

FERRY CHIEF ENGINEER

CLASS CONCEPT

Work in this class involves full responsibility for supervising and coordinating activities of vessel personnel engaged in operating and maintaining propulsion and other engines, generators, deck, machinery, electrical, refrigeration and sanitation equipment and other related systems on board ferry vessels. Employees operate the engineering systems in accordance with rules and regulations established by the U.S. Coast Guard, North Carolina Department of Transportation and policies and procedures of the Ferry Division. Employees are responsible for following all safety and Homeland Security rules and regulations. Work is reviewed by superiors through written reports and by inspections performed by United States Coast Guard personnel. Employees may perform other duties as required.

I. DIFFICULTY OF WORK:

Variety and Scope - Duties include executing daily orders received from the Ferry Master which pertain to the engineering and related systems; checking, operating and maintaining engineering equipment including main and auxiliary machinery, piping, plumbing, sanitation, electrical, hydraulic, heating and air conditioning systems; ensuring the vessel has an adequate supply of fuel and lubricants on board; supervising or cleaning work spaces; maintaining routine vessel fire fighting equipment; preparing and submitting scheduled and incident reports; keeping required logs and related records; and maintaining inventory of spare parts and tools.

Complexity of Work - Complexity is associated with performing preventive maintenance tasks and checking, operating and maintaining marine equipment such as engines, generators, steering gears, pumps and other auxiliary equipment.

Judgmental Demands - Judgment is exercised in inspecting vessel systems; operating engines according to instructions; assembling diesel engines following overhaul; fueling vessels to prevent pollution to environment; and standing engine room watch and monitoring/observing condensers and evaporators, load on generators, oil, water and grease levels and pressure, engine temperature and revolutions per minute.

Controls Over Work - Instructions are received verbally in accordance with established schedules. Employees are expected to perform duties independently as no technical review is received while work is in progress.

II. RESPONSIBILITY:

Potential for Loss - Errors made in overhauling engines and monitoring various system gauges could result in costly repairs. Errors in preparing engineering systems for daily operation could result in flooding, fire or possible explosion. Improper fueling of vessel could result in oil pollution of the marine environment. Improper operation of engines could result in collisions with other vessels, as well as material damage to both private and public property.

Safety of Others - Employees are responsible for complex, expensive and potentially dangerous engineering systems. Failure to comply with stringent safety measures could result in fire, flooding, explosion or electrical shock causing severe injury or death.

III. MENTAL AND VISUAL DEMANDS:

Visual Attention - Employees must continuously exercise visual attention in all phases of operating vessel engineering systems, including reading system instrumentation and gauges.

Mental Concentration - Employees must be extremely aware and attentive while standing watch in the engine room; assembling internal combustion engines; starting and operating engines and generators; reading numerous gauges and other instruments related to marine engineering equipment; and refueling vessels.

IV. PHYSICAL EFFORTS:

Intensity of Efforts - Occasional heavy effort is required during overhauls of marine engines and generators. Moderate physical effort is required in accessing vessel void spaces, climbing ladders or stairs and during refueling operations.

Frequency and Duration of Effort - This is a confined marine environment requiring long work hours. The environment has very high ambient atmospheric temperatures due to the continuous operation of internal combustion engines. Entry into very confined voids and other spaces is routinely required.

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V. WORKER SURROUNDS AND HAZARDS:

Worker Surroundings - Employees work in a confined vessel engine room. Employees are exposed to extreme temperatures and high noise levels.

Hazardous Conditions - Employees may be subject to injury while maintaining or repairing equipment. Employees perform work utilizing hand and power tools, chain hoists, air compressors, electrical equipment and other equipment with potential for back injury, burns, electrical shock and hearing damage.

VI. CONTACTS AND COMMUNICATIONS:

Purpose of Contacts - Instruct, monitor, train and supervise engine room personnel during operations, communicate with shore personnel.

Scope of Contacts – Contacts include the crew personnel and shore support employees. Occasional contact with the traveling public, U.S. Coast Guard Inspectors, visitors and appointed or elected officials.

RECRUITMENT STANDARDS

Knowledge, Skills and Abilities

Thorough knowledge of the operations, maintenance and repairs of marine diesel and gas engines, pumps, generators and other auxiliary equipment.

Thorough knowledge of State, Federal and U.S. Coast Guard laws and regulations regarding occupational hazards and safety precautions for engine room work aboard ferries.

Considerable knowledge of electricity and its proper use, including providing independent power while vessel is underway, as well as shore power when vessel is moored.

Skill in making temporary and permanent repairs.

Ability to supervise and instruct personnel in all areas of ferry engine room operations.

Ability to overhaul and maintain complex engineering equipment, including large internal combustion diesel engines.

Ability to establish and maintain effective relations with fellow employees and the traveling public.

Minimum Training and Experience Requirements

Possession of a valid U.S. Coast Guard license as Chief Engineer or Designated Duty Engineer with the appropriate horsepower for the vessel operated.

Necessary Special Qualification

Possession of a Transportation Worker Identification Credential Card (TWIC) issued by the Transportation Security Administration (TSA).

Special Note

This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class, but may not be applicable to all positions.