



Position Description

Job Title: **WELDER**

Industrial Construction Services and Design, Inc. (ICON) is a full service mechanical/electrical contractor with unique custom machine engineering and fabrication capability. Industrial Construction Services and Design, Inc. services manufacturers and heavy industrial markets located throughout the US and abroad by providing superior value measured in terms of quality, responsiveness and cost.

WELDER JOB SUMMARY: ICON applies the tradecraft name "Welder" to employees with specialized technical expertise and work experience. The combination of technical expertise and work experience is used to categorize Welders by Class 1, 2 or 3. ICON's entry level Welder is designated a Welder 1 and will be encouraged to build his or her technical expertise and work experience to achieve Welder 2 and 3 designations. Employee compensation rates are based upon these classification levels in addition to fair market values and other considerations. The following description encompasses all of the tasks that a fully qualified Welder Class 3 should be able to perform.

Welding work involves permanently joining pieces of metal together by applying heat or electricity. This work requires reading blueprints and job specifications to be able to perform various tasks. Welders use welding torches, soldering irons, brazing irons, welding machines, metal clips, acids, salts and electrical conductors. They work with many types of metals, such as iron, carbon steel, aluminum and stainless steel. There are several types of welding processes that Industrial Construction Services and Design, Inc. utilizes throughout its projects, such as stick welding (SMAW), MIG welding and TIG welding. The tasks of pipe welders center on arranging and matching the pipes together before using melting metal to connect them. Pipe welding has a variety of positions such as horizontal fixed position (5G) and pipe incline fixed (6G). SMAW stands for "shielded metal arc welding". SMAW welding is a manual arc welding process that uses a consumable electrode coated in flux in order to lay the weld. MIG stands for "metal inert gas". MIG welding is a special kind of welding using wire feed to supply filler material to the parts when uniting metals. The tasks of welders include dividing up parts, cutting metal with plasma cutters or torches, reading blueprints, drilling holes, sharpening, shining and delivering metal with a forklift. TIG stands for "tungsten inert gas". TIG welding is generally used for aluminum and stainless steel applications and involves melting a rod to the pieces of metal. TIG welding is much more difficult and specialized than MIG welding. Welds which need the exactness should use TIG welding. Metal of different compositions as well as thinner parts of metal which are impossible to weld by SMAW or MIG welding will be united by TIG welding.

Welders are required to have a good understanding of basic plant physics and mathematics. The welders must have the ability to analyze engineering drawings, blueprints, specifications, sketches, work orders and material safety data sheets to plan layout, assembly and welding operations. The welders will layout, position, align and secure parts and assemblies prior to assembly using straightedges, combination squares, calipers and rulers. Equipment and welding methods must be determined by the welder by applying knowledge of metallurgy, geometry and welding techniques. All welders must have the skills to operate all welding equipment, such as torches, tips, hoses, pressure regulators and gas cylinders that relate to their type of welding process. Welders must recognize, set up and operate hand and power tools common to the welding trade. Other welding duties include examining work pieces for defects, measuring work pieces with straightedges or templates to ensure conformance with specifications, selecting and installing torches, torch tips, filler rods and flux, according to welding chart specifications or types and thicknesses of metals. The welders may weld components in flat, vertical or overhead positions without fear of heights. All welders must know how to operate safety equipment and use safe work habits at all times. Due to the type of work a welder does and the tools and equipment they use, certain physical requirements must be met. Welders must be able to stand, stoop, bend, kneel, climb and work in tiring and uncomfortable positions. The welders frequently handle, lift, carry and set up parts and equipment that weight up to 50 pounds (23 kg) and occasionally they may lift and carry items that weigh over 50 pounds (23 kg).