SORBITOL PLANT FROM CORN STARCH (Zea mays)
WITH CATALYTIC HYDROGENATION PROCESS

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Abstract
Sorbitol is alcohol sugar which have solubility in water. Sorbitol plant from corn starch with catalytic hydrogenation process is planned with a reason give opportunity to cooperate in raw material innovation for sorbitol. The raw material is used are corn starch with composition 79.56 % starch.

Process which is used is hydrogenation catalytic. Preparing the raw materials that is corn fluor and then by hydrolizing starch through two steps, that are dextrination and sacharification so that is formed dextrins which is changed be dekstrose. And then dekstrose is reacted with H₂ gas and Raney Nickel catalyst. After that, sorbitol solution step into purification phase, that are carbonation, filtration, and ion exchanger. And then, is condensed until 75% in double effect evaporator.

Sorbitol plant from corn starch is palnned will buid on 2013 and having location in Sumenep, Madura Island. This plant is operated during 330 workday with 24 hours operate. With capacities at sorbitol from corn starch material plant is tired 61,000 ton/ year or 185,000 kg/day. For utility, make up water : 446425320 m³/ year.

Key Word : sorbitol, catalytic hidrogenation, hidrolisis, raney nickel, corn starch.