ABSTRACT

Reduction Plant as a department that handle smelter aluminium process become molten aluminium. This process determine how to reach the end result appropriate the production target. The process do from cell contraction process, baking process, start-up, and operation pot process.

This research apply risk management method to identify and asses the risk analyzed by using Hazard and Operability Study (HAZOPS). Risk assessment result the highest will be use as abase of developing alternative solution. Benefit and Cost Analysis is used to decided acceptable.

From the identification result use HAZOPS method found four problems which include the highest. They are the long time to do molten taping, anode changing, lift the bushbar and rice crust adhering to the pot. Based on the Benefit and Cost Analysis the solution for the first problem is repair six damage MT ladles, the second and the third problems are does maintenance for ACC four year once and the last problem make schedule maintenance.

Key word : Reduction Plant, Risk Management, HAZOPS, Benefit and Cost Analysis.