ABSTRAK

Pra Rancang Bangun Pabrik Surfaktan Natirum Lignosulfonat Dari Tandan Kosong Kelapa Sawit Dengan Kapasitas Produksi 30.000 Ton/Tahun.

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Pada rancangan bangun pabrik surfat natrium lignosulfonate untuk meningkatkan nilai kapasitas surfat natrium lignosulfonate dalam negeri sehingga memenuhi kebutuhan industry kimia dan permintaan pasar. Kapsitas produksi dalam pendirian pabrik tersebut direncanakan 30.000 ton/tahun. Pabrik ini beroperasi selama 330 hari dalam setahun. Pabrik surfat natrium lignosulfonate ini direncakan akan dibangun di Kota Bontang, Provinsi Kalimantan Timur pada tahun 2024. Bahan baku yang digunakan adalah Tandan Kosong Kelapa Sawit. Alat Utama yang digunakan dalam Pra Rancang bangun pabrik surfaktan natrium lignosulfonate dari Tandan Kosong Kelapa Sawit yaitu Spray Drayer. Utilitas pendukung proses meliputi unit penyedian air proses, listrik, air pendingin (CTW) dan bahan bakar. Percent Return On Investment (ROI) sebelum pajak 105% dan setelah pajak 95%. Pay Out Time (POT) 1 tahun, Break Event Point (BEP) sebesar 48,65%, Suhu Down Point (SDP) sebesar 41,21%, Internal Rate Return (IRR) 20,83%. Dari data analisa diatas dapat disimpulkan bahwa pabrik ini layak didirikan diindonesia.

Kata Kunci: Tandan Kosong Kelapa Sawit, Surfaktan Natrium Lignosulfonat, pra rancang bangun.

ABSTRACT

Pre-Design of a Natirum Lignosulfonate Surfactant Factory from Empty Palm Oil Bunches With a Production Capacity of 30,000 Tons/Year.

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In the design of the sodium lignosulfonate surfactant factory to increase the value of domestic sodium lignosulfonate surfactant capacity so as to meet the needs of the chemical industry and market demand. Production capacity in the establishment of the factory is planned to be 30,000 tons/year. This factory operates 330 days a year. The sodium lignosulfonate surfact factory is planned to be built in Bontang City, East Kalimantan Province in 2024. The raw material used is Palm Oil Proof. The main equipment used in the pre-design of the sodium lignosulfonate surfactant factory from Tanda Kosomg Palm Oil is the Spray Drayer . Process supporting utilities include process water supply units, electricity, cooling water (CTW) and fuel. Percent Return On Investment (ROI) before tax is 105% and after tax is 95%. Pay Out Time (POT) 1 year, Break Event Point (BEP) of 48.65%, Shut Down Point (SDP) of 41.21%, Internal Rate Return (IRR) of 20.83%. From the analysis data above, it can be concluded that this factory is feasible to be established in Indonesia.

Keywords: Oil Palm Empty Bunch, Surfactant Sodium Lignosulfonate, pre-design.