ABSTRAK

PRARANCANGAN PABRIK ASAM SALISILAT DARI FENOL DAN NATRIUM HIDROKSIDA MENGGUNAKAN METODE KOLBE-SCHMITT DENGAN KAPASITAS 25.000 TON/TAHUN
(Perancangan *Triple Effect Evaporator* EV-301, EV-302, & EV-303)

Oleh
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Pabrik asam salisilat ini berbahan baku fenol dan natrium hidroksida, yang rencananya akan didirikan di Tangerang, Banten. Pabrik ini berdiri dengan pertimbangan ketersediaan bahan baku, tenaga kerja, sarana transportasi yang memadai, perizinan dan kondisi sosial masyarakat sekitar.

Pabrik ini direncanakan dapat memproduksi kristal asam salisilat sebanyak 25.000 ton/tahun, dengan waktu operasi selama 24 jam/hari selama 330 hari/tahun. Banyaknya bahan baku yang digunakan adalah fenol sebanyak 2.943,7514 kg/jam dan natrium hidroksida sebanyak 1.251,16 kg/jam. Penyediaan kebutuhan utilitas pabrik asam salisilat ini berupa unit penyedia dan pengolahan air, unit penyedia *steam*, dan unit penyedia udara instrumen.

Jumlah karyawan sebanyak 164 orang dengan bentuk perusahaan adalah perseroan terbatas (PT) dengan struktur organisasi *line and staff*.
Dari analisis ekonomi, maka diperoleh hasil sebagai berikut:

Fixed Capital Investment (FCI)	= Rp. 760.689.824.938
Working Capital Investment (WCI)	= Rp. 134.239.380.871
Total Capital Investment (TCI)	= Rp. 894.929.205.809
Break Even Point (BEP)	= 47,09 %
Shut Down Point (SDP)	= 28,57 %
Pay Out Time afterTaxes $(POT)_a$	= 2,7 tahun
Return of Investment after Taxes $(ROI)_a$	= 22,97%
Interest Rate of Return (IRR)	= 26%
Annual Net Profit (Pa)	= Rp. 205.567.312.063/tahun

Kata kunci: pabrik asam salisilat

ABSTRACT

PRADESIGN OF SALICYLIC ACID PLANT FROM PHENOL AND NATRIUM HYDROXYDE USING KOLBE-SCHMITT METHODE WITH CAPACITY 25.00 TONS/YEAR
(*Triple Effect Evaporator* Design EV-301, EV-302, & EV-303)

By
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Salicylic Acid plant produced by reacting phenol and natrium hydroxyde, is planned to be located in Tangerang, Banten Province. The plant is established by considering availability of raw material, labor, transportation facilities, permits and social conditions of the surrounding community.

This plant is planned to production salicylic acid crystal with production capacity is 25.000 tons/year, with operating time of 24 hours/day in 330 working days/year. The raw materials used in this plant are much 2.943,7514 kg/hour phenol and 1.251,16kg/hour natrium hydroxide. Provision of utility plant needs a treatment systemand water supply, steam supply system, and instrument of air supply system.

Labor needed in this plant as many as 164 people with business entity form Limited Liability Company (PT) with line and staff organization structure.
From the economic analysis obtained:

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Keyword: salicylic acid plant