

MARINE QUALITY ASSURANCE SPECIALIST

This is technical work in the inspection, surveying, and monitoring completion of repair work for all Ferry Division vessels and equipment.

Employee surveys vessels, generates work lists, notes deficiencies to codes and regulations, and assists in the preparation of shipyard maintenance specifications and repair contracts. Work includes acting as the State representative for contracts at commercial shipyards, assuring that all specifications and codes are adhered to during repair and construction work, and performing quality control inspections and surveys at the State's Manns Harbor marine maintenance facility. Employee will review and evaluate the feasibility of shipyard work requests, perform complete visual and instrumental inspection of vessels, note mechanical or structural problems, recommend level of repair, and assist in the research of materials, codes and regulations. At commercial shipyards, employee inspects all work and materials associated with repairs, interprets and determines conformance to specifications, negotiates supplemental work agreements or deletions, selects and approves sub-contractors, makes decisions relating to change orders, and evaluates progress to determine amount of progress payments. Employee will also coordinate the delivery, return, acceptance tests, sea trials, and inspection of vessels by U.S. Coast Guard inspectors. Other duties include training and instructing vessel crews in the use of new machinery and equipment, conducting underwater surveys and performing emergency underwater repairs, evaluating vessel operational problems, researching solutions and new construction/modification designs, and developing recommendations to the Marine Engineer. Employee works under general supervision and is reviewed through discussions with supervisor, reports and project results. Work may include other duties as assigned.

I. DIFFICULTY OF WORK:

Complexity - Work assignments consist of inspecting a vessel's structure and systems before, during, and after maintenance, repairs, or alterations. Structure inspections require visual reviews and the use of non-destructive testing such as ultrasonic, magnetic particle, and die penetrant weld tests. Major vessel structural members and hull plates are inspected as well as mechanical, electrical, pneumatic, water, hydraulic, plumbing, fire fighting, and navigational systems. Employee evaluates the feasibility of shipyard work requests, determines production progress, and assists in the research relating to marine construction/modification designs, new equipment, and codes and regulations.

Guidelines - Guidelines are generally detailed and specific but very extensive. Employee does interpret contract conditions, negotiate supplemental work agreements, interpret blueprints and regulations, and cross-references various codes and standards. Codes and standards include applicable portions of the Consolidated Federal Regulations, American Bureau of Shipping, Institute of Electrical and Electronic Engineers, National Fire Protection Association, ASME, ASNT, ASTM, and AWS. Employees also utilize manufacturers' operation, repair, and overhaul manuals; and marine trade publications.

II. RESPONSTBTTITY:

Accountability - With a vessel in a commercial shipyard, employee is the authorized representative and inspector for the Department of Transportation. This involves exercising independent judgment concerning contract conditions, specifications, codes, regulations, and contract supplements. When supplements to the contract are negotiated by the employee, their decisions are binding to the contractor and the State.

Consequence of Action - Decisions rendered and actions taken by the employee at a commercial shipyard could reflect adversely on the Division and State Government in general. Errors in inspection and testing could result in the loss of damage to equipment, and disruption of ferry schedules. Serious errors could result in personal injury or loss of life to passengers and crew.

Review - Employee functions with considerable independence especially while at commercial shipyards. Work is reviewed through discussions, reports; and proposed specifications, procedures, or sketches of changes prepared by the employee. Vessels assigned to toll operations must also pass a U.S. Coast Guard inspection before being returned to service.

III. INTERPERSONAL COMMUNICATIONS:

Subject Matter - Work requires contact with other Ferry Division employees, contractors' personnel, manufacturer representatives, and United States Coast Guard personnel. The exchange of information is generally with those who have an understanding of the topic being discussed.

Purpose - Employee has contact with other Ferry Division employees to discuss and evaluate problems with equipment. Contact is necessary with contractors' personnel to assure compliance with contract and applicable codes and standards; and to negotiate supplemental work agreements. Employee coordinates inspections, acceptance tests, and sea trials with the United States Coast Guard.

IV. WORK ENVIRONMENT:

Nature of Working Conditions - Work is performed in the office of the Ferry Division, in the field within the Ferry Division, and at commercial shipyards. When in commercial shipyards, employees work from twelve to twenty hours per day, seven days a week inspecting equipment, discussing and negotiating with the contractor's personnel, and completing reports. This is typically for a period of from one to four months at one time. Inspection work in the field and at shipyards requires a great deal of walking, climbing, and crawling for periods of up to four continuous hours. Employees crawl in and out of voids and machinery spaces with temperatures below freezing in winter and over 120 degrees in summer. While performing field and shipyard work, employees are exposed to dust, noise, fumes, odors, vibrations, flames, glare, sparks, grease, cutting tools, moving machinery, hot liquids, chemical substances, inclement weather, and other health hazards.

Nature and Potential of Personal Hazards - Potential for bodily injuries is ever present when employees work on and under superstructures; in and around bilges and hulls; under water; in machine shops, carpentry shops, steel fabrication shops, electric shops, and paint shops.

V. RECRUITMENT STANDARDS:

Knowledges, Skills, and Abilities - Considerable knowledge of shipbuilding trades and applicable codes and standards. Skill in the use of testing instruments such as calipers, micrometers, hygrometers, manometers, tachometers, and pressure measuring devices. Ability to represent the Department of Transportation in a firm and fair manner at commercial shipyards; inspect vessel repairs and modifications; and negotiate with owners or their representatives. Ability to read and interpret shipyard maintenance specifications, repair contracts, and blueprints. Ability to research codes, regulations, ship modifications, and new techniques in shipbuilding. Ability to perform repairs and inspections under water.

Minimum Education and Experience - Graduation from high school and five years of experience in the inspection or construction of steel ships; or an equivalent combination of education or experience.