

ABSTRAK

PRARANCANGAN PABRIK MALEIC ANHYDRIDE DARI OKSIDASI N-BUTANA KAPASITAS 20.000 TON/TAHUN Oleh

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Pabrik Maleic Anhydride berbahan baku *n-butana* dan *oksigen*, akan didirikan di Cilacap, Jawa Tengah. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan dan kondisi lingkungan.

Pabrik direncanakan memproduksi Maleic Anhydride sebanyak 20.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah *n-butana* sebanyak 2.116,50 kg/jam dan *Vanadium phosphorus oxide* sebanyak 29.186,5629 kg/jam.

Penyediaan kebutuhan utilitas pabrik Maleic Anhydride berupa: pengadaan air, 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 137 orang.

Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment (FCI)</i>	= Rp 440.396.823.280,-
<i>Working Capital Investment (WCI)</i>	= Rp 77.717.086.461,-
<i>Total Capital Investment (TCI)</i>	= Rp 518.113,909.742,-
<i>Break Even Point (BEP)</i>	= 50,29 %
<i>Pay Out Time before Taxes (POT)_b</i>	= 2,49 tahun
<i>Pay Out Time after Taxes (POT)_a</i>	= 2,93 tahun
<i>Return on Investment before Taxes (ROI)_b</i>	= 25,62 %
<i>Return on Investment after Taxes (ROI)_a</i>	= 20,49 %
<i>Discounted Cash Flow (DCF)</i>	= 16,379%
<i>Shut Down Point (SDP)</i>	= 27,44 %

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

ABSTRACT

MANUFACTURE OF MALEIC ANHYDRIDE FROM N-BUTANA OXYDATION CAPACITY 20.000 TONS/YEAR (Design Reactor -301 (RE-301))

By

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Maleic Anhydride plant produced by reacting benzene dan oxygen was plan to be in industrial plant in the region of Cilacap, in Central Java 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 n-butana 2.116,50 kg / hr and *Vanadium phosphorus oxide* as 29.186,5629 kg / 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 137 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:

<i>Fixed Capital Investment</i> (FCI)	= Rp 440.396.823.280,-
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Consider the summary above, it is proper establishment of Maleic anhydride plant to studied further, because the plant is profitable and has good prospects.