MAINTENANCE MECHANIC WG-4749-09

OPERATIONS WORKCENTER

I. POSITION AND ORGANIZATION INFORMATION

Position:

Maintenance Mechanic, WG-4749-09

Purpose of position:

The primary purpose of this job is to provide full performance level work in constructing, installing, repairing, and modifying wood and wood substitute structures and items requiring close tolerance fit and structural soundness, and performing the full range of painting, including surface preparation, blending and matching paints, and coating of various surfaces requiring fine finishes and decorative effects.

Organization:

Facilities Management & Airfield Support

Organization goals:

II. MAJOR DUTIES

A. Duty (Critical):

Plans and lays out work from blueprints, sketches, drawings, specifications, and work orders in the construction and maintenance of installation facilities. Reviews work order requirements reflecting structures to be constructed, installed, modified, altered, or repaired. Visits worksite and analyzes, evaluates, and determines structural damage when planning repair and modification projects. Makes changes to job layout based on on-site inspection of job. Interprets and applies complex building plans, blueprints, wiring diagrams, engineering drawings, and maintenance and repair manuals to determine material, tools, and equipment needed for the project and how or what repairs need to be made. (16%)

Tasks:

1. Interprets blueprints, sketches, work orders, and specifications and determines project requirements.

2. Plans sequence of work by accurately determining work to be done and corrective measures to be taken.

3. Determines the proper tools and material required for the job or projects.

Selected Staffing KSAs:

A1, A2, A3, A4, A5, A6, A7, A8, A9

B. Duty (Critical):

Independently applies skilled methods, techniques, and advanced shop mathematics to construct, install, repair, and modify a wide variety of structures. Works on projects, such as building frames, rafters, concrete forms, walls, staircases, door and window frames, interior and exterior trim, and other miscellaneous items. Completes work from initial layout to final assembly by interpreting and applying complex building plans, specifications,

blueprints, sketches, and other guides and codes. Applies a full range of carpentry methods in accomplishing complex tasks requiring construction of irregular sizes, shapes, and angles with precise fits and accurate dimensions. (16%)

Tasks:

1. Produces finished products according to specifications.

2. Determines the proper grade, size, and types of lumber or special related materials required for projects.

Selected Staffing KSAs:

A1, A2, A3, A4, A9, A10

C. Duty (Critical):

Prepares various surfaces of interior and exterior components of buildings and other structures by mechanically and chemically removing old paint and rust, filling cracks, sanding, and applying fillers and base coats. Washes and sands surfaces as necessary, and treats them with oil, turpentine, or other preparations. Selects more sophisticated methods of surface preparation, when necessary to ensure a high quality, decorative finish. (16%)

Tasks:

1. Prepares surfaces which are in proper shape, level, and smoothness.

2. Prepares surfaces to be free of major dents, scratches, nicks, loose paint, and feathered edges.

Selected Staffing KSAs:

A3, A4, A6, A8, A9, A10

D. Duty (Critical):

Applies skilled methods and techniques in paint preparation and coating applications. Mixes, thins, blends, matches, tints, and tones coating materials. Adds pigment and/or thinners to gauge the change of color tone and drying properties. Mixes stains, epoxies, enamels, varnishes, shellacs, lacquers, plastic paints, bituminous paints, and other surface coating materials. Applies coating materials using brushes, rollers, spray guns and other means of application. Applies coating techniques that ensure surfaces have a smooth textured and decorative appearance and meet thickness and level requirements. Sets up, adjusts, and operates spray painting equipment or other power painting equipment. Sands between coats and rubs or polishes final coats as necessary to obtain proper adhesive between coats and specified finishes. May bake finish on enameled and painted articles. (16%)

Tasks:

1. Blends coating material, matches colors, and mixes pigments according to the manufacturer's directions in order to meet specific thickness requirements and obtain desired texture and color.

2. Products meet protective requirements and surfaces are routinely free from skips, runs, or drips.

3. Work is in compliance with specifications, completed within specified time frames, and meets customer requirements.

Selected Staffing KSAs:

A3, A6, A7, A8, A9, A10, A11

E. Duty (Critical):

Utilizes safety practices and procedures following established safety rules and regulations and maintains a safe and clean work environment. Uses and assures proper fit of required safety equipment and clothing. Follows federal and state rules when storing, using, handling, labeling, and disposing of hazardous materials and waste in accordance with environmental standards. Performs clean-up duties, such as cleaning equipment, sweeping, straightening, and lining up tools, and other property in the assigned area. (16%)

Tasks:

1. Operates equipment in a safe manner, applying established safety rules and regulations to minimize minor violations and to avoid major violations due to employee error or negligence.

2. Adheres to safety and security procedures and regulations and promptly reports any observed or identified violations in accordance with established guidelines.

3. Complies with environmental laws and regulations when working with chemicals and disposing of toxic and hazardous waste.

Selected Staffing KSAs:

A1, A2, A3, A6, A7, A8, A9, A10, A11

F. Duty (Critical):

Uses and maintains tools. Maintains bench stock levels of parts, materials, tools, and equipment at prescribe levels. Uses tools and equipment such as plumb lines, chalk lines, levels, dividers, calipers, marking gauges, framing squares, jointers, shapers, tenoners, routers, saws, lathes, brushes, rollers, spray guns, graining devices, viscosity testers, thickness gauges, compressors, as well as common hand and power tools, to do the work. Occaisionally operates jackhammer, concrete saw and rotary hammers. Maintains records and documents actions. Initiates or annotates forms or reports such as Operator's Inspection Guide and Trouble Report, Temporary Issue Receipt Form, Base CE Work Clearance Request Form, and updates the Civil Engineering Material Acquisition System (CEMAS). (20%)

Tasks:

1. Uses, maintains, and accounts for all types of hand and/or power tools required to accomplish assigned duties.

2. Prepares record of actions taken and assures documentation is properly signed and coordinated.

Selected Staffing KSAs:

A1, A2, A3, A5, A10

G. Duty (Critical):

Uses skilled techniques to construct, install, repair, and modify wood and wood substitutes to produce a wide variety of structures. (0%)

Tasks:

1. Operates general and precision carpentry and woodworking equipment to produce finished products with precise fits, accurate dimensions, and acceptable appearance.

2. Determines the proper grade, size, and type of lumber or wood substitute materials, construction techniques, layout, work sequence, and types of lumber or special related materials for projects.

3. Interprets complex instructions, sketches, blueprints, and building codes.

4. Operates, adjusts, and maintains a wide variety of hand and power tools and equipment and adheres to safety procedures.

Selected Staffing KSAs:

A12

III. KNOWLEDGES, SKILLS AND ABILITIES (KSAs)

A. Selected Staffing KSAs:

1. Knowledge of carpentry methods and techniques and skill in constructing, installing, repairing, and modifying wood structures.
2. Knowledge of precision carpentry equipment and ability to produce finished products with precise fits, accurate dimensions, and acceptable appearance.
3. Knowledge of safety regulations, practices, and procedures.
4. Knowledge of advanced shop mathematics to plan, compute, and lay out more complex projects.
5. Knowledge of regulations, procedures, and policies related to records maintenance and documentation.
6. Knowledge of accepted surface preparation and coating methods including special finishing techniques.
7. Knowledge of paints and thinning additives and skill in tinting, toning, matching, and blending coating materials.
8. Knowledge of current federal, state, and local regulations pertaining to hazardous waste management.
9. 10. Ability to interpret complex instructions, sketches, blueprints, and building codes.
10. Skill in setting-up, operating, and maintaining a variety of painting and woodworking power and hand tools/equipment.
11. Ability to read and apply directions that relate to the mixture, use, and application of various kinds of coating materials, solvents, and precoating agents.
12. Ability to do the work of the position without more than normal supervision

B. Basic Training Competencies:

1. Knowledge of carpentry methods and techniques and skill in constructing,

installing, repairing, and modifying wood structures.

2. Knowledge of precision carpentry equipment and ability to produce finished products with precise fits, accurate dimensions, and acceptable appearance.

3. Knowledge of safety regulations, practices, and procedures.

4. Knowledge of advanced shop mathematics to plan, compute, and lay out more complex projects.

5. Knowledge of regulations, procedures, and policies related to records maintenance and documentation.

6. Knowledge of accepted surface preparation and coating methods including special finishing techniques.

7. Knowledge of paints and thinning additives and skill in tinting, toning, matching, and blending coating materials.

8. Knowledge of current federal, state, and local regulations pertaining to hazardous waste management.

9. 10. Ability to interpret complex instructions, sketches. blueprints, and building codes.

10. Skill in setting-up, operating, and maintaining a variety of painting and woodworking power and hand tools/equipment.

11. Ability to read and apply directions that relate to the mixture, use, and application of various kinds of coating materials, solvents, and precoating agents.

12. Ability to do the work of the position without more than normal supervision

13. Knowledge of equipment assembly, installation, and repair

14. Ability to apply technical practices in the performance of assigned work

15. Ability to interpret instructions, specification, etc. (including blueprint reading)

16. Ability to measure and lay out materials, tools, steps, etc., needed to perform assignments

17. Ability to use and maintain tools and equipment

18. Knowledge of the materials needed to complete assignments

IV. CLASSIFICATION FACTORS

Factor 1. Knowledge

1. -- Thorough knowledge of wood and wood substitute materials and construction techniques.

-- Skill to apply woodworking techniques necessary to produce items or structures which require accuracy, spacing, fit, structural soundness, and a finished appearance.

-- Ability to use a variety of joining techniques such as miters, rabbets, dados, biscuits, and mortises and tenons to assemble items and to use glues and adhesives to secure wood pieces, veneers, and counter tops.

-- Skill in the operation of general and precision carpentry and wood working equipment (to include powered and hand tools) to produce products with precise fits, accurate dimensions, and acceptable appearance.

-- Skill in applying knowledge of advanced shop mathematics to plan, compute,

and lay out more complex and exact projects with features, such as arcs, tangents, and circles.

-- Skill in interpreting complex instructions, sketches, blueprints, and building codes.

-- Knowledge of accepted surface preparation and coating methods and techniques. Knowledge in how to build up, shape, and level surfaces with metal and synthetic resins, plastics, and patching compounds.

-- Skill in obtaining finely-smoothed surfaces with abrasive compounds, pumice, and rotten-stone, evening out dents and scars by burning in process, and treating surfaces with precoating agents.

-- Skill in applying coating materials using accepted methods of the trade to meet match, texture, decorative, thickness, and level requirements and to achieve special effects. Skill in rubbing down (for fine-texture finishes), marbling, mottling, and graining techniques.

-- Skill in determining the methods, techniques, devices, and materials best suited to obtain the surface condition and finish required.

-- Skill in matching, tinting, toning, and blending coating materials, and in combining agents with coating materials, following manufacturer's requirements.

-- Skill in the use of standard and special surface treatment and testing equipment.

-- Skill in reading and applying directions that relate to the mixture, use, and application of various kinds of coating materials, solvents, and precoating agents.

2. - Skill to apply woodworking techniques necessary to produce items or structures which require accuracy, spacing, fit, structural soundness, and a finished appearance. Ability to use a variety of joining techniques such as miters, rabbets, dados, biscuit, and mortise and tenon to assemble items and to use glues and adhesives to secure wood pieces, veneers, and counter tops.

3. - Applies a thorough knowledge of material strengths and construction techniques to construct, install, repair, and modify structures such as building frames, rafters, concrete forms, walls, stair cases, interior and exterior trim, miscellaneous items such as counter tops, equipment cabinets, computer consoles, and items requiring limited decorative trim and molding.

- Skill to construct air and weathertight assemblies such as equipment shelters for ships undergoing refitting of military hardware.

4. - Skill to set up, operate, adjust, and maintain all types of carpentry equipment to produce finished product with precise fits, accurate dimensions, and acceptable appearance.

5. - Skill in applying knowledge of advanced shop mathematics to plan, compute, and lay out more complex and exact projects with features such as arcs, tangents, and circles.

6. - Skill in interpreting complex instructions, sketches, blueprints, and building codes to accomplish complex carpentry work.

7. - Knowledge of safety procedures.

Factor 2. Responsibility

Receives assignments orally or by work orders. Accomplishes all phases of work independently including work requiring close tolerances, precise fit, and a finished appearance. Employee is responsible for determining the methods, techniques, materials, and devices best suited to prepare and treat surfaces, to obtain smooth-textured and decorative surfaces, and to insure that surface finishes meet level and thickness requirements. Independently initiates and completes assignments under minimal supervision or minimal review of work in progress. Uses initiative in accomplishing work assignments. Uses judgment in evaluating problems. Determines material and equipment needs to accomplish a wide range of work sequences ranging from basic repairs to complex project segments. Responsible for safely operating powered equipment and hand tools and adhering to all safety procedures. Work is reviewed for compliance with building codes, objectives, timeliness, and quality of workmanship and established trade standards.

Factor 3. Physical Effort

Uses hand and power tools and equipment that may require standing and holding tools in uncomfortable positions for extended periods. The work requires considerable bending, kneeling, and stooping. On-site work typically requires crawling, climbing on ladders, scaffolds, and roof tops. The employee prepares and coats surfaces from ladders, scaffolds, and platforms, and in situations where the surfaces to be coated are in cramped and hard-to-reach places. The work may be at extreme heights (such as water towers or tall buildings). Strenuous physical exertion is sometimes required when handling heavy and bulky materials such as sheets of plywood and other construction materials. May lift and move materials up to 40 pounds, unassisted, and occasionally lift or move heavier items with the assistance of lifting devices or other workers.

Factor 4. Working Conditions

Works inside shops and outside at job sites. In shops, is exposed to moderate or high noise levels from operating machinery, sawdust in the air, fumes, and hazards associated with carpentry and painting trades. At job sites, may be exposed to weather conditions and hazards of working on and around scaffolds and ladders and are subject to cuts, bruises, and contusions; may occasionally be exposed to the possibility of broken bones. May work in confined areas such as crawl spaces and attics which may be dusty and dirty. Uses protective devices, such as ear plugs, safety glasses, respirators, safety shoes, hard hats, coveralls, gloves, rain gear, and other protective gear are required, which are sometimes heavy and uncomfortable.

V. CLASSIFICATION SUMMARY

In this position:

Duty A. 16% WG-4749-09 Maintenance Mechanic
Plans and Lays Out Work

Duty B. 16% WG-4749-09 Maintenance Mechanic
Applies Skilled Methods

Duty C. 16% WG-4749-09 Maintenance Mechanic
Prepares Various Surfaces

Duty D. 16% WG-4749-09 Maintenance Mechanic
Applies Skilled Techniques

Duty E. 16% WG-4749-09 Maintenance Mechanic
Utilizes Safety Practices

Duty F. 20% WG-4749-09 Maintenance Mechanic
Uses and Maintains Tools

Duty G. 0% WG-4607-09 Carpenter
Intermediate and Journey Level

List of Modified Duties and Factors:

Duty F. has been edited. The final grade may or may not be appropriate. The factors have not been changed.

Classification criteria for positions in this menu are located in OPM Federal Wage System Job Grading Standard, Carpenter 4607, (TS-61) April 1991; Job Grading Standard for Trades Helper Jobs, (TS-3) November 1968; and Job Grading Standard for Intermediate Jobs, (TS-3) November 1968.

OPM Job Grading Standard for Carpenter, *WG-4607, TS-61 dated April 1991; OPM* Job Grading Standard for Painter, WG-4102, TS-9 dated November 1969; and OPM Job Grading Standard for Maintenance Mechanic, WG-4749, TS-30 dated May 1974.

Remarks: Carpentry duties equate to WG-09. Painter duties equate to WG-09.

Note: This is a multi-skilled position. For this SCPD, the primary purpose is to perform carpentry and painting work. This SCPD should be applied when both trades are performed on a regular and recurring basis at the WG-09 level. If a local determination is made that these two skills do not encompass a substantial portion or primary responsibility of the position or the highest level of work is being performed in a single occupation (e.g. Carpenter), this SCPD is not appropriate. In cases where it is not clear cut, local classifiers should consult with the supervisor to choose the more important occupation for recruitment, selection, placement, promotion, or

reduction-in-force.r

The classification information in this program is based on the "Job Grading System for Trades and Labor Occupations, Parts 1, 2, and 3" which includes Explanation of Job Grading System, Job Grading Standards, and Definitions of Trades and Labor Job Families and Occupations. The definition for the General Maintenance and Operations Work Family, 4700, is particularly pertinent.

Grade: WG-09