

JOB DESCRIPTION – WELDER

JOB DUTIES AND RESPONSIBILITIES

Sets up and operates arc welding machine that welds together parts of fabricated metal products, as specified by blueprints, layouts, welding procedures, and operating charts: Welds flat, cylindrical, or irregular parts that may be clamped, tack-welded, or otherwise positioned. Visually examines welds for adherence to specifications. Grinds surfaces for interpass preparation or penetrant test. Adjusts machine setup to vary size, location and penetration of bead. Lays out, fits and tacks work pieces together. Preheats work piece, using hand torch or heating furnace. Removes surplus slag, flux, and spatter, using brush, portable grinder, and hand scraper. Connects cables from welding unit to obtain amperage, voltage, slope and pulse. Strikes (forms) arc that generates heat to melt and deposit metal from electrode to work piece and joins edges of work piece. Manually guides electrode or gun along weld line, maintaining length of arc and speed of movement to form specified depth of fusion and bead, as judged from color of metal, sound of weld, and size of molten puddle. Welds in flat, horizontal, vertical or overhead positions. Examines weld for bead size and other specifications. Cleans or degreases weld joint or work piece, using wire brush, portable grinder, or chemical bath. Prepares broken parts for welding by grooving or scarfing surfaces. Chips off excess weld, slag, and spatter, using hand scraper or power chipper. Positions and clamps work pieces together or assembles them in jig or fixture. Operates other machine shop equipment to prepare components for welding. Welds short beads at points specified by layout, welding diagram, or by fitter, along overlapping edges of metal parts to hold parts in place for final welding. Tack-welds, using hand, submerged, or gas-shielded arc welding equipment. Welds metal parts, using gas welding equipment as specified by layout, welding diagram, or work order: Selects torch tip, filler wire, and flux according to charts and thickness and type of metal. Connects hoses from torch to regulator valves and cylinders of oxygen and fuel gas. Turns regulator valves to start flow of gases, lights torch, and adjusts gas mixture and pressure to obtain flame of desired size and color based on knowledge of gas-welding techniques. In Arc cutter operations, cuts, trims, or scarfs metal objects to dimensions, contour or bevel specified by blueprints, work order, or layout, using arc-cutting equipment: Selects carbon or metal coded carbon electrode, electric current, gas nozzle, and gas pressure, according to thickness and type of metal, data on charts, or record of previous runs. Uses non-consumable tungsten electrode and gases, such as helium or carbon dioxide. Selects torch tip, gas pressures, speed of cut, and allows for width of cut, according to thickness and type of metal as computed from charts. Installs torch tip and turns handle to start and adjust pressure of fuel gas. Directs flame on work piece to heat it to oxidizing temperature, as indicated by color of metal. Squeezes lever or trigger to release additional jet of oxygen that burns a path through metal. Guides flame along cutting line, observing cutting to judge angle, distance of torch, and speed of movement. Lays out cutting lines, using rule square, compass, or by tracing template. Builds scaffold for access to work area. Moves, hauls or positions compressed gas cylinders near work area, drags weld leads from energy source to work area prior to beginning welding operations. Will be required to pass welder certification or performance tests to meet certification standards of governmental agencies or professional and technical associations. May be required to work while wearing respiratory protection, either air supplied or air purifying, depending upon atmospheric conditions and work location. May be required to work in confined spaces, above ground in excess of fifty feet, outdoors in direct sunlight and in seasonal temperature extremes. Some of these job duties are not full time; project size and organization of work determine whether workers spend their time on one duty or transfer from duty to duty as project progresses to completion.

TOOLS, EQUIPMENT AND DEVICES REQUIRED ON THE JOB

Hood	Gloves	Wire Brush	Whip w/Holder
Goggles	Chipping Hammer	Side Cutters 9"	Safety Glasses
Tip Cleaners	Striker	Hardhat	4 ½" AC/DC Grinder
Crescent Wrench 8"	Crescent Wrench 10"	14" File	

NON-PHYSICAL JOB REQUIREMENTS

The Dictionary of Occupational Titles, Fourth Edition, Revised 1991, United States of America, Department of Labor Specific Vocational Rating for Welder is: Over 6 months up to and including 1 year.

PERSONAL TRAITS

The ability to get along well with co-workers and management and the ability to work together with other employees as part of a group, the ability to accurately communicate ideas, instructions, questions, problems, solutions. The ability to accurately receive and understand ideas, instructions, questions, problems, solutions or feelings understanding of the nature and causes of accidents, appreciative of the effects and seriousness of accidents, alert and attentive for possible hazards, takes necessary actions to prevent accidents - is not accident prone and does not have a history of chronic unsafe behavior.

PHYSICAL JOB REQUIREMENTS

The ability to verbally communicate alarms or warnings clearly, concisely, loudly and quickly, to clearly and quickly hear or otherwise sense alarms or warnings and take appropriate action, maintain equilibrium to prevent falling when moving, walking, standing, kneeling or crouching - particularly on narrow, uneven, irregular, slippery surfaces, going up or down ladders, stairs, scaffolding, ramps, poles or other objects using hands, arms, feet or legs. Moves about on hands and feet, bending the body downward and forward bending leg and spine - working in a bent over position. Sensing physical attributes such as size, shape, temperature, texture or sharpness of an object by touching. Foot agility and dexterity - operating pedals, foot controls, kick bars and other similar tasks that require foot or toe motion. Grasping, gripping or applying pressure to an object with the fingers and palm, holding an object in the hand. The ability to clearly and concisely perceive sounds, the ability to hear and understand detailed oral communications, the ability to hear warning signals and alarms given verbally and mechanically. Lifting, raising or lowering objects in a vertical direction, particularly heavy or bulky objects. Moving objects backward, forward, in or out in a horizontal direction, particularly heavy or bulky objects. Pulling, exerting a steady backward, downward, upward or outward force against an object - jerking, plucking, wrenching, stretching, towing, drawing, dragging or tugging objects in a sustained motion. Pushing, pressing against something with steady forward, downward, upward or outward force - shoving, pushing, compressing, squeezing, mashing, packing, pressing, jamming, compacting, or squashing objects in a sustained motion. Reaching, extending the hand(s) and/or arm(s) in any direction. The ability to see, read and understand written communications: including directions, instructions and warning signs, to see and distinguish colors, to visually distinguish shapes and patterns, to accurately sense distances (depth perception), to accurately see objects and detect motion at wide angles (peripheral vision). Bending the body downward and forward by bending the spine at the waist, using the lower extremities and back muscles and moving on foot, particularly for long distances.

PHYSICAL MODIFIERS/DEMANDS

The Dictionary of Occupational Titles, Fourth Edition, Revised 1991, United States of America, Department of Labor Physical Demands Strength Rating for Welder is: H - Heavy Work - Exerting 50 to 100 pounds of force occasionally, and/or 25 to 50 pounds of force frequently, and/or 10 to 20 pounds of force constantly to move objects. Physical demand requirements are in excess of those for Medium Work.

VISUAL MODIFIERS/DEMANDS

The job requires considerable, sustained use of eyesight for functions such as visual inspection, reading, measuring, assembling, transcription, data analysis and operating machines or vehicles and the ability to clearly see at night or in dim light, in daylight or bright light, under glare or poor contrast.

ENVIRONMENTAL MODIFIERS/DEMANDS

The job involves: Exposure to cold working conditions during winter months and to hot working conditions during summer months, exposure to noise - workers must wear protective hearing equipment or frequently shout in order to be heard above the ambient noise level. Exposure to pollutants or allergens which can adversely affect the skin and/or the respiratory system such as gases, smoke, odors, mists, fumes, dust, chemicals, oils or solvents, exposure to hazardous working conditions including moving machinery, electricity and/or working in high places. The job requires the use of protective equipment such as hard hats, respirators, aprons, gloves, special clothing, safety shoes and safety glasses. The job involves continuous work that cannot be easily or economically interrupted for breaks except at regularly scheduled intervals or at the completion of an assignment.

I understand and can perform this job with or without reasonable accommodation.