

Class Concept

Work in this class involves the operation of acetylene and electric arc welding equipment in order to fuse metal parts in situations where weld strength is a necessity, such as in the construction or repair of steam boilers and high pressure steam lines as well as various types of machinery and equipment. Work also involves the assembly and disassembly of the parts to be welded. Work assignments are received from a shop foreman with general instructions regarding the welding needed. Work is performed at the journey level in accordance with established shop and trade practices, but incumbent exercises considerable initiative in developing his own procedures and work methods.

Lays out, cuts, and fits material for welding. Joins metal pieces by applying the torch or electric arc to surfaces and melting the welding rod and flux into the joint. Burns or cuts through metal by melting and oxidizing with a hot flame and free oxygen. Examines parent metals and alloys in order to determine their strength and heating properties, and determines the amount of heat to be applied. Makes metal articles such as brackets, pipe hangers, braces, bolts, and repair parts for machinery, trucks, implements and equipment.

Recruitment Standards

Knowledge, Skills, and Abilities

- Working knowledge of the principles and methods of acetylene and electric arc welding.
- Working knowledge of the heating properties of a variety of alloys and parent metals.
- Skill in the operation of the tools and equipment of the welding trade.
- Ability to work from and follow oral and written directions and drawings and to copy or reproduce parts which have been broken.
- Physical strength and ability sufficient to move relatively heavy objects and to perform manual labor for short periods of time.

Minimum Education and Experience

High school or General Educational Development diploma (GED) diploma and two years of progressive experience in acetylene or electric arc welding; or an equivalent combination of education and experience.