

ABSTRAK

PRARANCANGAN PABRIK METIL KLORIDA DARI METANOL DAN ASAM KLORIDA DENGAN KAPASITAS 40.000 TO/TAHUN (Perancangan Menara Distilasi (DC-301))

Oleh

INTAN AYU SARI

Pabrik Metil Klorida berbahan baku Metanol dan Asam Klorida di dirikan di Kawasan Industri, Cilegon – Banten. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan dan kondisi lingkungan.

Pabrik direncanakan memproduksi Metil Klorida sebanyak 40.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah Metanol sebanyak 4.081,6244 kg/jam dan HCl sebanyak 4.655,6028 kg/jam

Penyediaan kebutuhan utilitas pabrik Metil Klorida berupa : pengadaan air, pengadaan *steam*, pengadaan listrik, kebutuhan bahan bakar, dan pengadaan udara kering.

Bentuk perusahaan adalah Perseroan Terbatas (PT) menggunakan struktur organisasi *line* dan *staff* dengan jumlah karyawan sebanyak 177 orang.

Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment</i>	(FCI)	= Rp 458.454.487.219,1670
<i>Working Capital Investment</i>	(WCI)	= Rp 86,373,781,991.1559
<i>Total Capital Investment</i>	(TCI)	= Rp 539,836,137,444.7240
<i>Break Even Point</i>	(BEP)	= 32,95 %
<i>Shut Down Point</i>	(SDP)	= 16,05%
<i>Pay Out Time before taxes</i>	(POT) _b	= 1,93 tahun
<i>Pay Out Time after taxes</i>	(POT) _a	= 2,29 tahun
<i>Return on Investment before taxes</i>	(ROI) _b	= 35,29%
<i>Return on Investment after taxes</i>	(ROI) _a	= 28,24%
<i>Discounted cash flow</i>	(DCF)	= 19,32 %

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

ABSTRACT

PREDESIGN OF METHYL CHLORIDE FACTORY FROM METHANOL AND CHLORIDE ACID WITH A CAPACITY OF 40,000 TO / YEAR (Distillation Column Design (DC-301))

By

INTAN AYU SARI

Factory Methyl chloride made from methanol and hydrochloric acid was established in the Industrial Estate, Cilegon - Banten. This factory was established by considering the availability of raw materials, adequate transportation facilities, easily available labor and environmental conditions.

The factory is planned to produce methyl chloride as much as 40,000 tons / year, with an operating time of 24 hours / day, 330 days / year. The raw material used is methanol as much 4,081,6244kg / hour and HCl as much as 4,655.6028 kg / hour

Provision of the utility needs of the Methyl Chloride plant in the form of: water supply, steam procurement, electricity supply, fuel needs, and dry air procurement.

The form of the company is a Limited Liability Company (PT) using a line and staff organizational structure with a total of 177 employees.

From the economic analysis, it is obtained:

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<i>Total Capital Investment</i>	(TCI)	= IDR 539,836,137,444.7240
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Considering the explanation above, it is appropriate that the establishment of this Methyl Chloride factory be studied further, because it is a profitable factory and has a good future.