



CITY OF OMAHA CLASS SPECIFICATION

CLASSIFICATION TITLE: POWER SYSTEMS MECHANIC II

BARGAINING UNIT: [CIV BARGAINING](#)

CODE NUMBER: 6566

PAY RANGE CODE: [08145](#)

REVISION DATE: 10/26/17

NATURE OF WORK:

This is skilled work at the journey level involving the installation, maintenance, and repair of power systems and related electrical, electronic, and mechanical equipment at the municipal wastewater treatment plants, flood levee, and pump stations. Employees in this class perform major installation, repair, and adjustment of plant electrical equipment and calibration and repair of telemetry systems, instrumentation, and related electronic equipment. Those assigned to the Facilities Management Division of the Public Works Department also operate, adjust, and maintain boilers, air handlers, heating, ventilation, and air conditioning systems, ice rink refrigeration systems, small refrigeration equipment, and other auxiliary equipment in City owned buildings. They may be assigned as lead workers on larger, more difficult projects.

ESSENTIAL FUNCTIONS: *(Any one position may not perform all the duties listed, nor do the listed examples include all the duties that may be performed in positions allocated to this class.)*

Inspects, maintains, repairs, and installs major power systems including motor control centers, power distribution systems, motors, lighting panels and emergency lighting systems, switchgear, heating and air conditioning systems, refrigeration equipment, air dryers, boilers, heat recovery devices, wiring and conduit, and other electrical, electronic and mechanical equipment.

If assigned to the Facilities Management Division, operates, adjusts, and maintains boilers, gas or oil fired steam plants, air handlers, heating, ventilation and air conditioning systems, ice rink refrigeration systems, small refrigeration equipment, and other auxiliary equipment.

Calibrates and maintains electronic monitoring and controlling devices which includes telemetry equipment, flow meters, gauges, gas detectors, and time delay circuits.

Reads and interprets wiring diagrams, blueprints, sketches, technical manuals, and specifications.

Orders and procures repair and supply parts.

Oversees the work activities of crew members on large projects including equipment installations, provides technical direction and instructions, and assigns tasks.

Prepares daily reports, completes work orders, and maintains preventive maintenance records.

Determines installation, maintenance, or repair procedures and the equipment and materials needed to complete assigned projects.

Assists with the development of work schedules and job priorities.

Maintains regular job attendance in accordance with a schedule established for the position by the supervisor.

Performs other related duties as assigned or as the situation dictates within the scope of this classification.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of and ability to operate a computer or other technology using standard or customized computer or systems software applications appropriate to the assigned tasks.

Knowledge of the materials, tools and equipment, theory, methods, and techniques used in the electrical and electronic trades.

Knowledge of the occupational hazards and safety precautions necessary to perform safely in these trades.

Knowledge of facility operations as they relate to power systems.

Skill in performing installation, maintenance, and repair activities on electrical and electronic equipment.

Skill in the use and care of tools, equipment, and materials used.

Ability to learn and adapt to advances in computer and electronics device technology and software.

Ability to read and interpret technical manuals, schematics, and blueprints of electric and electronic designs.

Ability to prepare reports, complete work orders and other forms, and maintain records.

Ability to understand oral and written instructions.

Ability to adhere to safety policies, procedures, and guidelines.

Ability to establish and maintain effective working relationships with fellow employees and members of the general public.

For those assigned to Facilities Management:

Knowledge of the principles governing the operation of high pressure steam boilers, air conditioning equipment, steam generation, and steam heating systems.

Knowledge of the standard tools and practices used in the repair and maintenance of heating, ventilation, air conditioning, and building equipment.

Knowledge of the occupational hazards and safety precautions involved in high pressure boiler, ventilation, and air conditioning operation, repair, and maintenance.

Ability to diagnose and repair malfunctions in high pressure steam boilers, ventilation, air conditioning, and auxiliary equipment.

EDUCATION AND EXPERIENCE: *(The knowledge, skills, and abilities above may be acquired through, but are not limited to, the following combination of education and/or experience.)*

High school graduation or its equivalent

AND

Education or training in electrical maintenance and repair

AND

Four (4) years of electrical maintenance experience in at least one of the following areas: pumps and motors, hydraulics, or pneumatics. Experience must also include maintenance of equipment similar to that used in the City's wastewater treatment facilities.

If assigned to Facilities Management, must have experience in the operation, maintenance, and repair of high pressure steam boilers, ventilation, and air conditioning equipment, and in making repairs to plumbing and mechanical equipment.

SPECIAL QUALIFICATIONS

Must possess and maintain a valid motor vehicle operator's license at the time of application.

Must possess a forklift operator's permit by the end of the probationary period.

If assigned to Facilities Management:

Must acquire a Third Grade Engineer's certificate issued by the City of Omaha within eighteen months after initial hire.

Must possess a certificate in air conditioning recovery and reclaiming at the time of application.

Must obtain a forklift operator's permit by the end of the probationary period.

Must possess a permit for the inspection, hydrostatic testing, recharging, maintenance, and annual tagging of portable fire extinguishers by the end of the probationary period.

WORKING CONDITIONS: *(The conditions herein are representative of those that must be met by the employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.)*

Work is performed primarily in and around industrial building sites involving working amid high noise levels, vibrating machinery, moving mechanical parts, electrical currents, working in high places and confined spaces, in conditions such as high humidity, fumes, odors, dust, mists, gases, and exposure to chemicals. Work may also be performed outdoors in all weather conditions.

EQUIPMENT OPERATION: *(Any one position may not use all of the tools and equipment listed nor do the listed examples comprise all of the tools and equipment that may be used in positions allocated to this classification.)*

Pickup Truck	Portable Pump
Electric Cart	Power Tools
Forklift	Megger
Band Saw	Multimeter
Drill Press	Ammeter
Grinder	Capacitance Analyzer
Air Compressor	Digital Frequency Meter
Jackhammer	Telemetry Test Instruments
Power Threader	Self-contained Breathing Apparatus
Oscilloscope	Welders and Torches
Phase Sequencer	Battery Chargers
Signal Generator	Overhead Crane
Signal Tracer	Hoist
Hand and Power Tools	Testing Equipment
Ladders	Tap and Die Sets
Manifold Test Gauges	Electric Volt, Amp, and Ohm Meters
Computer	Printer
Copier	

Previous Revision Date(s):	9/24/92	12/11/08
	11/21/02	8/29/13
	9/25/03	

**POWER SYSTEMS MECHANIC II-FACILITIES MANAGEMENT
PHYSICAL REQUIREMENTS**

Physical Requirements	EXAMPLES OF RELATED JOB DUTIES	Rarely 1-5%	Occasionally 6-33%	Frequently 34-66%	Continuously 67-100%
Standing	Servicing HVAC equipment. Servicing may include changing filter, replacing various motors, greasing bearings, and diagnosing faulty equipment.		X		
Walking	Gathering tools, moving throughout building to service HVAC systems. Walking may occur on even or un-even terrain depending on the jobsite			X	
Sitting	Driving to and from various job sites, doing end of the day paperwork, and using diagnostic computers in buildings.		X		
Lifting	Raising and lowering an object weighing up to 100 lbs.			X	
Carrying	Transporting an object up to 50 lbs a distance of up to 30 feet.			X	
Pushing/ Pulling	Pushing/pulling and object up to 60 lbs a distance of up to 50 feet.		X		
Climbing	Getting in and out of van, climbing up and down stairs of various buildings, climbing ladders.			X	
Balance	Working in confined areas, working on ladder, working on roof, working in crawl spaces.			X	
Stooping	Working on equipment at various levels, reaching into various equipment, changing filters and greasing bearings.		X		
Kneeling	Working on lower parts of equipment, replacing generator, installing filters.		X		
Crouching	Working on lower parts of equipment, repairing furnaces.		X		
Reaching	81" overhead reach is required to unlatch the vans ladder rack. Overhead reaches that varies in distance include changing filters, maintenance and repair of various equipment.		X		
Hand Usage	manipulating tools and servicing equipment.				X
Crawling	Access hard to get areas and when is required in ceiling crawl spaces which on average are at a height of 48".		X		

**POWER SYSTEMS MECHANIC II-MISSOURI RIVER WASTEWATER TREATMENT PLANT
PHYSICAL REQUIREMENTS**

Physical Requirements	EXAMPLES OF RELATED JOB DUTIES	Rarely 1-5%	Occasionally 6-33%	Frequently 34-66%	Continuously 67-100%
Standing	Working in the shop and/or working in the facility performing both maintenance and electrical tasks.		X		
Walking	Accessing various sites and equipment within the facility. Walking will be performed on uneven terrain; in various weather; and during day and evening settings.			X	
Sitting	Utilizing the computer to check emails and to review paperwork.	X			
Lifting	Raising and lowering an object weighing up to 83lbs.		X		
Carrying	Examples include moving parts and equipment from the shop to the truck to the various sites in the facility.		X		
Pushing/ Pulling	Pulling wire through conduits; utilizing a chain hoist to maneuver parts and equipment.			X	
Climbing	Stairs – to access multiple sites throughout the facility to repair and replace electrical equipment. Ladder – to access j-boxes. Ramps – to access the various levels in the secondary building.			X	
Reaching	Replacing hot water pumps and when working on j-boxes in the ceiling.		X		
Stooping/Crouching	Examples include working on outlets; j-boxes; gutters; and when accessing wires from the lower levels.		X		
Kneeling	Examples include pulling wires and working on equipment from lower levels.		X		
Hand Usage	Examples include performing maintenance, repair and replacement of parts and equipment; performing both mechanical and electrical work as necessary. Pinching and fine motor grasping will be performed when utilizing wiring tasks and threading wire nuts.			X	
Crawling	Examples include accessing the j-boxes that are found within various sites within the facility.	X			

**POWER SYSTEMS MECHANIC II-PAPIO WASTEWATER TREATMENT PLANT
PHYSICAL REQUIREMENTS**

Physical Requirements	EXAMPLES OF RELATED JOB DUTIES	Rarely 1-5%	Occasionally 6-33%	Frequently 34-66%	Continuously 67-100%
Standing	Working in the shop and/or working in the facility performing both maintenance and electrical tasks.		X		
Walking	Accessing various sites and equipment within the facility. Walking will be performed on uneven terrain; in various weather; and during day and evening settings.			X	
Sitting	Utilizing the computer to check emails and to review paperwork.	X			
Lifting	Raising and lowering an object weighing up to 83lbs.		X		
Carrying	Examples include moving parts and equipment from the shop to the cart to the various sites in the facility.		X		
Pushing/ Pulling	Pulling wire through conduits; utilizing a chain hoist to maneuver parts and equipment.			X	
Climbing	Stairs – to access multiple sites throughout the facility to repair and replace electrical equipment. Ladder – to access j-boxes. Ramps – to access the various levels in the secondary building.			X	
Reaching	Replacing hot water pumps and when working on j-boxes in the ceiling.		X		
Stooping/Crouching	Examples include working on outlets; j-boxes; gutters; and when accessing wires from the lower levels.		X		
Kneeling	Examples include pulling wires and working on equipment from lower levels.		X		
Hand Usage	Examples include performing maintenance, repair and replacement of parts and equipment; performing both mechanical and electrical work as necessary. Pinching and fine motor grasping will be performed when utilizing wiring tasks and threading wire nuts.			X	
Crawling	Examples include accessing the j-boxes that are found within various sites within the facility.	X			

**POWER SYSTEMS MECHANIC II-PARKS DIVISION
PHYSICAL REQUIREMENTS**

Physical Requirements	EXAMPLES OF RELATED JOB DUTIES	Rarely 1-5%	Occasionally 6-33%	Frequently 34-66%	Continuously 67-100%
Standing	Performing equipment diagnostics on large air handler using electrical meters and pressure gauges. Up to 60 minutes 3-5 times per week; Changing air filters 3-5 times per week.		X		
Walking	Accessing equipment and components at the various sites; accessing equipment on facility roofs, moving around the work shop. Walking will be performed on uneven terrain; in various weather; and during day and evening settings.			X	
Sitting	Driving work vehicle to various facilities.	X			
Lifting	Raising and lowering an object weighing up to 55lbs.		X		
Carrying	Examples include moving parts and equipment from the shop to the work vehicle to the various work sites.		X		
Pushing/ Pulling	Pulling wire through conduits; utilizing wrenching tool; moving parts via cart; moving heavy equipment with 4-wheel cart.			X	
Climbing	Stairs – to access mechanical rooms at various facilities Step Ladders and extension ladders – to access equipment above ceiling including mixing boxes and heat pumps. Vertical Ladders – to access roof at various facility including Montclair Community Center and Mockingbird Community Center; access into pits at Heartland of America Park			X	
Reaching	Working off ladder accessing mixing boxes and heat pumps.	X			
Stooping/Crouching	Working off ladder accessing mixing boxes and heat pumps.		X		
Kneeling	Examples include accessing control panels on residential type furnaces found in various facilities.		X		
Hand Usage	Examples include performing maintenance, repair and replacement of parts and equipment; performing both mechanical and electrical work as necessary. Pinching and fine motor grasping will be performed when utilizing wiring tasks and threading wire nuts.			X	
Crawling	Examples include accessing some equipment in the large air handlers.	X			