

ABSTRAK

PRARANCANGAN PABRIK METIL AKRILAT DARI ASAM AKRILAT DAN METANOL DENGAN KAPASITAS 60.000 TON/TAHUN

(Perancangan Reaktor (RE-201))

Oleh

DISA ANGGRAINI

Pabrik metil akrilat berbahan baku asam akrilat dan metanol, akan didirikan di Kawasan Industrial Estate Cilegon, Kota 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 akrilat sebanyak 60.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah asam akrilat sebanyak 6331,62 kg/jam dan metanol sebanyak 3658,27 kg/jam.

Jumlah karyawan sebanyak 164 orang dengan bentuk perusahaan adalah Perseroan Terbatas (PT) yang dipimpin oleh seorang direktur. Sistem manajemen perusahaan menggunakan struktur organisasi *line* dan *staff*.

Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment (FCI)</i>	= Rp2.068.461.998.517,-
<i>Working Capital Investment (WCI)</i>	= Rp365.022.705.621,-
<i>Total Capital Investment (TCI)</i>	= Rp2.433.484.704.138,-
<i>Break Even Point (BEP)</i>	= 33%
<i>Shut Down Point (SDP)</i>	= 11%
<i>Pay Out Time after Taxes (POT)_a</i>	= 2,44 tahun
<i>Return on Investment after Taxes (ROI)_a</i>	= 26%
<i>Discounted Cash Flow (DCF)</i>	= 33,12%

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

ABSTRACT

PREDESIGN OF METHYL ACRYLATE PLANT FROM ACRYLIC ACID AND METHANOL WITH CAPACITY 60.000 TONS/YEAR

(Reactor Design (RE-201))

By

DISA ANGGRAINI

A plant to produce methyl acrylate from acrylic acid and methanol, is planned to be located at Krakatau Industrial Estate Cilegon (KIEC), Cilegon City, Banten. The plant is established by considering availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Capacity of the plant is 60.000 tons/year operating 24 hour/day and 330 working days/year. The plant required 6331,62 kg/h of acrylic acid; 3658,27 kg/h of methanol.

Quantity of labor is around 164 people. The plant is managed as a Limited Liability Company (PT), which is headed by a Director. The company is organized in the form of line and staff structure.

From analysis of the plant economy is obtained:

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By considering above the summary, it is suitable study further the methyl acrylate plant since plant is profitable and has good prospect.