



I	SECTION CODE	AW
II	SECTION NAME	ADVANCED WELDING
III	COURSE CODE	AW-01
IV	COURSE TITLE	ADVANCED WELDING (SMAW, MIG & TIG)
V	DURATION	02 Weeks
IV	OBJECTIVES	
On completion of the course, the learner will be able to understand about the SMAW, MIG & TIG welding and able to demonstrate the practical competencies as stated in below contents.		

VI Course Content :

Theory topics	Practical Topics
Safety in welding and gas cutting, Causes and remedial measures, Definition of welding terms, Manual metal arc welding, Covered electrodes for manual metal arc welding, Welding positions, MIG welding principles advantages and limitations, MIG welding equipment and power sources, Mode of metal transfer in MIG welding, General description of TIG welding advantages limitations and applications, TIG welding equipment, Shielding Gases.	Practice on MMAW, MIG and TIG: a) Straight line beads- 1G, 2G, 3G & 4G b) Butt Joint - do- c) Lap Joint - do - d) T- Joint - do- e) Corner joint -do-



I	SECTION CODE	AW
II	SECTION NAME	ADVANCED WELDING
III	COURSE CODE	AW-02
IV	COURSE TITLE	HIGH PRESSURE PIPE WELDING - 6G
V	DURATION	02 Weeks
IV	OBJECTIVES	
On completion of the course, the learner will be able to understand about the pipe welding 1G to 6G and able to demonstrate the practical competencies as stated in below contents.		

VI Course Content :

Theory topics	Practical Topics
Introduction to pipe welding, Definitions of Welding terms, Manual metal Arc welding, Covered electrode for manual metal arc welding, Preparation of Pipe joints, Welding of root bead by tungsten inert gas process. Welding procedure, Performance Qualification and codes.	<u>Practice on MMAW</u> a) Plate welding 1G,2G,3G,4G. b) Preparation of Pipe joints. c) Pipe welding 1G,2G,5G and 6G.



I	SECTION CODE	AW
II	SECTION NAME	ADVANCED WELDING
III	COURSE CODE	AW-03
IV	COURSE TITLE	MIG/CO2 WELDING
V	DURATION	01 Week
IV	OBJECTIVES	
On completion of the course, the learner will be able to understand about the GMA welding and able to demonstrate the practical competencies as stated in below contents.		

VI Course Content :

Theory topics	Practical Topics
MIG process, equipment and power sources, MIG welding principles, Advantages & Limitations. Modes of Metal transfer in MIG welding. Welding parameters and setting the control. Welding procedures and Techniques. Shielding Gases for MIG. Filler wire for MIG welding. Defects, causes and remedy.	Practice on MIG a) Straight line beads- 1G, 2G, 3G & 4G b) Butt Joint - do - c) Lap Joint - do - d) T- Joint - do - e) Corner joint - do -



I	SECTION CODE	AW
II	SECTION NAME	ADVANCED WELDING
III	COURSE CODE	AW-04
IV	COURSE TITLE	TIG WELDING (SS, Al & Cu)
V	DURATION	01 Week
IV	OBJECTIVES	
On completion of the course, the learner will be able to understand about the TIG welding and able to demonstrate the practical competencies as stated in below contents.		

VI Course Content :

Theory topics	Practical Topics
TIG Welding process TIG Welding Equipment, TIG Welding Torch, Regulator, flow meter etc. Advantages of TIG welding over MMAW & Oxy-acetylene welding. Safety, Tungsten Electrode types & uses, Power Sources of TIG welding, Properties and use of Argon & Helium gas.	<u>Practice on TIG :</u> a) Straight line beads- 1G, 2G, 3G & 4G b) Butt Joint - do- c) Lap Joint - do – d) T- Joint - do- e) Corner joint -do-