



**STUDY OF OCCUPATIONAL SAFETY AND HEALTH
HAZARD IDENTIFICATION, RISK ASSESMENT AND RISK CONTROL
AT NGK SPARK PLUG MALAYSIA BERHAD**

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“ I declared that this thesis is the results of my own work except the isdeas and summaries which i have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submmited in candidature of any dgree.”

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DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving parents, Rozlan bin Mohd Akib and Zuraidah bin Alias whose words of encouragement and push for tenacity ring in my ears. My sibling Zarifah Lyana, Zharif Rafiq and Akmal Farouq have never left my side and are very special. I also dedicate this dissertation to my final year projects supervisor, Dr Fauzi Ismail who have supported me throughout the process. I will always appreciate all he have done for guiding and helping me and also acting fatherly to me. I dedicate this work and give special thanks to my friends, Amar Sufi and Adirul Shafiq for cooperation throughout the entire engineering program.

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ABSTRACT

The study has been done at NGK Spark Plug at production line C and D where operator needs to transfer spark plugs from machine to conveyor. Operator that work at this section need to work fast and repetitively to achieve daily production amount and it effecting their health and mentality. This study aims to perform conducting Hazard Identification, Risk Assessment and Risk Control (HIRARC) and utilize the engineering control as an alternative control measures to reduce risk associated hazard in workplace. It is significantly importance for an organizational to identify the hazard in a proper manner and the writer also implementing a *fish bone* method which is a combination of brainstorming, checklist and structured what-if (SWIFT) and applicable for individually as a safety personnel. To overcome this problem, simulation by using Delmia Quest software to make comparison between 10 slot conveyor and 15 slot conveyor. As a result, the operator idle time and utilization of conveyor are increased and it can reduce the operator stressfulness, which one of psychological health issue and hazards. With the use of information and previous study, it can be concluded that the method and control applied can be applicable to many organizational which reflected a good production line and safety and health working job.