

ABSTRAKSI

Pre-design Aluminum Sulfate plant with a capacity of 130,000 tons / year is planned to be established in Duri, Riau Province, with a land area of 14,050 m². This factory is planned to operate within 330 days / year or 24 hours a day with a total of 126 employees.

Bauxite as much as 965.4215 kg / hour and as much as acid sulfate 15,051.3692 kg / hour. Take as raw materials the production process will operate at a temperature of 110°C, pressure of 1 atm with a total conversion of 61%. Utilities need supply 59,795.1847 kg / hour of water, 2513.5861 kg / hour of steam, and electricity 1092.1910Kwh.

From the results of economic analysis Aluminum Factory Pre-Draft Sulfate obtained fixed capital of Rp 52.9 billion, working capital of Rp 19 billion profit before tax of USD 37.7 billion, and profit after tax USD 22.6 billion, percent return on investment (ROI) before taxes 35.53% and 21.32% after tax, pay-out time (POT) before taxes 2.19 years and 3.19 years after the tax, break even point (BEP) of 41.61% and shut down point (SDP) of 20.25%. Based on economic calculations it can be concluded that aluminum sulfate plant was feasible to be set up.

