

ABSTRACT

PRADESIGN OF DIPHENYLAMINE PLANT FROM CONVERSION OF VAPOR ANILINE CAPACITY 60.000 TONS/YEAR (Design Reactor (RE-201))

by
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A plant to produce diphenylamine from aniline is planned to be located at Palembang, South Sumatera. The plant is established by considering availability of raw materials, transportation facilities, readily available labor, and environmental conditions.

Capacity of the plant is 60.000 tons/year operating 24 hours/day and 330 working days/ year. The plant required 23.844,7881 kg/hr aniline.

The utilities are supply the water, supply the air instrument, supply the hot fluid, and supply the electric.

Quantity of labor is around 198 people. The plant is managed as a Limited Liability Company (PT), which is organized in the form of line and staff structure.

From analysis of the plant economy is obtained:

<i>Fixed Capital Investment</i>	(FCI)	= Rp 676.295.503.343,48
<i>Working Capital Investment</i>	(WCI)	= Rp 119.346.265.295,91
<i>Total Capital Investment</i>	(TCI)	= Rp 795.641.768.639,39
<i>Break Even Point</i>	(BEP)	= 44,13 %
<i>Shut Down Point</i>	(SDP)	= 29,27 %
<i>Pay Out Time before taxes</i>	(POT) _b	= 1,75 years
<i>Pay Out Time after taxes</i>	(POT) _a	= 2,1 years
<i>Return on Investment before taxes</i>	(ROI) _b	= 40,23 %
<i>Return on Investment after taxes</i>	(ROI) _a	= 32,18 %
<i>Discounted cash flow</i>	(DCF)	= 41 %

By considering above the summary, it is suitable study further the maltose plant since plant is profitable and has good prospects.