

Chief Engineer

ROLE OVERVIEW

Chief engineers are frontline leaders of the engine department typically on a merchant ship which may vary in size from 200 to 620 feet.

They are responsible for the overall supervision, operation, and maintenance of the engine room. They are usually required to have the capacity to operate the vessel if they must relieve the captain. Their main task is to ensure sea worthiness and prevent vessel breakdown and collision while on sea. Chief engineers provide leadership and direction to the engineering personnel and provide training to recruits within the organization. They are knowledgeable and experienced in vessel operations, environmental protection, pollution regulations and safety management systems.

They typically work offshore and onboard a ship for prolonged periods of time with the expectation of adverse weather conditions while on voyage. As the overall manager of the engine room, they engage in interactions with external sub-contractors to ensure proper supply of inventory, spare parts and provide performance reports for review by stakeholders and management. They also on occasion, provide input during the ship building process to sign off on engine room design, test platforms and certify ships on completion.

They are responsible for setting up and adhering to operational budget within the engineering department and abiding by the purchasing procedures of the organization. Chief engineers usually require various certifications in emergency duties, safety, and transportation to operate in this field and a minimum educational background of a college diploma.

STRATA LEVEL: 3 – Technical Specialist

Also Known as:

- Marine Chief Engineer
- Marine Engineer
- Ship Engineer

Education and Experience:

- A minimum of 4-7 years of experience as a chief engineer on a vessel.
- Post-secondary education in Engineering, preferably Marine engineering.
- 1st Class Marine Engineer Certificate.
- 1st, 2nd, and 3rd Class Motor Certificates.
- Marine Emergency Duties and Advanced First Aid.
- Transportation of Dangerous Goods Certificate.
- Safety Management Systems (ISO & ISM).

Associated NOC(s):

- **2274** – Engineer Officers, Water Transport



TECHNICAL



Ship Building

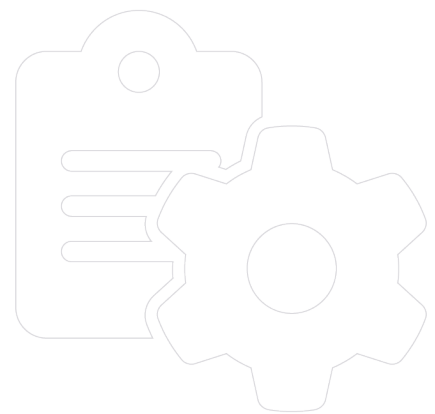
Coordinates with stakeholders and project manager to sign off on ship and engineering designs, test platforms and certify ships on completion.

- Ensures proper fitting of machinery and equipment to prevent corrosion and leaks.
- Participates in the design review by testing mechanical platforms, to ensure feasibility of proposed input.
- Engages with stakeholders during shipbuilding process to review engineering design and test platforms.
- Monitors quality of completion by contractors to ensure compliance with company standards.
- Approves ship and engine design to promote standard specifications and regulatory requirements.
- Certifies ships on completion of building phase to ensure seaworthiness and compliance with standards for maritime water transport.
- Collaborates with superintendent on dry dock activities to facilitate vessel surveys and inspections.
- Represents organization in meetings with stakeholders to review engineering design and test platforms.

Engine Operation

Ensures the proper operation of machinery and systems in the engine department to guarantee seaworthiness.

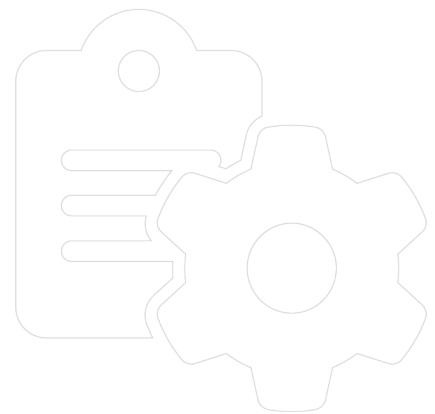
- Conducts regular inspection of machinery and equipment to ensure operational efficiency.
- Ensures adequate engine room supplies are available for intended voyage to adhere to classification society standards.
- Monitors the performance of machinery and systems in the engine room to ensure seaworthiness of vessel.
- Provides thorough analysis of breakdowns and faults to shore engineering team to facilitate quicker vessel recovery.
- Monitors the survey status of the vessel's machinery and maintains adequate report to ensure operational efficacy.



Engine Maintenance

Ensures timely maintenance of machinery and systems in the engine room to minimize cost of replacement and vessel breakdown.

- Oversees and performs trouble shooting and corrective maintenance on machinery to resolve technical issues that may arise while on sea.
- Ensures vessel's maintenance program is implemented in accordance with good engineering practices and company policies to minimize replacement cost.
- Liaises with port engineering team and superintendent to facilitate equipment and system repairs on board.
- Monitors maintenance and repair of machinery and electrical equipment to prevent vessel breakdown during voyage. Ensures auxiliary maintenance and safety equipment to adhere with the planned maintenance system and statutory regulation.



PERSONAL AND PROFESSIONAL



Communication

Communicates with engineering team and external contractors to facilitate vessel operations and ensure efficient management of the engine department.

- Communicates watchkeeping arrangements to engineering team to ensure smooth operation of engine department.
- Conveys performance expectations to engineering personnel to ensure efficient management of the engine room.
- Communicates with external sub-contractors to ensure adequate supply of requested inventory.
- Informs the ship master on machinery damage that may affect seaworthiness of the vessel to be adequately prepared in the occurrence of an emergency.
- Suggests possible solutions to engineering personnel and staff to address urgently needed repairs in the engine room.
- Coordinates with external sub-contractors to ensure adequate supply of requested spare parts for the engine room inventory.

Personnel Supervision

Engages in professional collaborative efforts with other members of the team, including sharing information and expertise, utilizing input from others, and recognizing others' contributions to work towards a common goal.

- Distributes work assignments to engine room crew to ensure operational effectiveness.
- On-boards new hires to ensure they have access to the appropriate manuals and the capabilities required to perform their duties effectively.
- Supervises engineering personnel to ensure operational needs and financial obligations are fulfilled.
- Maintains engine room administration by ensuring accuracy of engine room logbook and conformity with watchkeeping arrangements.
- Conducts performance appraisal of engineering personnel to ensure personal capabilities match with both current and future needs.



Leadership

Provides leadership and direction to engineering personnel and staff to ensure compliance and overall effectiveness of the engine department.

- Acts as the frontline engineering personnel to address immediate concerns regarding the engine room operation.
- Prepares and submits necessary performance reports to senior leaders to ensure up to date tracking of purchases and repairs.
- Participates in the interviewing and selection of new hires to ensure appropriate skills are employed.
- Leads the engine room personnel by distributing standing watch orders to ensure operational effectiveness.



LEGAL, REGULATORY, AND POLICY



Environmental Compliance

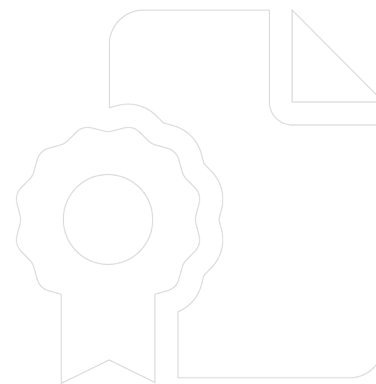
Monitors cargo loading, critical liquids, and transportation routes to ensure compliance with environmental legislation and prevent sea pollution.

- Ensures proper fitting of machinery and equipment to prevent corrosion and leaks.
- Monitors transfer of cargo from deck to ship to prevent sea pollution.
- Monitors the use and application of critical liquids such as fuel, lubricating oil on the ship to prevent spills.
- Complies with national and international maritime law when travelling on sea to prevent sanctions to organization.
- Complies with statutory survey requirements with regards to machinery and relevant spaces.

Health and Safety

Ensures safety procedures are followed by engine room personnel and other crew support staff by engaging in safe practices to reduce risk at the workplace and damage to cargo or goods.

- Supervises all hazardous work performed by personnel to ensure safety procedures are followed.
- Ensures appropriate safety work permits are held by engineering personnel to minimize occurrence of work accidents.
- Guarantees safe operation of the vessels technical plant to prevent breakdown during voyage.
- Ensures engineering personnel are properly equipped in safe work gear to prepare for emergencies and reduce work injuries.
- Complies with safety work processes within the safety management system to reduce risks in the workplace.
- Promotes safe work practices while performing physical tasks to prevent cargo damage.



ENVIRONMENTAL

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