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TITLE :
TO STUDY OF SPOT WELDING
AND CHARACTERISTIC

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STUDY ON SPOT WELDING AND CHARACTERISTIC

	PAGE
i . Preface	
ii . Acknowledgement	
CHAPTER 1	
1 . Introduction.....	1
CHAPTER 2	
2.0 Type of welding material.....	1
2.1 Low Carbon Steel (L.C.S).....	2
2.2 High Strength and Low Alloy Steel (L.A.S).....	5
2.3 Austernitic Stainless Steel (18/8 S.S).....	10
2.4 Aluminium.....	15
2.5 Grey cast iron.....	24
2.6 Copper.....	26
2.7 Copper Alloys.....	27
2.8 Brusses.....	28
CHAPTER 3	
3.1 Introduction.....	1
3.2 Principles of electric resistence welding.....	6
3.3 Fundamental of Resistant Welding Practice.....	8
3.4 Type of electric.....	13

CHAPTER 4

4.1 Introduction.....1
4.2 Details of machine.....6
4.3 Practical considerations.....9
4.4 Modification of spot welding production.....20
4.5 Range of materials which may be spot welded...25
4.6 Ferrous materials.....26
4.7 Non - Ferrous materials.....31
4.8 Special spot welding machines.....33

CHAPTER 5

5.1 Principles (Introduction).....1
5.2 Gun Welding (Introduction).....3
5.3 Resistant spot welding.....4
5.4 Electrode and Negget size.....5
5.5 Resistent and Force.....9
5.6 Current and time.....14
5.7 Nugget formation.....17
5.8 Process and quality control.....22
5.9 Regulating Current.....22
5.10 Power-Source types.....24
5.11 Factors influding welding current.....31
5.12 Timing.....34
5.13 Applications of force.....35
5.14 In-process monitoring.....37

5.15 Series Welding.....38

5.16 Heat balance.....40

5.17 Rocker arm and press-type.....41

5.18 Multiple Welding.....42

5.19 Gun and portable welding.....43

CHAPTER 6

6.1 Spot Welding Set Up.....1

6.2 Spot Welding Aluminium.....3

6.3 Spot Welding electrode.....3

6.4 Elektrod holder.....8

6.5 Mechanism.....9

6.6 Controls.....9

CHAPTER 7

7.1 Spot Welding equipment.....1

7.2 Portable welding machines.....13

CHAPTER 8

8.1 Special resistant welding machines.....1

8.2 Care of resistant welding equipment.....2

8.3 Resistant welding Accessories.....9

DICUSSION

CONCLUSION

REFERENCE

RESISTANCE SPOT WELDING (RSW)

1.0 INTRODUCTION

Resistance spot welding, Fig. 1-19, passes an electric current through the metal. Resistance to the electrical flow heats the metal to welding temperature. The process is used to weld together two or more overlapping pieces. It is well suited to automatic welding. Spot welding is commonly used to join auto body sections, cabinets, and other sheet metal assemblies.

A step-down transformer converts fairly high voltage low amperage current to a low voltage high amperage current. The weld is made between two electrodes which press the metals together. A large electrical current flows from one electrode through the metals to be welded together to the second electrode.

These electrodes are special copper alloys which can carry the high current and still have physical strength to operate under high pressures. The electrodes on small spot welders, used to weld thin materials, may be air cooled. Electrodes for welding thicker metals are water-cooled.

Resistance spot welding is controlled by the amperage, the electrode pressure, and the length of time the current flows. In an automatic spot welder, the operator sets the