

ABSTRAK

PRARANCANGAN PABRIK BENZIL KLORIDA DARI TOLUENA DAN KLORIN KAPASITAS 40.000 TON/TAHUN (Perancangan Reaktor (RE-101))

Oleh

IRAWAN SETIADI

Pabrik benzil klorida berbahan baku toluena dan klorin akan didirikan di Rangkasbitung, Lebak - Banten. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan dan kondisi lingkungan.

Pabrik direncanakan memproduksi benzil klorida sebanyak 40.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah toluena sebanyak 4940.654 kg/jam dan klorin sebanyak 4940.654 kg/jam.

Penyediaan kebutuhan utilitas pabrik Benzil Klorida 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 151 orang.

Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment</i>	(FCI)	= Rp 330.979.441.592,117
<i>Working Capital Investment</i>	(WCI)	= Rp 58.408.136.751,550
<i>Total Capital Investment</i>	(TCI)	= Rp 389.387.578.343,667
<i>Break Even Point</i>	(BEP)	= 11 %
<i>Shut Down Point</i>	(SDP)	= 7 %
<i>Pay Out Time before taxes</i>	(POT) _b	= 0,61 years
<i>Pay Out Time after taxes</i>	(POT) _a	= 0,75 years
<i>Return on Investment before taxes</i>	(ROI) _b	= 131,98 %
<i>Return on Investment after taxes</i>	(ROI) _a	= 105,58 %

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

ABSTRACT

MANUFACTURE OF BENZYL CHLORIDE FROM TOLUENE AND CHLORINE CAPACITY 40.000 TONS/YEAR (Design Reactor (RE-101))

By

IRAWAN SETIADI

Benzyl chloride plant produced by reacting toluene and chlorine is planned to be in industrial factory in the region of Rangkasbitung, Lebak - Banten. Plant will be established by considering the availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Production capacity is planned 40,000 tons/year, with operating time of 24 hours/day and 330 working days in a year. The raw materials used are much Toluene 4940.654 kg/hr and Chlorine as 4940.654kg/hr.

Provision of utility plant needs a treatment system and water supply, steam supply systems, instrument air supply systems, and power generation systems.

Labor needed as many as 151 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 benzyl chloride plant to studied further, because the plant is profitable and has good prospects.