

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE

WELDER

DEFINITION

Performs skilled, precision welding work in the fabrication, modification or repair of metal parts, fixtures and equipment; performs related work as required.

The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

WORK EXAMPLES

Prepares working plans and materials for constructive or repair welding. Works from blueprints and other written specifications by selecting appropriate metal materials and welding rods, and laying out, measuring and drawing guidelines on metal materials such as pipe, tubing or sheets of nickel, brass, aluminum, stainless steel and various irons.

Cuts, grinds, bends or drills metals into various shapes by selecting appropriate torch tips, and adjusting and directing a metal lathe, punch press, metal bender or the flame of a hand-held or stationary oxygen/gas or arc cutting torch.

Fabricates unique or prototype equipment or component parts and modifies existing equipment such as hinges, underbody ice blades, vehicle storage racks, J and eye bolts, therapeutic steel braces and brackets by selecting the appropriate welding machine or torch, rods and torch tips, adjusting valves, electrical currents and other variable factors according to the type of metal used, and soldering, brazing or welding prepared metal materials using standard or precision arc-air, arc or gas methods.

Repairs or reconstructs defective, damaged, fatigued or worn metal equipment, fixtures, or component parts of machinery/vehicles such as stainless steel pans, wheel chairs, serving carts, steel doors and hinges, steps from vans or trucks, end loader buckets, snow removal equipment, tractors and farm machinery by replacing, straightening or reinforcing parts using appropriate welding or soldering techniques and equipment.

Purchases supplies and equipment as needed either from the warehouse or from private vendors.

Adjusts, cleans and makes minor repairs to assigned precision cutting and welding tools/equipment as necessary in order to maintain tools/equipment in operating condition.

COMPETENCIES REQUIRED

Knowledge of the proper use and care of materials and assigned tools/equipment such as gas shielded arc welders, arc welders, and acetylene, oxygen or arc-cutting torches, welding rods and torch tips.

Knowledge of the occupational hazards and safety precautions related to the welding trade including the proper use and care of safety equipment such as hoods, goggles and ventilation equipment.

Knowledge of the standard and precision methods of welding and metal fabrication including arc and gas welding, cutting, brazing, soldering and metalworking.

Knowledge of metallurgy and heat treatment as they relate to the strength and use of various combinations of flame and metal.

Ability to perform simple computer transactions and data entry to order supplies and equipment.

Ability to work out-of-doors in all types of weather conditions.

Ability to lift and load items weighing up to 95 pounds to the height of 55 inches above the ground.

Ability to plan, design and determine appropriate sizes and shapes of materials to use in metal fabrication or repair of fixtures and equipment.

Ability to read and interpret plans, sketches or technical drawings in order to determine the appropriate methods to use in fabricating, modifying or repairing fixtures and equipment as intended by the requestor or manufacturer.

Ability to set priorities and accomplish work goals in light of conflicting priority requests from customers.

Ability to read and communicate in English, both orally and in writing, to inquire about, understand and execute instructions or work orders.

Ability to learn and understand new technology and the use of new tools and equipment.

Skill in welding and fabricating all types of metals including cast iron, aluminum and steel.

Skill in the accurate, steady operation/adjustment and care of various assigned cutting and welding tools, equipment and machinery.

Is familiar with and complies with agency policies and work rules at all times.

Displays high standards of ethical conduct. Exhibits honesty and integrity. Refrains from theft-related, dishonest and unethical behavior.

Works and communicates with internal and external clients and customers to meet their needs in a polite, courteous, and cooperative manner. Committed to quality service.

Displays a high level of initiative, effort and commitment towards completing assignments efficiently. Works with minimal supervision. Demonstrates responsible behavior and attention to detail.

Responds appropriately to supervision. Makes an effort to follow policy and cooperate with supervisors.

Aligns behavior with the needs, priorities and goals of the organization.

Encourages and facilitates cooperation, pride, trust and group identity. Fosters commitment and team spirit.

Expresses information to individuals or groups effectively, taking into account the audience and nature of the information. Listens to others and responds appropriately.

EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS

The equivalent of two years of full-time welding experience;

OR

successful completion of an approved two-year welder apprenticeship program may be substituted for the required experience;

OR

an equivalent combination of education and experience substituting one month of approved trade school coursework in welding for each month of the required welding experience to a maximum substitution of twenty-four months.

NECESSARY SPECIAL REQUIREMENTS

Positions in this job class in the Department of Transportation must possess a valid Commercial Driver's License Instruction Permit upon hire. Within 14 calendar days following appointment, a valid Class A or B Commercial Driver's License must be obtained with air brake and other required endorsements in order to continue employment.

NOTE

Title 49 of the Code of Federal Regulations (parts 391 & 40), requires a pre-employment drug screen of all positions in this job class in the Department of Transportation and will require ongoing participation in the employer's random drug and alcohol testing program.