimia yang digunakan untuk produksi Etil selulosa, pelarut, pendingin, amastesi topical, industry pewarna, obat-obatan serta sebagai obat pengurang rasa sakit pada luka bakar dan sengatan serangga. Etil klorida diproduksi dengan proses hidroklorinasi etilen dengan bahan baku Etilen dan Hidrogen klorida.

Kapasitas produksi pabrik direncanakan sebesar 37.000 ton/tahun dengan 330 hari kerja dalam 1 tahun dan didirikan di Kota Cilegon, Provinsi Banten. Bentuk perusahaan adalah badan usaha Perseroan Terbatas (PT) yang dipimpin oleh seorang Direktur Utama yang dibantu oleh Direktur Teknik dan Produksi serta Direktur Keuangan dan Pemasaran,

Analisa kelayakan Perancangan Pabrik Etil Klorida sebagai berikut:

Fixed Capital Investment (FCI)	= Rp301.109.807.523,-
Working Capital Investment (WCI)	= Rp75.277.451.881,-
Total Capital Investment (TCI)	= Rp376.387.259.403,-
Break Even Point (BEP)	= 29,93%
Pay Out Time after Taxes (POT)a	= 2,40 tahun
Return on Investment before Taxes (ROI)b	= 34%
Return on Investment after Taxes (ROI)a	= 29%
Discounted Cash Flow (DCF)	= 33%
Shut Down Point (SDP)	= 16,78%

Berdasarkan pertimbangan diatas, sudah selayaknya pendirian pabrik Etil Klorida ini dikaji lebih lanjut, karena merupakan pabrik yang menguntungkan dan mempunyai prospek yang baik.

Kata kunci: Etil klorida, Etilen, Hidrogen klorida, Hidroklorinasi, Ekonomi.

ABSTRACT

MANUFACTURING OF ETHYL CHLORIDE FROM ETHYLENE AND HYDROGEN CHLORIDE WITH CAPACITY 37.000 TONS/YEAR (DESIGN OF REACTOR (R-301))

By

ATIKA PUTRI KARINA

Ethyl chloride is a chemical product used for the production of Ethyl cellulose, solvent, coolant, topical anesthetic, dye industry, medicine and as a pain reliever for burns and insect stings. Ethyl chloride is produced by Ethylene hydrochlorination process with Ethylene and Hydrogen chloride as raw materials.

The factory's production capacity is planned at 37.000 tons/year with 330 working days in 1 year and will be established in Cilegon City, Banten Province. The form of the company is a Limited Liability Company (PT) which is head by a Director who assisted by the Director of Engineering and Production also Director of Finance and Marketing

An economic analysis of preliminary plant design of Ethyl chloride are:

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Based on the above considerations, the establishment of the Ethly Chloride factory should be studied further, because it is a profitable factory and has a good prospect.

Key words: Ethyl chloride, Ethylene, Hydrogen cchloride, Hydrochlorination, Economics.