ABSTRAK

PRARANCANGAN PABRIK *POTASSIUM PERCLHORATE* DARI KALIUM KLORIDA DAN AIR KAPASITAS 30.000 TON/TAHUN

REAKTOR ELEKTROLISIS (RE-201)

Oleh

OCTE VIA DEVI

Pabrik *Potassium Perclhorate* berbahan baku kalium klorida dan air, akan didirikan di Bungah duku, Gersik Jawa Timur. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan dan kondisi linkungan.

Pabrik direncanakan memproduksi *potassium perclhorate* sebanyak 30.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah kalium klorida sebanyak 2519,128 kg/jam.

Penyediaan kebutuhan utilitas pabrik *potassium perclhorate* berupa: pengadaan air, pengadaan steam, pengadaan listrik, kebutuhan bahan bakar, dan pengendalian udara kering.

Bentuk perusahaan adalah Perseroan Terbatas (PT) mengunakan struktur organisasi *line* dan *staff* dengan jumlah karyawan sebanyak 198 orang.

Dari analisa ekonomi diperoleh:

Fixed Capital Investment	(FCI)	= Rp 155.846.501.249
Working Capital Investment	(WCI)	= Rp 27.503.232,750
Total Capital Investment	(TCI)	= Rp 183.348.824.999
Break Even Point	(BEP)	= 56,5348%
Shut Dwont Point	(SDP)	= 24,5666%
Pay Out Time before taxes	$(POT)_b$	= 1,33 tahun
Pay Out Time after taxes	$(POT)_a$	= 1,616 tahun
Retrun on Investement before taxes	$(ROI)_b$	= 55,1149%
Retrun on Investement after taxes	$(ROI)_a$	= 44,0919 %
Discounted cash flow	(DCF)	= 44,0919

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

ABSTRACT

PREDESIGN OF POTASSIUM PERCHLORATE FROM POTASSIUM CHLORIDE AND WATER WITH CAPACITY OF 30.000 TONS/YEAR

ELECTROLYSIS REACTOR (RE-201)

By

OCTE VIA DEVI

Potassium Perchlorate Plant use potassium cloride and water as its feedstock, this plant will be build in industrial region of Bungah dukuh in Gresik, East Java. Plant was established by considering the availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Plant's production capacity which planned are 30.000 tons/year, with operating time of 24 hours/day and 330 working days in a year. The raw material which used is potassium chloride as many as 2519,128 kg/hr.

The supply of potassium perchlorate plant's utility such as: water treatment system, steam supply system, electricity supply system, fuel supply system, air supply system and power generation system.

The type of business enity is Limited Liability Company (PT) and use Line and staff as organization system with 198 worker which is headed by a Director who assisted by the Director of Production and Director of Finance.

From the economic analysis, which can be obtained are:

Fixed Capital Investment	(FCI)	= Rp 155.846.501.249
Working Capital Investment	(WCI)	= Rp 27.503.232,750
Total Capital Investment	(TCI)	= Rp 183.348.824.999
Break Even Point	(BEP)	= 56,5348%
Shut Dwont Point	(SDP)	= 24,5666%
Pay Out Time before taxes	$(POT)_b$	= 1,33 years
Pay Out Time after taxes	$(POT)_a$	= 1,616 years
Retrun on Investement before taxes	$(ROI)_b$	= 55,1149%
Retrun on Investement after taxes	$(ROI)_a$	= 44,0919 %
Discounted cash flow	(DCF)	= 44,0919

By considering the summary above, it is better to take proper study of establishment from potassium perchlorate plant, it is because the plant has profitabe and good propects.