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MOHAMMAD YEAKUB ALI

AKM NURUL AMIN

**DESIGN FOR MANUFACTURE**

Towards Improved Manufacturability



**IIUM Press**

# DESIGN FOR MANUFACTURE

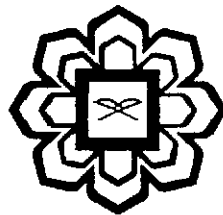
## Towards Improved Manufacturability

### EDITORS

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# CONTENTS

## Preface

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### PART I: DESIGN

---

#### Chapter 1 - Design of a Simple and Affordable Electric Bicycle ..... 04

Tasnim Firdaus Ariff<sup>1</sup>, Goey Ewing<sup>2</sup> and Kam Yee Wah<sup>3</sup>  
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---

#### Chapter 2 - Design of Bicycle Helmet Using FEA ..... 10

Tasnim Firdaus Ariff<sup>1</sup> and Lau Ken Tick<sup>2</sup>  
1 Faculty of Engineering – International Islamic University Malaysia  
2 School of Technology, Tunku Abdul Rahman College  
✉ : tasnim@iium.edu.my

---

#### Chapter 3 - Mould Design for Handphone Casing Using Moldflow ..... 18

Tasnim Firdaus Ariff<sup>1</sup> and Law Siah Yong<sup>2</sup>  
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2 School of Technology, Tunku Abdul Rahman College  
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---

#### Chapter 4 - Improvement of Typical Hip-Joint Design for Gripping and Fixing ..... 26

Siti Norbadiyah Binti Mohamad Badari<sup>1</sup> and Erry Adesta<sup>2</sup>  
1, 2. Faculty of Engineering – International Islamic University Malaysia  
✉ : eadesta@iium.edu.my

---

#### Chapter 5 - A Surgical Training Model Manufacture Using Fused Deposition Modeling ..... 44

Hasanudin Hafis Mohamad Ali, Md. Amir Hamzah Md. Shukri, WAY Yusoff  
Faculty of Engineering – International Islamic University Malaysia  
✉ : hasan.ma86@gmail.com; mdamirhamzah87@gmail.com

---

**Chapter 6 - Reverse Engineering for Rapid Prototyping of Automotive Components ..... 50**

WAY Yusoff<sup>1</sup>, Muhammad Ridhuan Kamarudin<sup>2</sup> and Noor Hiana Mohd Salimi<sup>3</sup>  
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---

**Chapter 7 - Design and Fabrication of Industrial Welding Robotic Arm ..... 58**

Syed Idros Syed Abdullah<sup>1</sup>, Mohamad Syatbi Mahamad Puzi<sup>2</sup>, and WAY Yusoff<sup>3</sup>  
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---

---

**PART II: QUALITY**

---

**Chapter 8 - Application of Statistical Quality Control for Quality Improvement ..... 66**

Tasnim Firdaus Ariff<sup>1</sup> and Yap Yee Seng<sup>2</sup>  
1 Faculty of Engineering – International Islamic University Malaysia  
2 School of Technology, Tunku Abdul Rahman College  
✉ : tasnim@iium.edu.my

---

**Chapter 9 - The Development of Cost Estimation for Quality Assurance System in Die-Casting Processes ..... 72**

Nur Hanisah A Hamzah<sup>1</sup> Nurhafizah Azmi<sup>2</sup> and Erry Yulian Tribblas Adesta<sup>3</sup>  
1, 2, 3 Faculty of Engineering, International Islamic University Malaysia  
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---

**Chapter 10 - Study the Adherence of the Values in The ISO 9001:2000 Certified Companies in Malaysia ..... 84**

Dr. Mohd Radzi Bin Haji Che Daud<sup>1</sup> and Rusdi Bin Mat Song<sup>2</sup>  
1, 2. Faculty of Engineering – International Islamic University Malaysia

---

**Chapter 11 - Cost Comparison Analysis between Strip to Coil for Support Brake Pedal at Suria Component (M) Sdn. Bhd ..... 92**

Dr. Mohd Radzi Bin Haji Che Daud<sup>1</sup>, Shamin Asyrani Bt Alies<sup>2</sup>, Norhayati Bt Saleh<sup>3</sup>  
1,2,3. Faculty of Engineering – International Islamic University Malaysia

**Chapter 12 - Performance Measurement of SMEs Manufacturing Sector in Malaysia ..... 98**

WAY Yusoff<sup>1</sup>, Muhammad Fauzan Md Noraini<sup>2</sup> and Mohd Norazrul Ismail<sup>3</sup>  
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---

**Chapter 13 - The Introduction of Fit Manufacturing as a Performance Measuring Approach towards Sustainability of Selected Manufacturing Companies in Malaysia ..... 105**

WAY Yusoff<sup>1</sup>, Aziatul Ashikin Mohd<sup>2</sup> and Siti Maznah Abdul Rahim<sup>3</sup>  
1, 2, 3 Faculty of Engineering - International Islamic University Malaysia  
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---

**Chapter 14 - The Study of the Implementation of OHSAS: 18001 at Kulliyah of Engineering ..... 113**

WAY Yusoff<sup>1</sup>, Muhammad Fakhrani Hayyun<sup>2</sup> and Mohd Fairus bin Abdullah<sup>3</sup>  
1, 2, 3 Faculty of Engineering - International Islamic University Malaysia  
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---

**Chapter 15 - Implementation of FMECA on Fixed Assembly Cell (FAC) ..... 121**

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---

**Chapter 16 - Implementation of FMECA on Computer Integrated Manufacturing (CIM) ..... 129**

WAY Yusoff<sup>1</sup> and Azmil Soleh<sup>2</sup>  
1,2 Faculty of Engineering – International Islamic University Malaysia  
✉ : yusmawiza@iium.edu.my

---

---

## **PART III: MATERIALS**

---

**Chapter 17 - The Effect of Stucco System in Ceramic Shell Investment Casting ..... 139**

Siti Norbahiyah Binti Mohamad Badari<sup>1</sup> and Erry Adesta<sup>2</sup>  
1, 2. Faculty of Engineering – International Islamic University Malaysia  
✉ : eadesta@iium.edu.my

---

**Chapter 18 - Casting Investigation of Heat Treated Biocompatible Materials  
for Total Hip Bone Replacement ..... 151**

Siti Norbahiyah Binti Mohamad Badari<sup>1</sup> and Erry Adesta<sup>2</sup>  
1, 2. Faculty of Engineering – International Islamic University Malaysia  
✉ : [eadesta@iium.edu.my](mailto:eadesta@iium.edu.my)

---

**Chapter 19 - Pultrusion of Pineapple Leaf Fibre (PALF)-reinforced Vinyl Ester  
Composites: Water Absorption Property ..... 162**

Mohamed Abd. Rahman, M. Kamarul Helmi M. Nawawi  
Faculty of Engineering – International Islamic University Malaysia  
✉ : [mrahman@iium.edu.my](mailto:mrahman@iium.edu.my)

---

**Chapter 20 - Effects of Austempering Treatment on Mechanical Properties of  
Ductile Iron ..... 170**

Belal Ahmed Ghazal<sup>1</sup> and Erry Yulian Triblas Adesta<sup>2</sup>  
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---

**Chapter 21 - Microwave Sintering of Metallic Materials ..... 179**

Tasnim Firdaus Ariff  
Faculty of Engineering – International Islamic University Malaysia  
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---

**Chapter 22 - Microwave Sintering of Ceramic Materials ..... 185**

Tasnim Firdaus Ariff  
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---

---

**PART IV: MODELLING**

---

**Chapter 23 - Numerical Analysis to Characterize Triaxiality Value of Adhesive Joint  
due to Particular Load Configuration. Part 1: Butt Joint ..... 194**

Irfan Hilmy  
MME Dept., Faculty of Engineering – International Islamic University Malaysia  
✉ : [ihilmy@iium.edu.my](mailto:ihilmy@iium.edu.my)

**Chapter 24 - Numerical Analysis to Characterize Triaxiality Value of Adhesive Joint due to particular Load Configuration. Part 2: Cleavage and Scarf Joint ..... 202**

Irfan Hilmy  
Faculty of Engineering – International Islamic University Malaysia  
✉ : [ihilmy@iium.edu.my](mailto:ihilmy@iium.edu.my)

**Chapter 25 - Metabolic Energy of Manual Lifting in Manufacturing Industry ..... 213**

Mohammad Iqbal<sup>1</sup>  
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---

**PART V: MANAGEMENT**

---

**Chapter 26 - Value Stream Mapping: an Important Footstep for Value Analysis and Value Engineering ..... 223**

A. N. Mustafizul Karim and Nurul Husna Binti Azon  
Faculty of Engineering, International Islamic University Malaysia  
Email: [mustafizul@iium.edu.my](mailto:mustafizul@iium.edu.my)

---

**Chapter 27 - The Project Management Challenges in Technology Innovation ..... 231**

Mahmood Hameed Mahmood<sup>1</sup> and Erry Yulian Triblas Adesta<sup>2</sup>  
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---

**Chapter 28 - Critical Chain in Project Management ..... 239**

Erry Yulian Triblas Adesta<sup>1</sup>, Asfana Banu Mohamad Asharaf<sup>2</sup>, Nur Atiqah Abdul Rahman Azmil<sup>3</sup>  
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**PART VI: MACHINING**

---

**Chapter 29 - Engineering Project Management in Automotive Industry ..... 247**

Mohamed Konneh<sup>1</sup>, and Abdul Halim  
Faculty of Engineering - International Islamic University Malaysia



**Chapter 30 - Surface Study when Finish Grinding Silicon using Resin Bonded Diamond Cup Wheel..... 257**

Mohamed Konneh<sup>1</sup>, and Muhammad Mukhtar  
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---

**Chapter 31 – Surface Roughness Studies in Die-sink EDM of Tungsten Carbide using Copper Tungsten Electrode ..... 264**

Mohamed Konneh<sup>1</sup>, and Abdul Halim  
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---

**Chapter 32 – Study of the Effect of different Electrodes on Material Removal Rate, Electrode Wear Rate and Surface Roughness in the EDM of S-STAR ..... 272**

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---

**Chapter 33 – Kerf in Micro Wire Electro Discharge Machining ..... 279**

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**Chapter 34 - The Effect of Deep Cryogenic Treatment on the Properties of AISI D2 Tool Steel ..... 286**

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---

**Chapter 35 - Effect of Welding Process on Formability of Tailor Welded Blanks ..... 294**

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**Chapter 30** Surface Roughness Studies in Die-sink EDM of Tungsten Carbide using Copper Tungsten Electrode ..... 257

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**Chapter 31** - Study of the Effect of different Electrodes on Material Removal Rate, Electrode Wear Rate and Surface Roughness in the EDM of S-STAR..... 264

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---

**Chapter 33** - Engineering Project Management in Automotive Industry ..... 279

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**Chapter 35** - Effect of Welding Process on Formability of Tailor Welded Blanks ..... 294

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## Implementation of FMECA on Fixed Assembly Cell (FAC)

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### 1. Introduction

In general, a process FMECA is conducted during quality planning and before production has taken place. It is a disciplined review and analysis of a new/revised process and is conducted to anticipate, resolve or monitor process problems for new/revised product programs. It involves listing potential failure modes and causes, and uses occurrence and detection probability in conjunction with severity criteria to develop a Risk Priority Number (RPN). The RPN allows the priorities of the actions that need to be conducted to alleviate the risk. In its most rigorous form, a FMECA formally documents the team's thoughts (including analysis of every process function that could conceivably go wrong based on experience and past problems) in developing a process. Once FMECA is completed, a critical item list is compiled enabling us to pin-point system inherent disadvantage, thus ensuring that safety, quality and reliability are built into manufacture stages of products.

### 2. Methodology

In order to implement FMECA to FAC, the process FMECA approach is done by the team, which it includes component quality and maintenance engineering. Process FMECA includes scope definition, function description, the identification of potential failures and then the ranking of such failures. It also includes the management functions, these being the selection and management of actions, the review and the FMECA documentation update and review. The basic steps involved in process FMECA includes:

### 3. What is Preventive Maintenance Programme (PMP)?