ABSTRACT

PRADESIGN OF SALICYLIC ACID PLANT
FROM PHENOL AND SODIUM HYDROXYDE
CAPACITY 40.000 TONS/YEAR
(Triple Effect Evaporator Design(EV-301, EV-302 & EV-303))

By
WIKE WINGTIAS ARNESA

Salicylic Acid plant produced by reacting phenol and sodium hydroxyde, is planned to be located in Gresik, East Java Province.The plant is established by considering availability of raw materials, transportation facilities, readily available laborand environmental conditions.

This Plant is planned to production salicylic acid crystal with production capacity is 40.000 tons/year,with operating time of 24 hours/day and 330 working days in a year. The raw materials used in this plant are much 4.709,4983 kg/hr of *Phenol* and *Sodium Hydroxyde* as 2.043,3427 kg/hr.

Provision of utility plant needs a treatment systemand water supply, steam supply systems, instrument air supply systems, and carbondioxide gas supply system.

Labor needed in this plant as many as 184 people with a business entity form Limited Liability Company (PT) with line and staff organizational structure.

From thee conomic analysisis obtained :

Fixed Capital Investment (FCI)	= Rp.936.480.682.308,-
Working Capital Investment (WCI)	= Rp.165.261.296.877,-
Total Capital Investment (TCI)	= Rp. 1.101.741.979.186,-
Break Even Point (BEP)	= 43,65%
Shut Down Point (SDP)	= 27,26%
Pay Out Time after Taxes $(POT)_a$	= 2,3 tahun
Return on Investment after Taxes $(ROI)_a$	= 29,30%
Interest Rate Return (IRR)	= 26,99%
Annual Net Profit (Pa)	= Rp. 322.781.158.940,-/tahun

By considering above the summary, it is proper establishment of salicylic acid plant for studied further, because the plant is profitable and has good prospects future.

Key word : salicylic acid plant