

WELDER (ARC)

DOT Code: 810.384-014

AIMS Code: 0620

DESCRIPTION:

Welds together metal components of products, such as pipelines, automobiles, boilers, ships, aircraft, and mobile homes, as specified by layout, blueprints, diagram, work order, welding procedures, or oral instructions, using electric arc-welding equipment: Obtains specified electrode and inserts electrode into portable holder or threads consumable electrode wire through portable welding gun. Connects cables from welding unit to obtain amperage, voltage, slope, and pulse. Starts power supply to produce electric current. Strikes (forms) arc which generates heat to melt and deposit metal from electrode to workpiece and join edges of workpiece. Manually guides electrode or gun along weld line, maintaining length of arc and speed of movement to form specified depth of fusion and bead, as judged from color of metal, sound of weld, and size of molten puddle. Welds in flat, horizontal, vertical, or overhead positions. Examines weld for bead size and other specifications. May manually apply filler rod to supply weld metal. May clean or degrease weld joint or workpiece, using wire brush, portable grinder, or chemical bath. May repair broken or cracked parts and fill holes. May prepare broken parts for welding by grooving or scarfing surfaces. May chip off excess weld, slag, and spatter, using hand scraper or power chipper. May preheat workpiece, using hand torch or heating furnace. May position and clamp workpieces together or assemble them in jig or fixture. May tack assemblies together. May cut metal plates or structural shapes. May operate other machine shop equipment to prepare components for welding. Important variations include types of metals welded, subprocesses used, trade name of equipment used, work site (in-plant, job shop, construction site, shipyard), method of application (manual, semiautomatic), high-production or custom, level of ambidexterity required, type of joints welded (seam, spot, butt). May be required to pass employer performance tests or standard tests to meet certification standards of governmental agencies or professional and technical associations.

WORK PROCESS SCHEDULE:

ON-THE-JOB TRAINING

APPROXIMATE HOURS

A.		1300
1.	Blueprint reading and sketching	
2.	Use and handling of oxyacetylene gas	
3.	Operate torch, simple cutting and lancing	
4.	Safety	

RELATED TECHNICAL INSTRUCTION:

The Commonwealth of Massachusetts requires 150 hours each year of related technical instruction which must be mastered by the apprentice in order to successfully complete the program.