

**AMERICAN COUNCIL ON EDUCATION
MILITARY PROGRAMS EVALUATION**

Occupation Review Report
2010

CGW-MSSE-001

MARINE SAFETY SPECIALIST ENGINEERING (MSSE)

Exhibit Dates: 1/08–Present.

Career Pattern

May have progressed to Marine Safety Specialist Engineering Chief Warrant Officer from Damage Controlman (DC), Electricians Mate (EM) and Machinery Technician (MK).

Description

MSSEs are called upon to be the subject matter experts for engineering systems. They provide the core technical expertise for marine safety and the engineering mentorship for other non-technical members in the program. MSSEs serving in the marine safety field are engineering specialists whose primary focus is commercial vessel inspections/examinations (marine inspector) and casualty investigations (investigating officer). This focus relies heavily on engineering/technical backgrounds for the inspection and casualty investigation of main propulsion equipment (gasoline, diesel, boiler, and gas turbine) and auxiliary machinery (ships service and emergency generators, steering gear, evaporators, air compressors and receivers, bilge systems, fire alarms and smoke detection systems, fuel oil handling system, cargo transfer systems, oily water separators, all vessel electrical systems, life boat launching equipment, etc.). MSSEs review vessel construction plans to ensure new vessel construction and existing vessel repairs are completed in accordance with approved plans, applicable regulations, and accepted industry standards. MSSEs conduct examinations of vessels in dry dock to inspect welding repairs, wood and fiberglass boat repairs, rudder assemblies, propeller and tail shaft examinations, bow/stern thrusters, sea chests, sea valves, etc. MSSEs also inspect the following: lifesaving equipment, firefighting equipment, bridge and navigational equipment, anchor windlasses and other ground tackle, habitability, watertight integrity, structural fire protection, etc. They perform regulatory oversight of complex federal laws, regulations, and treaties. These activities are performed on domestic and foreign small passenger vessels, deep draft freight/tank vessels, mobile offshore drilling units, offshore supply vessels, and oil and chemical/gas barges. In the performance of these duties they interface with a broad array of private and public (local/state/federal/international) members at all levels of the marine industry.

Related Competencies

Ship structure and terminology topics include hull assemblies, hull construction, hull fittings, hull repair, ship construction, vessel construction, vessel stability, vessel structure, and welding. Marine engineering topics include auxiliary machinery systems, cargo transfer system, firefighting systems, fuel oil handling systems, main propulsion system, and safety systems. Maritime safety topics include bridge equipment, domestic maritime regulations for construction, domestic maritime regulations for maintenance, domestic maritime regulations for operation, foreign maritime regulations for construction, foreign maritime regulations for operation, foreign regulations for

maintenance, marine firefighting equipment, marine firefighting procedures, marine lifesaving equipment, marine lifesaving procedures, marine pollution prevention, navigational equipment, and vessel stability. Communications topics include briefings, debriefings, interpersonal communications, multimedia presentations, oral communications, report writing, small group interaction, and technical writing. Supervision topics include critical thinking, cultural awareness, decision-making, mentoring, motivation and morale, on the job training, safety, situational leadership, and team building. Operations management topics include administrative management, contract administration, logistics coordination, multi-organizational coordination, organizational planning, quality assurance and control, resource management, and risk management. Project management topics include maritime code enforcement, maritime code requirements, resource allocation, risk assessment, status and progress reporting, task evaluation, task execution, task planning, time management, and workload management.

Recommendation

In the lower-division baccalaureate/associate degree category, 3 semester hours in ship structure and terminology, 3 in marine engineering, and 3 in maritime safety. In the upper-division baccalaureate category, 3 semester hours in communications, 3 in supervision, 3 in operations management, and 3 in project management (7/10)(7/10).

CGW-MSSD-001

MARINE SAFETY SPECIALIST DECK (MSSD)

Exhibit Dates: 1/08–Present.

Career Pattern

May have progressed to Marine Safety Specialist Deck Chief Warrant Officer from Aviation Survival Technician (AST) and Marine Science Technician (MST).

Description

MSSDs serving in the marine safety field conduct and supervise personnel in vessel safety and security inspections. Additionally they conduct and supervise marine casualty investigations. MSSDs conduct commercial vessel inspections/examinations (marine inspector) and casualty investigations (investigation officer). MSSDs inspect the following: lifesaving equipment, firefighting equipment, bridge and navigational equipment, anchor windlasses and other ground tackle, watertight integrity, structural fire protection, etc. MSSDs also conduct inspections and casualty investigations of main propulsion equipment (gasoline, diesel, boiler, and gas turbine) and auxiliary machinery (ships service and emergency generators, steering gear, evaporators, air compressors and receivers, bilge systems, fire alarms and smoke detection systems, fuel oil handling system, cargo transfer systems, oily water separators, all vessel electrical systems, life boat launching equipment, etc.). Marine inspectors conduct examinations of vessels in dry dock to inspect welding repairs, wood and fiberglass boat repairs, rudder assemblies, propeller and tail shaft examinations, bow/stern thrusters, sea chests, sea valves, etc. They review vessel construction plans to ensure new vessel construction and existing vessel repairs are completed in accordance with approved plans, applicable regulations, and accepted industry standards. MSSDs perform regulatory oversight of complex federal laws, regulations, and treaties. These activities are performed on domestic and foreign small passenger vessels, deep draft freight/tank vessels, mobile offshore drilling units, offshore supply vessels, and oil and chemical/gas barges. In the

performance of these duties, they interface with a broad array of private and public local, state, federal, international) members at all levels of the marine industry.

Related Competencies

Ship structure and terminology topics include hull assemblies, hull construction, hull fittings, hull repair, ship construction, vessel construction, vessel stability, vessel structure, and welding. Maritime safety topics include bridge equipment, domestic maritime regulations for construction, domestic maritime regulations for maintenance, domestic maritime regulations for operation, foreign maritime regulations for construction, foreign maritime regulations for operation, foreign regulations for maintenance, marine firefighting equipment, marine firefighting procedures, marine lifesaving equipment, marine lifesaving procedures, marine pollution prevention, navigational equipment, and vessel stability. Communications topics include briefings, debriefings, interpersonal communications, multimedia presentations, oral communications, report writing, small group interaction, and technical writing. Supervision topics include critical thinking, cultural awareness, decision-making, mentoring, motivation and morale, on the job training, safety, situational leadership, and team building. Operations management topics include administrative management, contract administration, logistics coordination, multi-organizational coordination, organizational planning, quality assurance and control, resource management, and risk management. Project management topics include maritime code enforcement, maritime code requirements, resource allocation, risk assessment, status and progress reporting, task evaluation, task execution, task planning, time management, and workload management.

Recommendation

In the lower-division baccalaureate/associate degree category, 3 semester hours in ship structure and terminology and 3 in maritime safety. In the upper-division baccalaureate category, 3 semester hours in communications, 3 in supervision, 3 in operations management, and 3 in project management (7/10)(7/10).