

SUMMARY

DANIEL IBRAHIM. Feasibility Study of Activated Natural Rubber Powder (SKAT) for Rubberized Asphalt (Case Study: PT. Bintang Djaja). Supervised by AMZUL RIFIN and SETIADI DJOHAR.

To meet the needs of high-quality asphalt and to increase domestic rubber absorption, Indonesia government began to launch asphalt pilot project using activated grinded rubber industry (SKAT) for rubberized asphalt. This project is an opportunities for asphalt companies. The purposes of this project is to examine the best location, non-financial and financial aspects for the establishment of SKAT mill.

AHP was used to determine SKAT mill location by using 3 criteria, 24 sub criteria and 4 alternatives. Cikampek, Palembang, Sidoarjo and Semarang have been chosen for alternatives location. Based on expert choice software calculation, Semarang was chosen as the best location with score 0,382. The main advantage of Semarang is its strategic location because it has a prospective market within a radius of 600 km, it has 5,611 km national road and 109,075 km provinces road. Semarang has another advantages with its cheaper land and low labour prices than another cities

Installed capacity of SKAT mill was about 15,000 tons will need 185 of manpower. SKAT mill is very environmentally friendly, because using recycling waste tires as raw material and not producing any waste. Total potential income of rubber farmers can increase to Rp. 3.195.000.000, - per year. The risk of establishment of SKAT mill for PT. Bintang Djaja is another additive products for rubber asphalt such as RAR and latex-based rubber asphalt, fluctuation of raw materials prices and modified asphalt business unit production will be reduced. The establishment of SKAT mill will not be feasible without government policies that mandate the use of rubberized asphalt-SKAT based for national infrastructure.

With investment value Rp. 47.2 billion and first year of working capital Rp. 19.9 billion using three financing alternatives (100%, 50% and 20% self financing), the NPV for each alternatives are 83.9 billion, 59.9 billion and 45.6 billion, IRR 36.2% , 27.9% and 23.5% and payback period 3 years 4 months, 4 years 2 months and 4 years 11 months. Based on sensitivity analysis results, greater self financing will make purchasing of raw materials or decreasing SKAT price more flexible. The result showed that the establishment of SKAT mill was feasible.

Keywords AHP, IRR, non financial, NPV, sensitivity analysis