

MARINE ELECTRONICS TECHNICIAN (DOT)

General Statement of Duties and Responsibilities

Under general direction, with wide latitude for independent judgment and action, is responsible for the electronic control and monitoring systems regulating the electrical/mechanical systems aboard vessels operated by the Department of Transportation and the Department of Environmental Protection. All personnel perform related work.

Examples of Typical Tasks

Operates, maintains, repairs and troubleshoots electrical/mechanical systems and controls regulating vessels' medium voltage diesel electric propulsion generators, alternate current medium voltage variable frequency drives, and auxiliary machinery, required to power, propel and navigate the vessels, including: engines, generator sets, drives, motors, connected controllers and switchgear, as well as the vessel's lighting, air and signal systems.

Performs periodic and routine diagnostic tests on electronic monitoring and control systems and related hardware equipment to ensure optimal performance; makes adjustments and repairs as needed.

Customizes and maintains software programs associated with vessels' PLC (Programmable Logic Controller) based control and monitoring systems and similar successor and related systems, by setting parameters, making adjustments and updating programs.

Assists engineering staff in developing preventative maintenance procedures for vessels' electronic monitoring systems.

MARINE ELECTRONICS TECHNICIAN (DOT) (Continued)

Examples of Typical Tasks (Continued)

Monitors and updates the programmable logic controller and other associated operating systems software and programs; interprets data produced by these programs; makes adjustments to optimize vessel efficiency.

Routinely boards vessels to inspect, repair, calibrate and test the electronic control hardware and data acquisition units, including all instrumentation associated with main propulsion and auxiliary machinery.

Assists in developing machinery service contracts by defining scope of work for vendors contracted to perform periodic safety tests and inspections to ensure compliance with American Bureau of Shipping and United States Coast Guard regulations; coordinates and assists in safety tests of automation control systems.

Assists in developing and conducting training programs for vessel engineering personnel.

Qualification Requirements

1. A baccalaureate degree from an accredited college, with specialization in Electronic Engineering, Electrical Engineering, Marine Engineering, Electrical Technology or Electronic Technology, and at least four years of satisfactory full-time experience using medium voltage alternating current variable frequency drives and power systems, utilizing Programmable Logic Controller systems or comparable computer-system experience; or
2. An associate degree from an accredited college in Electrical or Electronic Technology, and at least six years of satisfactory full-time experience using medium voltage alternating current variable frequency drives and power systems, such as Programmable Logic Controller systems as described in "1" above.

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Lines of Promotion

None. This class of positions is classified in the Non-Competitive Class.