FAILURE ANALYSIS OF ID PLATE DESIGN AND PROCESS BY USING FAILURE MODE AND EFFECT ANALYSIS AT PT. HYUNDAI INDONESIA MOTOR

A THESIS

Submitted in Partial Fulfillment of the Requirement for the Bachelor Degree of Engineering in Industrial Engineering

ERVILIA WIDYA PUTRI

12 14 07132

INTERNATIONAL INDUSTRIAL ENGINEERING PROGRAM

FACULTY OF INDUSTRIAL TECHNOLOGY

UNIVERSITAS ATMA JAYA YOGYAKARTA

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IDENTIFICATION PAGE

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Submitted by

Ervilia Widya Putri

12 14 07132

have declared qualified on May 31st, 2016

Faculty Supervisor,

B. Laksito Purnomo, S.T., M.Sc.

Board on Examiners,

Chair,

B. Laksito Purnomo, S.T., M.Sc.

Member,

Ign. Luddy Indra Purnama, M.Sc.

Member,

V. Ariyono, S.T., M.T.

Yogyakarta, May 31st, 2016

Dean of Faculty of Industrial Technology

Universitas Atma Jaya Yogyakarta

Dr. Drs. A. Teguh Siswantoro, M. Sc.

DECLARATION OF ORIGINALITY

I certify that the research entitled “Risk Failure Analysis of ID Plate Design and Process by Using FMEA at PT. Hyundai Indonesia Motor” in this thesis has not already been submitted for any other degree.

I certify that to the best of my knowledge and belief, this thesis which I wrote does not contain the works of parts of the works of other people, except those cited in the quotations and bibliography, as a scientific paper should.

In addition, I certify that I understand and abide the rule stated by the Ministry of Education and Culture The Republic of Indonesia, subject to the provisions of Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 17 Tahun 2010 tentang Pencegahan dan Penanggulangan Plagiat di Perguruan Tinggi.

Signature : materai 6000

Student name : Ervilia Widya Putri

Student ID : 12 14 07132

Date : May 2015

PREFACE

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Yogyakarta, May 31st, 2016

Author,

Ervilia Widya Putri

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ABSTRACT

The purpose of this research is to present the application of failure mode and effect analysis (FMEA) to an automotive industry especially focuses on small part that produced by PT. HIM that called Identification Plate (ID Plate). ID Plate is an important item in abroad production that has function to give information for customer about the engine number, chasis number, and other information which is important. FMEA has been used as a decision making tool to prioritize the failure modes by reducing failure rate called as risk priority number (RPN) especially focuses on FMEA design and process type. Both design and process will be develop until take the recommendation action and recalculate became RPN value. The research results indicated the action that lead to decrease RPN value and decrease failures mode occur by comparing observation result and RPN value before and after implementing. The real observation also have been gained as a result of implemention to continue in recalculating run values. The contribution of the researchers are original and valuable.

Keywords: Identification Plate (ID Plate), Failure mode and effect analysis (FMEA), Risk priority Number (RPN), Implementation

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