



JOB FAMILY CONCEPT

This family consists of seven levels of Marine Deck work. Levels are distinguished based on complexity, level of supervision received, and supervisory responsibilities. Positions in the Marine job families are required to be at sea for long periods of time on ocean-going vessels and require U.S. Coast Guard licensing and/or endorsements/documents. This job family is distinguished from the Marine Engineering and Steward families in that it is responsible for providing support in deck operations and activities. It is distinguished from the Research Technician Family in that marine positions are primarily responsible for providing support for vessel operations rather than research. The Marine Deck job family addresses responsibility for the following functions:

- Routine maintenance
- Support deck facilities and operations
- Safety of crew and vessel
- Stand watch
- Support scientific mission
- Vessel operation and navigation
- Vessel and mission operations and objectives
- Staff supervision
- Track/maintain vessel's stability

Incumbents may perform one or more of these functions in support of a wide range of equivalent marine deck activities.

This job family covers several functional areas of marine deck support and ship operations work including:

- Ordinary Seaman
- Able Seaman
- Boatswain
- Third Mate
- Second Mate
- Chief Mate
- Chief Mate/Relief Master
- Master

TYPICAL FUNCTIONS

[Note: A single position may involve one or more of the functions listed, and may include functions not listed.]

- Coordinate and plan equipment, logistical and support needs
- Load and unload cargo, stowage, deployments, equipment and supplies



- Operate hydraulic, mechanical, electrical and pneumatic deck and ground tackle equipment, winches, and cranes
- Load, stow and maintain mooring lines and anchors
- Inspect gear, equipment and safety equipment
- Perform preventive maintenance and make minor repairs to deck, interior and hull
- Ensure deck and related equipment and facilities are clean and organized
- Participate in planning, scheduling and logistics
- Review and maintain appropriate documentation
- Operate vessel's small boats
- Stand watch at helm, lookout, deck, security and bridge
- Order, purchase and maintain inventory of equipment and supplies
- Perform first aid functions
- Assist in rescue operations as a member of the emergency and firefighting response team
- Maintain operational readiness of emergency equipment
- Prepare vessel for mission
- Navigate and operate vessel
- Supervise and support ship scientific mission
- Ensure trim and stability are safely maintained
- Ensure vessel safety and security
- Ensure compliance with U.S. Coast Guard, American Bureau of Shipping, State of Alaska, SMC, University of Alaska policies, regulations, laws and statutes
- Supervise and train staff
- Perform other duties as otherwise directed by a supervisor

LEVELS AND COMPETENCIES

The primary distinction between levels is reflected in the Level Descriptors. As levels increase, scope, complexity and degree of independence increase. **As vessel size increases, the degree of responsibility and required education/certification/licensing also increases.** Higher levels may perform duties of lower levels. Education and experience are stated at the minimum threshold for the level. Additional education or experience may be desirable for some positions.

Level 1
PCLS: 04821

Grade 74
Marine Exempt - Hourly

Descriptors

Work is performed under direct supervision and work within guidelines that are generally defined. This is an entry level position within the vessel's deck department. Ensure vessel and deck equipment is well organized, maintained and clean. Stand watch as lookout and security. Assist in handling and storing mooring lines, equipment, cargo and supplies. Make minor repairs to vessel, perform basic carpentry and labor duties. Assist in emergency response team and operate small boats. The typical position in this level would be an **Ordinary Seaman**.



Knowledge, Skills, and Abilities

Working knowledge of ocean-going vessel principles and marine maintenance. Basic knowledge and ability to safely operate power and hand tools. Ability to learn deck procedures, line handling and operation of deck and ground tackle equipment. Ability to clean and maintain ship in sanitary condition. Ability to communicate effectively. Ability to work in extreme conditions.

Education and Experience

High school graduation and six months work experience aboard a marine vessel as a crewmember, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with STCW certificate. First aid and CPR certification. Additional license or certification may be required.

Level 2

PCLS: 04822

Grade 75

Marine Exempt - Hourly

Descriptors

Work is performed under general supervision. Assist in maintaining vessel in operating condition. Replenish supplies and fuel, load/unload cargo and rigging equipment. Perform maintenance and cleaning on deck, interior, hull, and a variety of equipment. Stand watch as security and as part of the bridge navigation watch. Load and stow equipment and supplies. Handle mooring lines and anchors. Operate smaller boats and equipment for deployment and retrievals. Member of emergency response team. Assists higher-level personnel in ensuring vessel safety standards. This level is distinguished from the previous level by its increased responsibility and performance of more complex* functions that require a greater breadth of knowledge and higher level credential. The typical position in this level would be an **Able Seaman**.

Knowledge, Skills, and Abilities

Same as level 1, plus: Knowledge of crane and winch operation, rigging, splicing lines and use of various portable and fixed machine and hand tools. Knowledge of maritime USCG regulations, ship handling, and safety procedures. Ability to ensure security and watertight integrity, and maritime radio standards. Ability to stand watch at helm. Ability to operate small boats. Ability to maintain vessel and auxiliary equipment in well-organized and clean condition.

Education and Experience

High school graduation and one year related work experience on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with Able Seaman Unlimited and Rating Forming Part of Navigation Watch (RFPNW) endorsements, STCW, HAZWOPER, first aid, and CPR certification. Additional license or certification may be required.



Level 3
PCLS: 04823

Grade 76
Marine Exempt - Hourly

Descriptors

Work is performed under intermittent supervision. This is the lead Able Seaman aboard the vessel. Plan, schedule and lead** maintenance of non-engineering areas of vessel including interior/exterior spaces and structures. Responsible for training and ensuring safety of deck personnel and operation of deck equipment. Maintain inventory of deck department stores, and recommends orders. Maintain accurate records of inventory and deck work logs. Member of firefighting and emergency response teams. Stand watch as security and as part of the bridge navigation watch. This level is distinguished from the lower levels in its greater level of responsibility for planning, scheduling and assigning work to subordinates for vessel maintenance, recommending orders and record keeping. The typical position in this level would be a **Boatswain**.

Knowledge, Skills, and Abilities

Same as level 2, plus: Advanced knowledge of deck equipment and safe deck operations. Knowledge of, and ability to operate controls for launch and recovery of the vessel's boats, scientific equipment and safety gear while underway. Strong written, verbal communication and problem solving skills. Knowledge of basic computer skills needed for maintaining records of inventory and work logs. Ability to instruct others in safe operation of equipment. Ability to lead**.

Education and Experience

High school graduation and 3 years related work experience on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Credential with Able Seaman Unlimited and RFPNW endorsements, lifeboat, STCW, HAZWOPER, first aid, and CPR certification. Additional license or certification may be required.

Level 4
PCLS: 04824

Grade 78
Marine Exempt - Hourly

Descriptors

Work is performed under administrative supervision. Perform Deck Watch Officer and Bridge Watch, as well as Safety Officer functions. Assist in the operation of vessel with responsibility for navigation, communication and operational safety. Lead** non-engineering operations of vessel including loading/unloading operations, mooring, storage and maintenance. Maintain operational readiness of boats, life rafts, lifesaving, fire fighting, and other shipboard deck safety equipment. Train ship personnel in proper operation of shipboard lifesaving firefighting and other emergency equipment. Test equipment for operational readiness and safety compliance standards. Act as liaison with research personnel. This level is distinguished from lower levels by the ability to provide navigational assistance, responsibility for ensuring safety and operational readiness of equipment and crew. The typical position in this level would be a **Third Mate**.



Knowledge, Skills, and Abilities

Same as level 3, plus: Advanced knowledge of and maintenance of lifesaving, fire fighting and other emergency equipment. Knowledge of vessel operations, navigation and equipment. Knowledge of vessel operational limits to ensure that the scientific mission can be achieved safely given weather constraints and other factors. Knowledge of computer operations including specialized database and vessel systems. Excellent communication skills. Skilled in utilizing electronic, dead reckoning and pilotage techniques of navigation. Ability to train personnel in operational and safety procedures.

Education and Experience

High school graduation and 3 years related work experience on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with Third Mate of Steam & Motor Any Gross Tons Upon Oceans with IMO-SOLAS certification, and Radar observer-unlimited rating endorsements, STCW, OICNW, GMDSS, ARPA, BRM, lifeboat, HAZWOPER, advanced marine firefighting, first aid, and CPR certification. Additional license or certification may be required.

Level 5

PCLS: 04825

Grade 79

Marine Exempt - Hourly

Descriptors

Work is performed under administrative supervision. Acts as lead**. Perform Deck Watch Officer and Bridge Watch functions. Assist in the operation of vessel with responsibility of navigation, communication, operational safety and maintenance. Perform Navigation Officer functions Including: maintaining all navigation equipment, publication, charts, and prepares information for the bridge. Plot voyage track and prepares critical related information that is necessary for voyage and mission planning prior to sailing. This level is distinguished from the lower levels by the responsibility and designation as the ship's navigation officer. The typical position in this level would be a **Second Mate**.

Knowledge, Skills, and Abilities

Same as level 4, plus: Advanced knowledge of vessel operations and equipment. Advanced knowledge and application of navigational equipment charts and publications. Advanced knowledge of vessel operational limits to ensure that the scientific mission can be achieved safely given weather constraints and other factors. Advanced skill in utilizing electronic, dead reckoning and pilotage techniques of navigation. Ability to ensure bridge electronics, navigational and alarm systems are working properly.

Education and Experience

High school graduation and 3 years related work experience on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with Second Mate of Steam & Motor Any Gross Tons Upon Oceans endorsement with IMO-SOLAS certification, and Radar observer-unlimited rating endorsements, STCW, OICNW, GMDSS, ARPA,



BRM, lifeboat, HAZWOPER, advanced marine firefighting, first aid, and CPR certification. Additional license or certification may be required.

Level 6
PCLS: 04826

Grade 80
Marine Exempt - Salary

Descriptors

Work is performed under general direction. Serve as a supervisor** of ship-board employees, operations, maintenance, and sanitation. Stand watch. Responsible for identifying abnormalities in operations, and recommend course of action. Assist in the execution of planned logistics and preparation of vessel for upcoming mission. Inspect, navigate, pilot, maneuver, and operate vessel to support scientific mission. Responsible for overall safety of crew and vessel. Ensure compliance with regulations, laws, and codes. May have fiscal responsibility. Maintain and monitor use of all medical supplies aboard ship. Responsible for ship sanitation, hygiene, and handling of medical emergencies. Serve as advisor to Chief Scientist and scientific personnel as a specialist or ship resource. This level is distinguished from lower levels by having responsibility for serving as second in command of the vessel and directing/ overseeing the work of the deck crew and as the Ship's Master when the Master is absent. The typical position in this level would be a **Chief Mate or where appropriate Relief Master.**

Knowledge, Skills, and Abilities

Same as level 5, plus: Expert knowledge of vessel operational limits. Knowledge of fiscal and personnel procedures and policies. Knowledge of the operating characteristics of marine machinery, equipment and systems, functional relationships and unique conditions which work is performed aboard marine craft. Knowledge of collision avoidance techniques. Knowledge of PC's, communication equipment, ship handling and stability. Knowledge of U.S. Coast Guard regulations, OSHA hazardous material regulations, maritime laws, university policy and regulations, and American Bureau of Shipping Regulations. Ability to advise scientific personnel. Ability to operate vessel in icy seas. Ability to lead** firefighting and emergency team response. Ability to assist in planning logistics for sea cruises. Ability to calculate vessel stability prior to sailing and track changes based upon changes in the vessel's loading. Ability to ensure that the scientific mission can be achieved safely given weather constraints and other factors. May require the ability to supervise**.

Education and Experience

High school graduation and work experience sailing as a Chief Mate or where appropriate Master on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with Chief Mate of Steam & Motor Any Gross Tons Upon Oceans endorsement (or where appropriate Master of Steam & Motor Any Gross Tons Upon Oceans endorsement) with IMO-SOLAS certification, and Radar observer-unlimited rating endorsements, STCW, OICNW, GMDSS, ARPA, BRM, lifeboat, HAZWOPER, advanced marine firefighting, first aid, and CPR certification. Additional license or certification may be required.



Level 7
PCLS: 04827

Grade 82
Marine Exempt - Salary

Descriptors

Work is performed under long-range administrative direction. Serve as a supervisor** of shipboard navigation, personnel, operations, engineering, maintenance and sanitation. Responsible for overall efficiency, success and safety of crew and vessel. Direct the planned logistics and prepare vessel for upcoming mission. Inspect, navigate, pilot, maneuver, and operate vessel to support scientific mission. Responsible for the oversight of outfitting and maintenance and participates in maintenance planning and scheduling. Supervise all emergency drills and oversees training. Responsible for ship's documentation while sailing. Serve as chief advisor to scientific personnel. Is a specialist or expert resource. Assess and recommend programs, plans, and changes. Ensure compliance with regulations, laws, and codes. Has fiscal responsibility and may develop budgets. The typical position in this level would be a **Master**.

Knowledge, Skills, and Abilities

Same as level 6, plus: Expert knowledge of ship stability, regulatory requirements, navigation, ship handling, oceanographic operations, deck machinery, and safety principles. Ability to understand marine science goals and be able to respond calmly and quickly in emergency situations.

Education and Experience

High school graduation and 2 years work experience sailing as a Master at the level of their license on a marine vessel, or equivalent. Professional license commensurate with U.S. Coast Guard Merchant Mariner Credential with Master of Steam & Motor Any Gross Tons Upon Oceans endorsement) with IMO-SOLAS certification, and Radar observer-unlimited rating endorsements, STCW, OICNW, GMDSS, ARPA, BRM, lifeboat, HAZWOPER, advanced marine firefighting, first aid, and CPR certification. Additional license or certification may be required.

- * **Complexity**: Refers to the diversity of rules and regulations (e.g. federal, state, and university regulations, US Coast Guard (USCG), American Bureau of Shipping (ABS), OSHA, hazardous materials, maritime and FCC) as well as navigational publications and charts. Complexity increases as the application, interpretation and frequency of working with these rules, regulations and documents increases.
- * **Scope**: Refers to the size of the vessel, scale of operations on a vessel, or the impact that the mission of the vessel has on an organization or unit.
- ** **Lead**: Provide day-to-day guidance, training and direction for staff in addition to other duties. Regularly assign and review work. Is fluent in assigned area of responsibility.
- ** **Supervise**: Hire, train, evaluate performance and initiate corrective action.

[2013 revisions include formatting document for consistency. Document was revised with comments and suggestions from work team.]