INSPECTION OF SIMILAR WELDING OF ALUMINIUM ALLOY 5083 AND STAINLESS STEEL 304L USING ADVANCE ULTRASONIC TESTING

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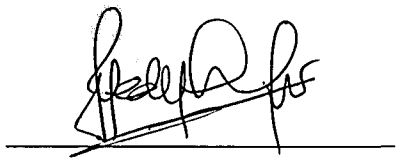

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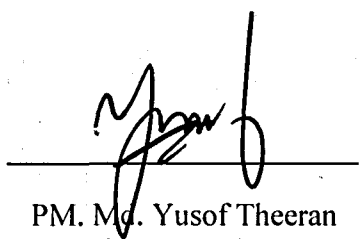

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vi
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	xi
ABSTRACT	xii
ABSTRAK	xiii

CHAPTER

1.	**INTRODUCTION**	
	1.1 Background of study	1
	1.2 Problem statement	2
	1.3 Significance of study	3
	1.4 Objectives of study	3
2.	**LITERATURE REVIEW**	
	2.1 Similar Welding	4
	2.2 Types of welding that use in similar metal	5
	2.3 Time of Flight Diffraction Technique (TOFD)	7
	2.4 Basic principal of Time of Flight Diffraction (TOFD)	8
	2.4.1 Mathematical Model of Time of Flight Diffraction (TOFD)	13
	2.4.2 The advantages of Time of Flight Diffraction (TOFD)	18
	2.4.3 The disadvantages of Time of Flight Diffraction (TOFD)	19
	2.4.4 The application of Time of Flight Diffraction (TOFD)	21

3. METHODOLOGY

3.1 Materials 23
3.1.1 Raw materials 23
3.1.2 Apparatus 24

3.2 Method 25
3.2.1 Preparation of samples 25
3.2.2 Designing and welding of samples 28
3.2.3 Testing samples 34

4. RESULT AND DISCUSSION

4.1 Result 37
4.1.1 Stainless steel 304L 37
4.1.2 Aluminium alloy 5083 46

4.2 Discussion 56
4.2.1 Stainless steel 304L 56
4.2.2 Aluminium alloy 5083 59

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion 63
5.2 Recommendation 64

CITED REFERENCES 65
CURRICULUM VITAE 67

ABSTRACT

The defects of the Lack of Fusion (LOF) and Lack of Penetration (LOP) on the surface of aluminium alloy 5083 and stainless steel 304L similar welding samples has been investigate using the advance Ultrasonic Testing (UT) Time of Flight Diffraction (TOFD) technique. The welding that was used to weld both similar samples is Tungsten Inert Gas (TIG) welding also known as Gas Tungsten Arc Welding (GTAW) and defects were made by the Die-sinking Electric Discharge Machine (EDM). There were total of three different types of Lack of Fusion (LOF) defects on both welded samples which are transverse surface, longitudinal surface and oblique, and another two Lack of Penetration (LOP) defects also on both welded samples. The defects were detected and investigated by Time of Flight Diffraction (TOFD) technique by observe the results of A-scan and B-scan images.