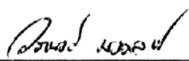


Varapong Mongkoltae 2008: Risk Assessment using Fault Tree Analysis for Aluminium Molding Process. Master of Engineering (Safety Engineering), Major Field: Safety Engineering, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Kandis Sudsakorn, Ph.D. 88 pages.

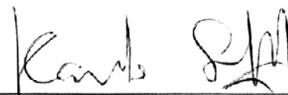
This work applies the Fault Tree Analysis (FTA) for the risk assessment of an Aluminium molding process in order to establish accident prevention. The number of accidents in a 2-year period is analyzed with FTA comparing to the current analysis method. It is found that both methods are similarly based on cause and effect analysis but FTA is capable of identifying causes more thoroughly. Therefore, FTA is applied to establish accident prevention more completely for Aluminium molding process.

From this work, the resulting accident prevention can be considered according to the 3E principles in 3 following aspects.

Engineering aspect suggests that risk assessment should be conducted whenever there is a change in operating procedures, mold design should be realized about inside bubble flow control, checklist should be added some more equipment checking, and proper signs and labels should be attached to pipings and valves. Education aspect advises that revision of operating procedure for aluminium molding should be practiced at least once a year. Finally, Enforcement aspect recommends that safety topic should be added to the meeting held before the start up, period maintenance every 6 months and 1 year should be scheduled, molds must be tested before use and sufficient number of instrument should be provided. The guidances are the results of FTA based on the 2-year accidents.



Student's signature



Thesis Advisor's signature

15 / May / 2008