



Welder

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Job Description:

Welders use heat to permanently join pieces of metal.

Wages:

Average median yearly pay is about \$40,000 a year in Utah.

Schedule: May work overtime, up to 70 hours a week. May work long 12 hour shifts back to back.



Education & Experience:

- ◆ Complete High School
- ◆ Long-term on-the-job training

High

School Courses:

- ◆ Computer Fundamentals
- ◆ Construction
- ◆ Drafting
- ◆ Electronics
- ◆ Industrial Arts
- ◆ Physical Education

Work Conditions:

- ◆ Work both indoors and outdoors, sometimes in tough conditions
- ◆ Often exposed to contaminants that give off toxic fumes
- ◆ Physically demanding work, on feet for most of the day
- ◆ Must be exact in their work. Work as part of a team.

Travel: May work at different locations from week to week.

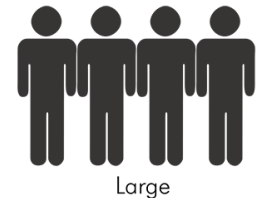
Gross Monthly Income:

\$3,300

Advancement:

Welders and solderers can advance to more skilled jobs with additional training and experience. For example, they may become technicians, supervisors, inspectors, or instructors. Some experienced welders and solderers open their own repair shops

Job Outlook:



Hours a Week:

60

Leisure Time:

Low

Knowledge:

- ◆ Mechanical
- ◆ Engineering & Technology

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Overview

Welding is the most common way to permanently join metal parts. In this process, heat applied to metal pieces melts and fuses them together. Because of its strength, welding is used in the building of ships, automobiles, and aircraft. It is also used to manufacture thousands of other products. In addition, welding is used to join beams in the construction of buildings, bridges, and other structures. Soldering and brazing are similar processes that are used on electronic and other small equipment.

Welders plan work from drawings or detailed work orders. In some cases, they use their knowledge of welding and metals to decide how to repair or join metal parts. Once they have information about the job, welders select and set up the equipment. Welders use arc, gas, and flame torches, as well as other types of welding equipment. Solderers generally use soldering irons. Welders perform manual welding, in which they entirely control the work. They also perform semi-automatic welding, in which they use machinery to help perform some tasks.

Next, welders position and secure the work piece. They may use a hoist or crane to move large pieces. For small pieces, they may use hand tools to clamp them into place. Welders create welds in a variety of positions, such as flat, vertical, or overhead. The position they use determines how they position the work piece. Once the pieces are positioned, welders use tools or chemical cleaners to clean the surface of metal pieces. Then they start the equipment. They connect hoses or nozzles, and ignite the torch or start the power supply. They adjust valves to regulate the flow of gas and air. Finally, welders fuse or weld metal parts together.

Welders and solderers also repair broken or cracked metal parts. They sometimes fill holes and seams in metal products. When a job is done, they chip or grind off excess weld or solder, using hand or power tools. Welders and solderers also examine their work to be sure it meets requirements. They also clean all equipment parts using a variety of cleaning solutions and chemicals.

The work of arc and flame cutters is closely related to that of welders. However, instead of joining metals, cutters use heat to cut and trim metal objects to specific dimensions. Cutters also cut up large objects, such as ships, cars, or aircraft.

Pathway:
***Skilled &
Technical Sciences***