



SHOP WELDER

FC: MA230
PG: MW-III

PC: 301
BU: 01
August 1987

DEFINITION

Under general supervision, performs precision welding and related work in the maintenance, fabrication and repair of District vehicles, tools and equipment; performs related work as assigned.

CLASS CHARACTERISTICS

This is a journey level classification, capable of independently performing the full range of welding required for shop work. This classification is distinguished from other welding classes by a focus on precision work and in that it does not work on District track, structures or revenue vehicles.

EXAMPLES OF DUTIES

Performs precision arc, MIG, TIG and gas welding on District vehicles, tools and equipment, including steel, iron, cast iron, stainless steel, aluminum and sheet metal welding; reads diagrams and prints, and discusses work to be performed with supervisor or user; determines appropriate approach, tools, and equipment for different jobs; measures angles and sizes of metal using precision measuring tools; cuts and shapes metal using grinder, drill press, shears, hydraulic break and cutting torch; prepares surfaces to be welded; loads, adjusts, and operates welding, brazing and soldering equipment, using appropriate safety devices; field tests and repairs equipment to confirm required tolerances; heat treats metals in oil or compound to harden or temper; grinds, smooths, and finishes welded surfaces; operates portable welding equipment to make field repairs; orders welding gasses, rods, wire, tools and safety equipment needs; stores rods according to special requirements; completes records of work performed and supplies used; notifies supervisors of tool and equipment replacements needed.

QUALIFICATIONS

Knowledge of:

Techniques of arc, gas, MIG and TIG welding. Fundamentals of physical metallurgy. Welding gasses and mixtures. Types of welding rods and their application. Storage and handling requirements for different types of welding rods. Safety practices in welding, including eye, respiratory and hand protection.

Skill in:

Welding steel, iron, cast iron, aluminum and other metals. Preparing surfaces to achieve effective welds. Operating machine shop tools to cut and shape metals. Grinding, smoothing and finishing welded surfaces. Treating and tempering metals. Determining the effect of welding on the strength of safety of various metals. Measuring angles and precision tolerances using calibration and measuring devices. Reading and interpreting written instructions, diagrams, blueprints and welding symbols. Keeping simple written records.

Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record. Must be able to lift and carry up to 50 pounds, maneuver heavier objects and have color vision to distinguish parts and states of metal in heating. Certification as a Combination Welder is desirable.

A typical way of gaining the knowledge and skills outlined above is:

Completion of an apprenticeship in welding, and one year of journey level experience in combination welding.

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