

ABSTRAK

PRARANCANGAN PABRIK METIL OLEAT DARI ASAM OLEAT DAN ASAM SULFAT KAPASITAS 70.000 TON/TAHUN

(Perancangan Raektor (RE-201))

Oleh

DIMAS ALI WIJAYA

Prarancangan pabrik metil oleat dari asam oleat dan asam sulfat dengan kapasitas 70.000 ton/tahun akan didirikan di Kawasan Industri Bontang, Kalimantan Timur di atas tanah seluas 45.000 m².

Metil Oleat dalam industri kimia digunakan sebagai pelumas, bahan tambahan dalam industri agrokimia, kosmetik dan pembuatan deterjen. Bahan baku berupa asam oleat sebanyak 9.284,353 kg/jam diperoleh secara import China dan Asam Sulfat sebanyak 10.535,436 kg/jam diperoleh dari PT. Kaltim Metanol Industri.

Jumlah karyawan sebanyak 166 orang dengan bentuk perusahaan adalah Perseroan Terbatas (PT) menggunakan struktur organisasi *line* dan *staff*. Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment</i> (FCI)	= Rp 3.243.082.091.676
<i>Working Capital Investment</i> (WCI)	= Rp 572.308.604.413
<i>Total Capital Investment</i> (TCI)	= Rp 3.815.390.696.089
<i>Break Even Point</i> (BEP)	= 49,68%
<i>Shut Down Point</i> (SDP)	= 21,56%
<i>Pay Out Time after Taxes</i> (POT) _a	= 3,27 tahun
<i>Return on Investment after Taxes</i> (ROI) _a	= 17,33 %
<i>Discounted cash flow</i>	= 35,01%

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

ABSTRACT

**MANUFACTURING OF METHYL OLEATE PLANT FROM OLEIC ACID
AND SULFURIC ACID CAPACITY 70.000 TONS/YEAR**

(Design Reactor (RE-201))

By

DIMAS ALI WIJAYA

Manufacturing of methyl oleate plant from oleic acid and sulfuric acid with a capacity of 70.000 tons/year will be established in Bontang Industrial Estate, East Kalimantan on a land area of 45.000 m².

Methyl Oleate in the chemical industry is used as a lubricant, additive in the agrochemical industry, cosmetics and detergent manufacturing. Raw materials in the form of oleic acid as much as 9,284.353 kg / hour are obtained by importing China and Sulfuric Acid as much as 10,535.436 kg / hour is obtained from PT Kaltim Methanol Industri.

The number of employees is 166 people with the company form being a Limited Liability Company (PT) using a line and staff organizational structure.

From the economic analysis it is obtained:

<i>Fixed Capital Investment (FCI)</i>	<i>= Rp 3.243.082.091.676</i>
<i>Working Capital Investment (WCI)</i>	<i>= Rp 572.308.604.413</i>
<i>Total Capital Investment (TCI)</i>	<i>= Rp 3.815.390.696.089</i>
<i>Break Even Point (BEP)</i>	<i>= 49,68%</i>
<i>Shut Down Point (SDP)</i>	<i>= 21,56%</i>
<i>Pay Out Time after Taxes (POT)_a</i>	<i>= 3,27 year</i>
<i>Return on Investment after Taxes (ROI)_a</i>	<i>= 17,33 %</i>
<i>Discounted cash flow</i>	<i>= 35,01%</i>

Considering the explanation above, it is appropriate to study the establishment of this methyl oleate plant further, because it is a profitable factory and has a good prospect.