WASHINGTON STATE DEPARTMENT OF PERSONNEL

60260

Specification for Class of

MARINE ELECTRICAL ENGINEER

Abolished 9/15/06

Definition: In the Marine Division of the Department of Transportation, prepares skilled professional marine electrical engineering designs and estimates.

Typical Work

Prepares the designs, calculations, specifications and working drawings for minor and major ferry vessel modifications, repairs and new construction projects, including, but not limited to, electrical power distribution, interior communication, navigation, lighting, power generation, switchgear, short circuit analysis, power analysis and shore power; in addition, verifies that all designs conform to U.S. Marine Regulatory Bodies Rules and Regulations; coordinates with other design sections of vessel design, vessel engineering and operations;

Performs shipchecks to verify drawings and calculations for repair and modifications and to write specifications; prepares specifications for equipment and material purchases in conformance with U.S. Marine Regulatory Bodies Rules and Regulations, and for shipyard installations and removals; estimates cost for shipyard work and equipment purchases; prepares operating procedures for new equipment;

Reviews vendor plans and manuals for conformance to purchase specifications and working plans; reviews consultant and contractor drawings, specifications and estimates for technical quality and contract compliance; reviews designers and drafters work for accuracy, compliance with specs and agreement with calculations;

Performs other work as required.

Knowledge and Abilities

Knowledge of: engineering principles, practices and methods with emphasis on electrical and mechanical design; efficient use of construction equipment; arithmetic, geometry, calculus and engineering formulas; hydraulics and hydraulic structures; surveying and mapping; theory principles and practices of

Electrical/Electronic Engineering, particularly as it relates to shipboard practices, marine engineering drafting procedures and equipment; the fundamentals of marine mechanical systems and hull structure.

Ability to: exercise sound and independent professional judgment in making decisions and rendering advice to other professional engineers on difficult mechanical and electrical engineering problems; analyze and prepare engineering plans and reports; do complicated mathematic computations; plan, supervise and coordinate engineering work going beyond scope of ordinary electrical engineering; negotiate with officials of other governmental agencies; draft specifications for the purchase of electrical equipment and materials; define the modifications and/or repairs required to be accomplished by a shipyard, in accordance with the latest U.S. Marine Regulatory Bodies Rules and Regulations; be able to communicate with inspectors from other agencies as well as the personnel on other sections of vessel design, vessel engineering and operations and, on occasion, with private industry.

Minimum Qualifications

A Bachelor of Science degree in Electrical Engineering and four (4) years of Marine Electrical Design experience in design and installation of shipboard electrical and electronics systems to the requirements of U.S. Marine Regulatory Bodies Rules and Regulations.

OR

Registration as an Engineer-in-Training and six (6) years of Marine Electrical Design experience in design and installation of shipboard electrical and electronics systems to the requirement of U.S. Marine Regulatory Bodies Rules and Regulations.

New class
Effective July 13, 1990