



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 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 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, and 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; determine the appropriate welding torch/machine; set up the torch/machine and adjust pressures, mixtures, polarity and temperatures; secure and tack material in place for final welding.

Weld metal components using a variety of gas and arc welding processes including acetylene, AC/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, 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 at the advanced journey level, and in addition, either:

- 1) function as a leadworker for lower level Welders on a regular basis by providing training and technical assistance, assigning and reviewing work, and providing input to performance evaluations;
- 2) in a correctional environment, function as a leadworker for an inmate crew on a regular basis and document inmate performance through completion of periodic performance reports. Incumbents are also responsible for implementing security procedures which include securing the work area from unauthorized inmates and accountability for assigned inmates, staff, tools, and equipment; or

CLASS CONCEPTS (cont'd)

Welder II (cont'd)

- 3) serve as a Combination Layout Welder or Specialty Welder performing duties that require a greater degree of Ingenuity and original problem solving and perform complex layout and fabrication to integrate structural integrity along with the conservation of materials.

Welder I: Under general supervision, incumbents perform the full range of duties described in the series concept that include maintenance and preventative welding on a wide variety of equipment and fixtures such as repairing tractors, forklifts, desks, and athletics equipment, and 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 and incumbents function as General Purpose Welders.

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 (AWS) 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** an equivalent combination of education and experience. *(See Special Requirements)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):
Working knowledge of: 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:** mechanical theory and design. **Ability to:** 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. **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; *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. **Ability to:** train and provide work direction to others including assigning and reviewing work, establishing work schedules and priorities and evaluating performance.

WELDER I

EDUCATION AND EXPERIENCE: Completion of an approved welding apprenticeship training program; **OR** an equivalent combination of education and experience. *(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

MINIMUM QUALIFICATIONS (cont'd)

WELDER I (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application): (cont'd)
lay out and design patterns, templates and jigs. **General knowledge of:** health and safety regulations applicable to the trade. **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. **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.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
Working knowledge of: safe working procedures and the proper use, storage and disposal of hazardous materials; agency and division rules, policies and procedures. **Ability to:** read and interpret engineering drawings and hydraulic and electrical schematics.

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>
ESTABLISHED:	7/1/91P 11/29/90PC	7/1/67
REVISED:		7/1/91P 11/29/90PC
REVISED:	9/19/03PC	9/19/03PC
REVISED:	2/10/06PC	2/10/06PC