UNIVERSITY OF SOUTHERN CALIFORNIA
Engineer Journeyman- Module A
Job Code: 180247

Grade: TA
OT Eligible: Yes
Comp Approval: 12/1/2004

**JOB SUMMARY:**
Performs standard engineering procedures for all boilers and related equipment on heating and ventilation systems. Determines need to repair and/or replace equipment. Estimates materials required for specific job components. Participates in the Engineer Pay for Knowledge and Skills Program including on-the-job training. Performs all appropriate module tasks and demonstrates proficiency as outlined in the Engineer Pay for Skills section, independently or as part of a team, as assigned by the supervisor. May perform tasks in higher-level modules. Trains journeymen and other employees specific skills and tasks as required.

**JOB ACCOUNTABILITIES:**

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<th>*E/M/NA</th>
<th>% TIME</th>
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<td>Repairs, replaces and adjusts pumps, fans, motors, steam valves, heat exchangers, mechanical seals, and building stationary equipment. Works from blueprints, specifications and schematic diagrams.</td>
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<td>Inspects exhaust fans and motors, chemical fume hoods, sump pumps, sewage ejectors, air compressors, condensate pumps, circulating pumps, cooling water system, furnaces, heat exchangers and reverse osmosis units (distilled water system).</td>
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<td>Performs routine safety check on boilers, heating furnaces and all heating and ventilating equipment.</td>
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<td>Monitors and maintains emergency generators, fountains, water softeners and swimming pool equipment. Conducts analysis of water system (boiler water, condensate water, cooling water, soft water system, heating and hot water system, lab equipment and city water) and adjusts chemical levels as required.</td>
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<td>Identifies and resolves operational and safety problems pertaining to heating and ventilating system.</td>
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<td>Installs equipment and fabricates components for system and equipment.</td>
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<td>Estimates materials required for specific job components.</td>
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<td>Maintains clean job site throughout duration and cleans up job site following work completion. Maintains safe working conditions for self and others. Stores and maintains supplies, tools and equipment.</td>
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<td>Trains other journeymen, Zone Maintenance Technicians, or other employees specific skills and tasks, as required.</td>
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<td>Prepares reports and/or maintenance records, as needed.</td>
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<td>Responds to on-call emergencies.</td>
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<td>Performs other related duties as assigned or requested. The University reserves the right to add or change duties at any time.</td>
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*Select E (ESSENTIAL), M (MARGINAL) or NA (NON-APPLICABLE) to denote importance of each job function to position.*
EMERGENCY RESPONSE/RECOVERY:

Essential: [ ] No  [ ] Yes  In the event of an emergency, the employee holding this position is required to “report to duty” in accordance with the university’s Emergency Operations Plan and/or the employee’s department’s emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.

JOB QUALIFICATIONS:

Minimum Education:
High School Diploma or equivalent and completion of four year apprenticeship program

Minimum Experience:
2 Years

Minimum Field of Expertise:
Four years experience as a trade-related trainee may substitute for completion of a four year apprenticeship program. Additional two years minimum experience must be as a journeyman. Experience performing standard trade-related procedures. General knowledge of trade-related methods, materials, tools, and equipment. Familiar with city and state building codes, OSHA rules and regulations, standard safety practices and equipment, and other requirements for workplace safety. 500 (HP) License (HSC Engineers).

Preferred Education:
Related Undergraduate Study

Skills: Administrative:
Compute totals
Gather data
Input data
Prioritize different projects
Read handwritten text
Understand and apply policies and procedures
Use computerized spreadsheets
Use database and/or word processing software
Verify calculations

Skills: Other:
Communication -- written and oral skills
Knowledge of applicable laws/policies/principles/etc.
Planning
Scheduling

Skills: Machine:
Calculator
Personal Computer

Skills: Trade/Auxiliary:
Calculate measurements
Identify technical and equipment problems related to trade
Prepare reports and/or maintenance records
Read, interpret, and comprehend design drawings, blueprints, plans, specifications, and/or sketches
Use and/or operate various stationary machinery, hand held power tools, and/or non power tools

**Supervises:** **Level:**

Trains journeymen and other employees on specific skills and tasks as required

**Comments:**

Valid California Driver’s License required. Must own designated hand tools.

**Pay for Skills:**

Repair/rebuild pump
Perform annual inspection of low water cut-out (L.W.C.O) unit
Adjust fume hood damper to meet flow specs
Perform monthly preventive maintenance on main/pool pumps (UPC only)
Perform daily boiler plant inspection
Clean up boiler tubes for soot
Install, replace, and repair electric motor
Replace pulley
Perform preventive maintenance on air compressor pump and motor
Replace sign glass/gasket
Repair/replace solenoid valves
Replace mechanical seal
Repair/replace blow down valve
Repair/replace leaking pipes
Replace bearings
Replace drive belts
Align fumehood motor and fan pulleys
Order material from outside suppliers
Respond to customers verbally or in writing
Order material from stock

**SIGNATURES:**

Employee: _______________________________ Date: _______________________________

Supervisor: _______________________________ Date: _______________________________

The above statements are intended to describe the general nature and level of work being performed. They are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified.

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