



STATE OF NEVADA
Department of Administration
Division of Human Resource Management

CLASS SPECIFICATION

<u>TITLE</u>	<u>GRADE</u>	<u>EEO-4</u>	<u>CODE</u>
WELDER II	31	G	9.430
WELDER I	30	G	9.417

SERIES CONCEPT

Welders plan and lay out projects and join metal components of different compositions together using gas welding, arc welding, soldering, and brazing processes to fabricate, strengthen, and/or repair a wide variety of components, equipment, and fixtures.

Work from blueprints and/or through examination of the component equipment or fixture; determine the appropriate type of material based upon education and knowledge of the properties and characteristics of metals and materials and the intended use of the object; determine appropriate quantity of material to minimize waste; complete work orders and cost estimates; order materials; design, cut, and lay out template to ensure a proper fit.

Lay out and fit material in preparation for welding; measure and scribe dimensions and reference points on the material; detail location and sequence of procedures; saw, shear, or cut material; mark and drill or punch holes; position, align, and fit components.

Set up jobs according to the type of work performed; dismantle and straighten components as required; select appropriate welding process based on the type(s) of materials and end use; determine the appropriate welding torch/machine; set up the torch/machine and adjust pressures, mixtures, polarity, and temperatures; select proper welding medium; secure and tack material in place for final welding.

Weld metal components using a variety of gas and arc welding processes including acetylene, alternating currents (AC)/direct currents (DC) arc (stick), gas-tungsten-arc (TIG), gas-metal-arc (MIG), and innershield (flux core wire) welding by applying knowledge of metallurgy and the various welding techniques.

Manually guide equipment along weld lines while observing and making required adjustments; examine weld for quality and conformance to specifications; and reassemble components and equipment after completion of repair.

Operate various machine tools such as a lathe, drill press, grinder, band saw, mill, iron worker, hoists, press, or mechanic's hand tools to complete general repair work as required.

Perform related duties as assigned.

CLASS CONCEPTS

Welder II: Under general supervision, incumbents perform the full range of duties described in the series concept, and in addition, at the advanced journey level, either:

- 1) function as a leadworker for lower-level Welders on a regular basis by assigning and reviewing work, and providing input to performance evaluations, training and technical assistance; or

CLASS CONCEPTS (cont'd)

Welder II: (cont'd)

- 2) in a correctional environment, function as a leadworker for an inmate crew on a regular basis; document inmate performance through completion of periodic performance reports; implement work safety and security procedures to ensure efficient, secure and safe operation of the work unit and the security of assigned inmates, staff, buildings, tools, and equipment in accordance with the Department of Corrections requirements and department policy; secure work areas from unauthorized inmates; or
- 3) function as a Combination Layout Welder or Specialty Welder performing duties that require a greater degree of ingenuity and original problem solving; perform complex layout and fabrication to integrate structural integrity and conserve materials.

Welder I: Under general supervision, incumbents function as General Purpose Welders and perform the full range of duties described in the series concept including maintenance and preventative welding on a wide variety of equipment and fixtures such as repairing tractors, forklifts, desks, gates, fencing, doors, and athletics equipment; fabricate items such as trailers, storage sheds, and duct work for air conditioning systems; and basic equipment modifications. This is the journey level in the series.

MINIMUM QUALIFICATIONS

SPECIAL REQUIREMENTS:

- * Pursuant to NRS 284.4066, some positions in this series have been identified as affecting public safety. Persons offered employment in these positions must submit to a pre-employment screening for controlled substances.
- * Some positions function as specialty welders and must have welding certification issued by the American Welding Society at the time of appointment and as a condition of continuing employment.
- * Some positions require employees to furnish their own tools.

WELDER II

EDUCATION AND EXPERIENCE: Completion of an approved welding apprenticeship training program followed by one year of journey level welding experience; **OR** one year of experience as a Welder I in Nevada State service; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

Working knowledge of: safe working procedures and the proper use, storage, and disposal of hazardous materials; weldability, ductability, and the effect that welding, heating, tempering, cooling, cool forming, wear, and stress have on various materials used in welding. **General knowledge of:** metallurgy and mechanical theory and design. **Skill in:** welding in flat, horizontal, vertical, and overhead positions for various types of welding processes; designing new installations and modifying equipment for new and different functions. **Ability to:** read and interpret engineering drawings and hydraulic and electrical schematics; recognize steel, stainless steel, high carbon steel, manganese, copper, brass, aluminum, and the different families of cast iron; establish and maintain effective working relationships with vendors and other sources of technical information; *and all knowledge, skills, and abilities required at the lower level.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):

Detailed knowledge of: methods, procedures, tools and equipment used in AC/DC arc, TIG, MIG, innershield, air arc, and acetylene welding. **Working knowledge of:** agency and division policies and procedures. **Ability to:** train and provide work direction to others including assigning and reviewing work, establishing work schedules and priorities, and evaluating performance; supervise and direct the work of

MINIMUM QUALIFICATIONS (cont'd)

WELDER II (cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job): (cont'd)
inmates and implement approved security measures in a correctional environment; enforce safety, security, and custodial measures for the supervision of inmates.

WELDER I

EDUCATION AND EXPERIENCE: Completion of an approved welding apprenticeship training program; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

Working knowledge of: methods, procedures, tools, and equipment used in AC/DC arc, TIG, MIG, innershield, air arc, and acetylene welding; composition, properties, and characteristics of different ferrous metals, nonferrous metals and alloys, fluxes, and other materials used in welding; mathematics sufficient to lay out and design patterns, templates, and jigs. **General knowledge of:** metallurgy; health and safety regulations applicable to the trade. **Skill in:** safely operating and maintaining tools and equipment used in welding; AC/DC arc, TIG, MIG, innershield and acetylene welding, brazing, and soldering; straightening and shaping metal. **Ability to:** complete written work orders, supply requisitions, and document specifications; read and interpret welding and metallurgy manuals, welding symbols, and blueprints; work independently and follow through on assignments with minimal direction; inspect assignments and determine the best welding or repair procedure.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(*These are identical to the Entry Level Knowledge, Skills, and Abilities required for Welder II.*)

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

	<u>9.430</u>	<u>9.417</u>
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