ABSTRAK

PRARANCANGAN PABRIK ASAM OKSALAT DIHIDRAT DARI GLUKOSA DAN ASAM NITRAT DENGAN KAPASITAS 10.000 TON/TAHUN

(Perancangan Crystallizer (CR-301))

Oleh

FENTI YUNIARTI

Asam oksalat merupakan zat kimia yang banyak digunakan dalam industri pegolahan logam, industri cat dan industri tekstil. Penyediaan kebutuhan asam oksalat dalam negeri saat ini masih sepenuhnya diperoleh dari kegiatan impor, sehingga pendirian pabrik asam oksalat di Indonesia memiliki prospek yang baik. Pabrik asam oksalat dihidrat akan didirikan di kawasan industri Bukit Indah City (BIC), Kabupaten Purwakarta, Jawa Barat dengan proses oksidasi glukosa dengan asam nitrat menggunakan katalis vanadium pentaoksida. Kapasitas produksi pabrik asam oksalat dihidrat direncanakan sebesar 10.000 ton/tahun dengan 300 hari kerja dalam 1 tahun. Bentuk perusahaan adalah Perseroan Terbatas (PT) dengan jumlah tenaga kerja yang dibutuhkan sebanyak 138 orang dengan struktur organisasi *line* dan *staff*.

Dari analisis ekonomi diperoleh:

Fixed Capital Investment	(FCI)	=	Rp 344.638.572.738
Working Capital Investment	(WCI)	=	Rp 60.818.571.660
Total Capital Investment	(TCI)	=	Rp 405.457.144.397
Break Even Point	(BEP)	=	36%
Shut Down Point	(SDP)	=	22%
Pay Out Time before taxes	$(POT)_b$	=	1,71 tahun
Pay Out Time after taxes	$(POT)_a$	=	2,38 tahun
Return on Investment before taxes	$(ROI)_b$	=	41%
Return on Investment after taxes	$(ROI)_a$	=	27%
Discounted cash flow	(DCF)	=	34,20%

Berdasarkan hasil analisis diatas, maka pendirian pabrik asam oksalat dihidrat ini layak untuk dikaji lebih lanjut karena menguntungkan dari sisi ekonomi dan mempunyai prospek yang baik.

ABSTRACT

MANUFACTURING OF OXALIC ACID DIHYDRATE
FROM GLUCOSE AND NITRIC ACID
WITH CAPACITY 10.000 TONS/YEAR
(Design of Crystallizer (CR-301))

By

FENTI YUNIARTI

Oxalic acid is a chemical substance widely used in the metal processing industry, paint industry and textile industry. Domestic supply of Oxalic Acid is still fully obtained from import, so the opportunity to establish Oxalic Acid Dihydrate plant has good prospects. The factory location is planned to be established in the Bukit Indah City (BIC), Purwakarta, West Java. The production capacity of the Oxalic Acid Dihydrate plant is planned to be 10.000 tons/year with 300 working days in 1 year. The required labors are 138 people with a bussines entity form Limited Liability Company (PT) with a line organizational structure.

From the economic analysis are obtained:

Fixed Capital Investment	(FCI)	=	Rp 344.638.572.738
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Based on the above consideration, the establishment of oxalic acid dihydrate plant should be stuidied further because it is a profitable plant from an economic standpoint and has good prospects.