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### **Assessment Criteria for Chief Engineer—OSV (Oceans and Near Coastal)**

Attached are proposed criteria for evaluating the competency of candidates for a license as Chief Engineer—OSV on vessels of less than 500 GRT (3,000 ITC) on oceans or near coastal waters. Although the criteria are based on the STCW competency Table A-III/1, they have been modified as permitted by 46 CFR 10.555 to make them appropriate for implementation on OSV's.

Because only one licensed engineer is required on board an OSV in most cases, he or she must perform the duties of a Chief Engineer. Accordingly, a number of competencies from Table A-III/2 of the Code have been incorporated. Because the criteria address the competencies at that level, no further exam or proficiency demonstrations will be required to advance to Chief Engineer. An individual qualifying for this license will be authorized to serve as the Chief Engineer.

The activities which must be demonstrated on board ship are:

- Taking over and accepting relief of a watch
- Routine watchkeeping duties
- Maintenance of machinery space logbook
- Handing over the watch
- Safety and emergency procedures
- Speak the English language
- Transferring liquid and dry bulk cargo
- Start and parallel generators

- Start emergency generator
- Machinery space and plant arrangements
- Lock-out, tag-out procedures
- Maintenance of auxiliary machinery
- Stow and secure deck cargoes
- Transfer liquid and dry bulk cargoes.
- Organize and conduct drills.
- Respond to emergencies.

It is understood that these criteria do not represent the final assessment tools to be used when demonstrating proficiency. Just as a performance standard requiring a "minimum score of 70% on a written exam" implies the development of a valid exam, a standard that requires cargo to be "stowed in a manner that is safe, efficient, stable, and in accordance with company policy" implies the use of an assessment form describing the items which a designated examiner should look for in the conduct of the demonstration.

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use of appropriate tools for fabrication and repair operations typically performed on ships

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Characteristics and limitations of materials used in construction and repair of ships and equipment	Knowledge of strength of materials such as yield strength, tensile strength, impact resistance and ductility	Written exam	List the characteristics and limitations of materials used in the construction and repair of ships and shipboard equipment.	70% minimum score on written exam
	Knowledge of the types of material failures experienced under stress and strain conditions, such as fatigue, corrosion, brittle and ductile failures and creep	Written exam	Describe the types of material failures experienced under stress and strain conditions.	
Characteristics and limitations of processes for fabrication and repair	Knowledge of the basic elements required to weld steel in fabrication and repair	Written exam	List the basic elements required to weld steel in fabrication and repair.	70% minimum score on written exam
	Knowledge of the basic elements required to perform basic machining in fabrication and repair	Written exam	Describe the basic elements required to perform basic machining in fabrication and repair.	

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use of appropriate tools for fabrication and repair operations typically performed on ships

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Properties and parameters considered in the fabrication and repair of systems and components	Knowledge of manufacturer's recommendations, and statutory regulations pertaining to the fabrication and repair of systems and components	On board ship or Laboratory	Describe the significance of manufacturer's recommendations, and statutory regulations pertaining to the fabrication and repair of systems and components.	Correctly describes the significance of manufacturer's recommendations, and statutory regulations pertaining to the fabrication and repair of systems and components.
	Knowledge of materials testing methods	Written exam	List the types of material failures experienced under stress and strain conditions.	70% minimum score on written exam
Application of safe working practices in the workshop environment	Proper and safe use of tools and equipment	On board ship or Laboratory	Use tools and equipment utilized to perform typical shipboard repairs and fabrications.	Correctly performs all tasks in accordance with supervisor's instructions.
	Proper procedures used in the performance of shipboard repairs	On board ship or Laboratory	Perform shipboard repairs such as replacing a section of pipe, replacing a gasket, repairing a valve, etc.	Correctly performs all tasks in accordance with supervisor's instructions.

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use hand tools and measuring equipment for dismantling, maintenance, repair and reassembly of shipboard plant and equipment

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Design characteristics and selection of materials in construction of equipment	Knowledge of the common materials used in ship and shipboard equipment construction	Written exam	Describe the basic characteristics of common materials used in the construction of shipboard equipment and systems.	70% minimum score on written exam
Interpretation of machinery drawings and handbooks	Use technical manuals and machinery drawings	On board ship or Laboratory	Participate in the dis-assembly, maintenance, repair and re-assembly of shipboard equipment using machinery drawings and manuals.	Correctly performs all tasks in accordance with supervisor's instructions.
Operational characteristics of equipment and systems	Knowledge of measuring instruments	Written exam	Describe the proper use of measuring instruments to determine operational parameters and system limitations.	70% minimum score on written exam
	Knowledge of hand tools	Written exam	Describe the proper use of hand tools such as chisels, hammers, screwdrivers, hacksaws, wrenches, etc.	

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use hand tools, electrical and electronic measuring and test equipment for fault finding, maintenance and repair operations

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Safety requirements for working on shipboard electrical systems	Knowledge of lock-out, tag-out procedures and policies	On board ship or Laboratory	Conduct lock out, tag out of electrical equipment, and verify that the system is de-energized using electrical measuring instruments.	Successfully and correctly under the supervision of a qualified person complete a equipment lock-out, and tag-out procedure in accordance with vessel and company policies.
	Use electrical measuring equipment	On board ship or Laboratory	Measure circuit values (i.e., voltage, resistance, current) using electrical measuring instruments.	Under the supervision of a qualified person, correctly measure a circuit's voltage, resistance, and current.
Construction and operational characteristics of shipboard AC and DC electrical systems and equipment	Knowledge of AC/DC rotating machinery	Written exam	Describe the fundamentals of AC/DC rotating machinery.	70% minimum score on written exam
	Knowledge of electrical fundamentals	Written exam	Describe the fundamentals of transformers, rectifiers, breakers, fuses, electromagnetic relays.	
	Knowledge of electrical schematic diagrams	Written exam	Describe and interpret electrical schematic diagrams.	

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use hand tools, electrical and electronic measuring and test equipment for fault finding, maintenance and repair operations

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Construction and operation of electrical test and measuring equipment	Knowledge of electrical measuring equipment construction	Written exam	Describe construction and operation of electrical test and measuring equipment.	70% minimum score on written exam

Competence: Maintain a safe engineering watch

Duties associated with taking over and accepting a watch	Take over the watch	On board ship	Relieve a watch.	Watch is relieved in compliance with the standards of Part 2-3 of Chapter VIII of the STCW Code that are appropriate to the vessel's size, crew complement, and operation, including standing orders and special instructions, condition and mode of operation of the plant including fuel levels, any special modes of operation dictated by equipment failure or adverse ship conditions, and the nature of any work being performed in the machinery space.
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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Maintain a safe engineering watch

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Routine duties undertaken during a watch	Perform watch duties	On board ship	Stand underway duty periods observed and verified by a licensed officer.	Keeps the main propulsion plant and auxiliary systems under constant supervision until properly relieved, and shall periodically inspect the machinery in their charge. They shall also ensure that adequate rounds of the machinery and steering gear spaces are made for the purpose of observing and reporting equipment malfunctions or breakdowns.
Maintenance of machinery space logbook and significance of the readings taken	Use machinery space logbook to record changes in machinery status	On board ship	Stand underway duty periods observed and verified by a licensed officer.	Ensures that all events related to the main and auxiliary machinery which have occurred during the engineering watch are suitably recorded.
	Use machinery space logbook to record malfunctions	On board ship	Stand underway duty periods observed and verified by a licensed officer.	Any machinery not functioning properly, expected to malfunction or requiring special service shall be noted along with any action already taken.
	Knowledge of readings	Written exam	Describe the significance of readings.	70% minimum score on written exam

**Function: Marine Engineering**

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

Competence: Maintain a safe engineering watch

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Duties associated with handing over a watch	Hand over the watch	On board ship	Hand over the watch.	All events related to the main and auxiliary machinery which have occurred during the engineering watch are suitably passed on to the relief, and shall not hand over the watch to their relief if there is reason to believe that the latter is obviously not capable of carrying out the watchkeeping duties effectively.
Safety and emergency procedures; change-over of remote/automatic to local control of all systems	Knowledge of emergency and safety procedures	On board ship	Describe safety and emergency procedures; change-over of remote/automatic to local control of selected systems.	Description conforms to equipment and procedures on the vessel.
Safety precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems	Knowledge of safety procedures	On board ship	Describe precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems	Description conforms to equipment and procedures on the vessel.

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Use the English in written and oral form

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties	Read English language	Written exam	Read English in engineering publications.	70% minimum score on written exam
	Speak English language	On board ship	Use English in communications with crew and others.	Communications are clear and understandable.
	Use standard Marine Vocabulary	Written exam	Use proper terminology.	70% minimum score on written exam

Competence: Operate main and auxiliary machinery and associated control systems

Preparation of main machinery and preparation of auxiliary machinery for operation	Test steering gear	On board ship or Laboratory	Test the steering gear system for getting underway	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
	Check steering gear	On board ship or Laboratory	Check steering gear systems while underway.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
	Knowledge to change-over steering	On board ship or Laboratory	Change over to the standby steering system.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Operate main and auxiliary machinery and associated control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Preparation of main machinery and preparation of auxiliary machinery for operation ( <i>continued</i> )	Knowledge of steering gear arrangement	Written exam	Describes the typical OSV steering gear system arrangement.	70% minimum score on written exam
	Check compressed air system	On board ship or Laboratory	Check the compressed air system.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
	Operate compressed air system	On board ship or Laboratory	Operate the compressed air system.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
	Check refrigeration and air conditioning system	On board ship or Laboratory	Check refrigeration and air conditioning system operation.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
	Knowledge of refrigeration and air conditioning system	Written exam	Describe the operation of refrigeration and air conditioning system.	70% minimum score on written exam
	Check potable water, sanitary, and sewage system operation	On board ship or Laboratory	Check potable water, sanitary, and sewage system operation.	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Operate main and auxiliary machinery and associated control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Preparation of main machinery and preparation of auxiliary machinery for operation ( <i>continued</i> )	Knowledge of diesel engine construction and operation	Written exam	Describe the principles of construction and operation of a 2 and 4-stroke diesel engine.	70% minimum score on written exam
	Knowledge of diesel engine cooling and lube	Written exam	Describe diesel engine cooling water and lube oil system.	70% minimum score on written exam
	Start main diesel engine	On board ship or Laboratory	Prepare and start the main propulsion diesel engine for departure, including all necessary checks and actions to ensure that the auxiliary and control systems are functioning satisfactorily	Correctly performs all tasks in accordance with manufacturer's instructions and company policy.
Location of common faults in machinery and plant in engine room and action necessary to prevent damage	Knowledge of main engine	Written exam	Describe possible abnormal conditions of the main engine and make recommendation for corrections.	70% minimum score on written exam

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Operate pumping systems and associated controls

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Pumping Systems - Routine pumping operations	Knowledge of storage tanks	Written exam	Describe tanks, tank vents, and overflows, filling connections and sounding tubes.	70% minimum score on written exam
	Knowledge for safe entry	Written exam	Describe procedure for safe entry of confined spaces and tanks.	
	Knowledge of fuel transfer	Written exam	Describe the fuel transfer system and procedures.	
	Transfer fuel	On board ship or Laboratory	Transfer fuel.	Correctly performs all tasks in accordance with manufacturer's instructions, company policy, and pollution prevention regulations.
Pumping Systems - Operation of bilge, ballast, and cargo pumping systems	Pump bilges	On board ship or Laboratory	Pump out bilges.	Correctly performs all tasks in accordance with manufacturer's instructions, company policy, and pollution prevention regulations.
	Knowledge of oily water separator	Written exam	Describe oily water separator.	70% minimum score on written exam

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Operate pumping systems and associated controls

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Pumping Systems - Operation of bilge, ballast, and cargo pumping systems ( <i>continued</i> )	Knowledge of ballasting	Written exam	Describe procedures for filling and emptying ballast tanks.	70% minimum score on written exam
	Knowledge of transferring bulk dry and liquid cargo.	On board ship	Participate in bulk dry and liquid cargo transfer operations.	Correctly performs all tasks in accordance with manufacturer's instructions, company safety policies, and pollution prevention regulations.

Competence: Operate alternators, generators and control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
<i>Generating plant</i> Appropriate basic electrical knowledge and skills	Knowledge of emergency generator	Written exam	Describe automatic start-up of emergency generators.	70% minimum score on written exam
	Knowledge of emergency electrical system	Written exam	Describe the emergency electrical system, including circuits served and safety devices.	
	Knowledge of electrical distribution system	Written exam	Describe arrangement of electrical distribution system from generator to load.	

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Operate alternators, generators and control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
<i>Generating plant</i> Preparing, starting, coupling and changing over alternators or generators	Start and parallel generators	On board ship	Starting and parallel generators, transfer load, and change over.	Correctly performs all tasks in accordance with manufacturer's instructions, company safety policies.
	Start emergency generator	On board ship	Start the emergency generator.	Correctly performs all tasks in accordance with manufacturer's instructions, company safety policies.
<i>Generating plant</i> Location of common faults and action to prevent damage	Knowledge of electrical faults	Written exam	Describe possible abnormal conditions in the electrical system, and make proper recommendations for corrections.	70% minimum score on written exam
<i>Control systems</i> Location of common faults and action to prevent damage	Knowledge of troubleshooting electrical faults	Written exam	Describe possible abnormal conditions in electrical control systems, and proper tests to determine location of electrical fault.	70% minimum score on written exam

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Maintain marine engineering systems, including control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
<i>Marine systems</i> Appropriate basic mechanical knowledge and skills	Knowledge of machinery space and plant arrangements of components, equipment, associated piping and control systems	On board ship	Trace out and draw diagrams machinery space arrangement of plant components, equipment, associated piping and control systems.	Correctly draws diagrams as compared to actual physical component/equipment locations, manufacturer's manuals, and Ship's Information Book
	Knowledge of shipboard inventory control	Written exam	Describe shipboard inventory control.	70% minimum score on written exam
<i>Safety and Emergency Procedures</i> Safe isolation of electrical and other types of plant and equipment required before personnel are permitted to work on such plant or equipment	Knowledge of how to perform lock-out, tag-out procedures	On board ship	Conduct lock-out, tag-out of a fluid system.	Correctly performs all tasks in accordance with vessel and company safety policies.
Undertake maintenance and repair to plant and equipment	Knowledge of diesel engine maintenance	Written exam	Describe routine maintenance and inspection of diesel engines.	70% minimum on written exam
	Knowledge of electrical equipment maintenance	Written exam	Describe routine maintenance on electrical equipment.	
	Knowledge of deck machinery maintenance	Written exam	Describe routine maintenance on deck machinery, winches, windlasses, etc.	

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Marine Engineering**

Competence: Maintain marine engineering systems, including control systems

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Undertake maintenance and repair to plant and equipment ( <i>continued</i> )	Knowledge of performed maintenance on auxiliary machinery	On board ship	Perform routine inspection and repair of auxiliary machinery.	Correctly performs all tasks in accordance with manufacturer's instructions, company policies, and Ship' Information Books
	Knowledge of diesel maintenance safety procedures	Written exam	Describe safety procedures prior to conducting routine maintenance on a main diesel engine.	70% minimum score on written exam

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

Competence: Ensure compliance with pollution-prevention requirements

KUP	Performance Objective	Condition of Assessment	Performance Measure	Performance Standard
<i>Prevention of pollution of the marine environment</i> Knowledge of the precautions to be taken to prevent pollution of the marine environment	Know the precautions to be taken to prevent pollution.	Written exam	List the precautions to be taken in compliance with MARPOL and U.S. regulations.	70% minimum score on written exam
	Know equipment associated with pollution prevention and clean-up	Written exam	Describe the equipment.	

Competence: Maintain seaworthiness of the ship

Knowledge and application of stability, trim and stress tables, diagrams and stress calculating equipment	Know and apply the data in the stability and trim tables	Written exam	Calculate and evaluate stability using a stability letter and data commonly available on an OSV.	70% minimum score on written exam
Understand the fundamental actions to be taken for partial loss of intact stability	Know and understand the fundamental actions to be taken for partial loss of intact stability	Written exam	List actions to be taken for partial loss of intact stability.	
Understand the fundamentals of watertight integrity	Know and understand the fundamentals of watertight integrity	Written exam	Describe the actions to be taken to ensure and maintain watertight integrity.	
	Understand the fundamental principles of construction and stability	Written exam	List the ways that vessel's construction affects its stability and seaworthiness.	
	Know and understands the stability effects of flooding and countermeasures	Written exam	Calculate the impact of flooding and free surface effects.	
<i>Ship construction</i> General knowledge of the principal structural members and then proper names of various parts of the vessel	Know the principal structural members and then proper names of various parts of the vessel	Written exam	List the principal structural members and then proper names of various parts of the vessel.	

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

Competence: Prevent, control and fight fires on board

KUP	Performance Objective	Condition of Assessment	Performance Measure	Performance Standard
<i>Fire prevention and fire-fighting appliances</i> Knowledge of fire prevention	Know fire prevention/protection techniques	Written Exam	List the techniques for fire protection, including vessel layout and construction and operational procedures.	Complete an approved training course
Ability to organize fire drills	Organize fire and abandon ship drills	Written exam	Describe the organization and conduct effective drills.	
Knowledge of classes and chemistry of fires	Know classes and chemistry of fires	Written exam	List the classes of fires and their associated combustible materials.	
Knowledge of fire-fighting systems	Know fire-fighting systems	Written exam	Describe the firefighting systems commonly found in shipboard use.	
Actions to be taken in the event of fire, including fires involving oil systems	Take actions to protect all persons on board in an emergency	Written exam	Describe the actions to take to protect persons.	
	Take actions to limit damage and save the ship following a casualty	Written exam	List the actions to limit damage and save the ship.	

**The objectives on this page will be met through completion of an approved basic and advanced firefighting course.**

**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

	<p>Know the actions to take in event of fire</p>	<p>Proficiency demonstration</p>	<ul style="list-style-type: none"> <li>-Use various types of portable extinguishers.</li> <li>-Use self-contained breathing apparatus.</li> <li>-Extinguish smaller fires.</li> <li>-Extinguish extensive fires.</li> <li>-Extinguish fires with foam or other suitable chemical agent.</li> <li>-Fight fire in smoke filled enclosed spaces wearing self contained breathing apparatus.</li> <li>-Extinguish fire with water fog.</li> <li>-Extinguish oil fire with fog applicator, dry chemical, or foam applicator.</li> <li>-Effect a rescue in a smoke filled space wearing breathing apparatus</li> </ul>	
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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

**Competence: Operate life-saving appliances**

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
<i>Life-saving</i> Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements and their equipment, including radio life-saving appliances, satellite EPIRB, SARTs, immersion suits and thermal protective aids	Organize and participate in abandon ship drills	On board ship	Describe the organization and participate in drills.	Drills are held regularly, with advance preparation, evaluation, and remediation as necessary.
	Know survival craft and rescue boats	On board ship	Describe features and operation of equipment.	70% minimum score on written exam
	Use emergency signaling equipment and communications equipment	On board or Laboratory	Inspect and operate in simulated fashion pyrotechnic distress signals, EPIRB's and SART's.	Actions are taken in accordance with manufacturer's instructions, specifications.
	Know sea survival techniques	Written exam	List techniques for survival at sea.	70% minimum score on written exam

**Competence: Apply medical first aid on board ship**

<i>Medical aid</i> Practical application of medical guides and advice by radio, including the ability to take effective action based on such knowledge in the case of accidents or illnesses that are likely to occur onboard ship	Know procedures for using medical guides and sources of medical advice by radios	Written exam	List procedures.	70% minimum score on written exam
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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

Competence: Monitor compliance with legislative requirements

KUP	Performance Objective	Condition of Assessment	Performance Measure	Performance Standard
<p>Basic working knowledge of the relevant IMO conventions concerning safety of life at sea and protection of the marine environment - National requirements affecting the operation and safety of the vessel</p>	<p>Know the following:</p> <ul style="list-style-type: none"> <li>- Relevant IMO conventions concerning safety of life at sea and pollution prevention</li> <li>- National laws and regulations</li> <li>- Certificates required and their period validity</li> <li>- Responsibilities under the load line convention</li> <li>- Responsibilities under SOLAS</li> <li>- Responsibilities under the International Convention of Pollution Prevention</li> <li>- Requirements of the International Health Regulations</li> <li>- International instruments affecting the ship, passengers, crew, and cargo</li> <li>- Methods and aids to prevent pollution</li> <li>- National legislation for implementing international agreements</li> </ul>	<p>Written exam</p>	<p>Describe the application of the relevant conventions, laws, and regulations to OSVs.</p>	<p>70% minimum score on written exam</p>

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**TABLE A-III/1 ASSESSMENT CRITERIA  
CHIEF ENGINEER—OSV (OC/NC)**

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

Competence: Monitor the loading, stowage, securing and unloading of cargoes and care during the voyage

<b>KUP</b>	<b>Performance Objective</b>	<b>Condition of Assessment</b>	<b>Performance Measure</b>	<b>Performance Standard</b>
Handling, stowage, and securing of deck cargoes	Know the safe handling of cargoes, including hazardous cargoes	Written exam	Describe procedures for cargo handling, including signaling, rigging, and stowage, particularly portable tanks on deck.	70% minimum score on written exam
	Know the effect of cargo stability and seaworthiness	Written exam	Describe the limitations for cargo carriage on OSV's in relation to the vessel's stability letter.	
	Know and apply rules, codes, and standards regarding cargo handling	Written exam	Apply relevant sections of the CFR and codes to cargo handling situations.	
	Stow and secure cargoes, including cargo-handling gear and lashing equipment	On board ship	Stow and secure cargoes.	Cargo is stowed and secured in a manner that is stable, safe, efficient, and in accordance with company policy, and the Ship's Information Book
Carriage of dangerous cargoes	Know the precautions and care of carrying dangerous cargoes	Written exam	Describe the requirements and recommended operational procedures for carrying dangerous cargoes, including labeling, packaging, and stowage.	70% minimum score on written exam