



ZELUNDO (ZEOLIT SINTESIS LUMPUR LAPINDO) SYNTHETIC ZEOLITE OF LAPINDO MUD: TECHNOLOGY INNOVATION OF CATALYST MATERIAL ON FLUID CATALYTIC CRACKING (FCC) PROCESSING

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ABSTRACT

Lapindo Mud disaster has happened in Sidoarjo city, East java Indonesia since 2006. Not only brought problems like homeless and jobless to inhabitant but also caused environment problem. Some of researcher state that contents of this mud are danger substances like Cobalt, Cadmium and others. The utilization of mud is as far as building materials such as roof and brick that both low strength and less in economics. In other side, Pertamina (National Oil Company) until now must import fuel catalyst cracked for change crude oil to gasoline. The best catalyst that used of all oil company in the world is zeolite shythetic. Pertamina always spend US\$ 3.500.000.000 for import catalyst annually. Besides that, this project proves that Lapindo mud can change be synthetic zeolite as catalyst. Lapindo mud has ratio Silica/Alumina = 2.190. It shows that Lapindo mud can be categorized as Zeolite Y as catalyst in reaction change crude oil to gasoline. Pertamina could reduce number of catalyst import because our resources and our technology can produce its. Synthetic zeolite shaped by Pelletizer so it shaped cylinder like pellet. Making process use reactor for change long chain Alkana (C_nH_{2n+2}) to short chain Alkena (C_nH_{2n}). Before it, through preparation process, heating, activation, neutralization and continue to molding. The cost process to produce synthetic zeolite from Lapindo mud to the expenses to import zeolite can thrift amount 23%. Therefore, catalyst from Lapindo mud can use for process crude oil change to gasoline or useful oil.

Keywords: Lapindo mud, synthetic zeolite, fluid catalytic cracking