

ON BOARD TRAINING RECORD BOOK

FOR

**OFFICERS IN CHARGE OF AN ENGINEERING WATCH (ENGINE
CADETS)**

Name.....

Home Address.....

.....

.....

.....

Date Training Started.....

The STCW Convention requires that any person conducting on board training shall do so only when it will not adversely affect the normal operation of the ship and time can be dedicated to the training and any evaluation of competence

SECTION 1 SUMMARY RECORD OF PROGRESS

PARTICULARS OF CADET to be completed by the trainee in **BLOCK CAPITALS**

Name in Full.....

Seafarer's Book No Date of Birth

Home Address

.....

.....

Change of Address (if applicable)

.....

.....

PHOTO

The acquired knowledge into practice was assessed by the:

Name of institution.....

.....

Date.....

Signature and stamp.....

.....

TRAINING PROGRAMME as applicable

COLLEGE PHASES:		
	From:	To:
	From:	To:
	From:	To:
	From:	To:
SEA PHASES:		
	From:	To:
	From:	To:
	From:	To:
	From:	To:
WORKSHOP OR OCCUPATIONAL TRAINING:		
	From:	To:
	From:	To:
	From:	To:

BASIC TRAINING as required by the STCW Code

As part of your pre-sea training you should have completed Basic Training or instruction as listed. Enter details of this training or instruction below.

	Date	Location	Document Number
Basic maritime safety program: - Personal Survival Techniques - Fire Prevention and Fire Fighting - Elementary First Aid - Personal Safety and Social Responsibilities	Section A-VI/1, paragraph 1-2		
Safety familiarization	Section A-VI/6 paragraph 1-4		

DESIGNATED TRAINING OFFICERS REVIEW OF TRAINING PROGRESS (CONTINUED)

Ship	Comments	Name in BLOCK CAPITALS	Initials	Date

COMPANY'S INSPECTION OF RECORD BOOK

Comments should only relate to the cadet's practical progress and competence and should NOT refer to character.

Comments	Name in BLOCK CAPITALS	Initials	Date

SECTION 2 MANDATORY SAFETY AND SHIPBOARD FAMILIARISATION

SAFETY FAMILIARISATION as required by Section A-VI/1 paragraph 1 of the STCW Code

Before being assigned to shipboard duties all seafarers must receive basic safety familiarization to know what to do in an emergency. The chief engineer or responsible officer on each ship should sign and date below to signify that you have received training or instruction to be able to carry out the following tasks or duties.

Ship's name						
Task/Duty	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date
Be able to: Communicate with other persons on board on elementary safety matters						
Understand safety information symbols, signs and alarm signals						
Know what to do if: A person falls overboard Fire or smoke is detected The fire or abandon ship alarm is sounded						
Be able to: Identify muster and embarkation stations and emergency escape routes						
Locate and don life jackets and survival suits						
Raise the alarm and have a basic knowledge of the use of portable fire extinguishers						
Take immediate action upon encountering an accident or other medical emergency before seeking further medical assistance on board						
Close and open the fire, weathertight and watertight doors fitted in the particular ship, other than those for hull openings						

SHIPBOARD FAMILIARISATION as required by Regulation I/14 of the STCW Convention

You will be given a period of time during which you will have an opportunity to become acquainted with the equipment you will be using, and specific watchkeeping, safety, environmental and emergency procedures and arrangements required to perform your duties. The location of safety and emergency equipment varies from ship to ship. To be sure that you are familiar with your duties and all ship arrangements, installations, equipment procedures and ship characteristics that are relevant to your routine or emergency duties, you must complete the following tasks or duties as soon as possible on joining your ship.

Ship's name						
Task/Duty	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date
Watch keeping procedures and arrangements: Have knowledge of engine room (ER) and other work areas						
Have knowledge of main and auxiliary engines and other engine room equipment and displays						
Operate, under supervision, equipment, plant and machinery to be used in routine duties						
Safety and emergency procedures: Read and demonstrate an understanding of your Company's Fire and Safety Regulations						
Demonstrate recognition of the engine room and general alarm signals for: FIRE EMERGENCY ABANDON SHIP ENGINE ROOM CO₂ RELEASE						
Locate engine room first aid equipment						
Locate Emergency Escape Breathing Devices (EEBDs) for machinery space and accommodation						
Locate fire -fighting equipment: alarm activating points, alarm bells, extinguishers, hydrants, breathing apparatus, fire-fighter's outfits and hoses						
Locate rocket line throwing apparatus						
Locate distress rockets, flares and other pyrotechnics						
Locate EPIRB, SART and portable radios for use in emergency						
Locate CO ₂ bottle room, and release points and control valves for machinery spaces, engine room, pump rooms, cargo tanks and holds						

SHIPBOARD FAMILIARISATION as required by Regulation I/14 of the STCW Convention (continued)

Ship's name						
Task/Duty	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date	Officer's Initials/Date
Safety and emergency procedures (continued): Locate and understand the operation of the emergency deck stops for main engines, fire flaps, ventilation, fuel oil valve and other emergency stop valves						
Locate and understand the operation of the emergency fire pump, emergency generator and emergency compressor						
Environmental protection: Get acquainted with: The procedure for handling garbage, rubbish and other wastes						
Handling of oily bilge water and oil wastes						

BOAT AND MUSTER STATIONS

Insert Boat and Fire Muster Stations and other details in the appropriate space. Ask the master to sign in the space provided.

Ship's name			
Boat Muster Station			
Fire Muster Station			
Master's Name BLOCK CAPITALS			
Master's Signature			
Date			

mv/ss	IMO Number	Call Sign.....
<p>Dimensions and Capacities</p> <p>Length Over all..... m</p> <p>Breadth m</p> <p>Depth m</p> <p>Summer draft m</p> <p>Summer freeboard m</p> <p>Gross tonnage t</p> <p>Deadweight..... t</p> <p>Light displacement..... t</p> <p>Grain/Liquid capacity m³</p> <p>Main Engines</p> <p>Engine (make/type)</p> <p>Stroke Bore</p> <p>Output..... bhp/kW rpm</p> <p>Turbo charger</p> <p>Reduction gears type</p> <p>Type of waste heat recovery</p> <p>Engine fuel type..... Cons t/d</p> <p>Viscosity..... cSt at °C</p> <p>Auxiliary boilers (type and no.)</p> <p>Make</p> <p>Working pressure kg/m² or bar</p>	<p>Lifesaving Equipment</p> <p>Lifeboats (No.).....</p> <p>Life-rafts (No.)</p> <p>Capacity per boat..... (persons)</p> <p>Capacity per life-raft..... (persons)</p> <p>Immersion Suits (No. /type).....</p> <p>Lifejackets (No/type)</p> <p>Emergency Escape Breathing Devices (EEBDs) (no./type)</p> <p>Fire Fighting Equipment</p> <p>Fire extinguishers (no. and capacity)</p> <p>Types: Water..... liters Foam..... liters</p> <p> Dry powderkg CO₂..... kg</p> <p>Fire hoses (no. and size) mm</p> <p>Breathing apparatus (make).....</p> <p>ER fixed fire-fighting system (type)</p> <p>Other fixed fire-fighting system(s) (type)</p> <p>Auxiliaries</p> <p>Generators (type/make)</p> <p>Output</p> <p>Fuel type..... Cons t/d</p> <p>Emergency generator</p> <p>Purifiers (type/make/capacity)</p> <p>LO..... HFO..... MDO.....</p>	<p>Steering Gear</p> <p>Type.....</p> <p>Cargo Handling Gear</p> <p>Derricks/cranes (no. and SWL) tones</p> <p>Winches (types) tones</p> <p>Other cargo equipment</p> <p>Ballast tanks (No.).....</p> <p>Cargo tanks(No.).....</p> <p>Cargo pumps(No.)</p> <p>Pipelines (sizes)</p> <p>Type and rating tones/hour</p> <p>Anchors</p> <p>Port weight tones</p> <p>Starboard weight..... tones</p> <p>Spare weight..... tones</p> <p>Cable (diameter) mm</p> <p>Length..... shackles</p> <p>Windlass (make/type).....</p>

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SECTION 3 PARTICULARS OF SHIPS

FIRST SHIP

SECOND SHIP

mv/ss	IMO Number	Call Sign.....
<p>Dimensions and Capacities</p> <p>Length Over all..... m</p> <p>Breadth..... m</p> <p>Depth..... m</p> <p>Summer draft..... m</p> <p>Summer freeboard..... m</p> <p>Gross tonnage..... t</p> <p>Deadweight..... t</p> <p>Light displacement..... t</p> <p>Grain/Liquid capacity..... m³</p> <p>Main Engines</p> <p>Engine (make/type)</p> <p>Stroke..... Bore.....</p> <p>Output..... bhp/kW..... rpm</p> <p>Turbo charger</p> <p>Reduction gears type</p> <p>Type of waste heat recovery</p> <p>Engine fuel type..... Cons..... t/d</p> <p>Viscosity..... cSt at..... °C</p> <p>Auxiliary boilers (type and no.)</p> <p>Make</p> <p>Working pressure..... kg/m² or bar</p>	<p>Lifesaving Equipment</p> <p>Lifeboats (No.).....</p> <p>Life-rafts (No.)</p> <p>Capacity per boat..... (persons)</p> <p>Capacity per life-raft..... (persons)</p> <p>Immersion Suits (No. /type).....</p> <p>Lifejackets (No/type)</p> <p>Emergency Escape Breathing Devices (EEBDs) (no./type)</p> <p>Fire Fighting Equipment</p> <p>Fire extinguishers (no. and capacity)</p> <p>Types: Water..... liters Foam..... liters</p> <p> Dry powder..... kg CO₂..... kg</p> <p>Fire hoses (no. and size)..... mm</p> <p>Breathing apparatus (make).....</p> <p>ER fixed fire-fighting system (type)</p> <p>Other fixed fire-fighting system(s) (type)</p> <p>Auxiliaries</p> <p>Generators (type/make)</p> <p>Output</p> <p>Fuel type..... Cons..... t/d</p> <p>Emergency generator</p> <p>Purifiers (type/make/capacity)</p> <p>LO..... HFO..... MDO.....</p>	<p>Steering Gear</p> <p>Type.....</p> <p>Cargo Handling Gear</p> <p>Derricks/cranes (no. and SWL)..... tones</p> <p>Winches (types)..... tones</p> <p>Other cargo equipment.....</p> <p>Ballast tanks (No.).....</p> <p>Cargo tanks(No.).....</p> <p>Cargo pumps(No.).....</p> <p>Pipelines (sizes)</p> <p>Type and rating..... tones/hour</p> <p>Anchors</p> <p>Port weight..... tones</p> <p>Starboard weight..... tones</p> <p>Spare weight..... tones</p> <p>Cable (diameter)..... mm</p> <p>Length..... shackles</p> <p>Windlass (make/type).....</p>

THIRD SHIP

mv/ss	IMO Number	Call Sign.....
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<p>Dimensions and Capacities</p> <p>Length Over all..... m</p> <p>Breadth m</p> <p>Depth m</p> <p>Summer draft m</p> <p>Summer freeboard m</p> <p>Gross tonnage t</p> <p>Deadweight..... t</p> <p>Light displacement..... t</p> <p>Grain/Liquid capacity m³</p> <p>Main Engines</p> <p>Engine (make/type)</p> <p>Stroke Bore</p> <p>Output bhp/kW rpm</p> <p>Turbo charger</p> <p>Reduction gears type</p> <p>Type of waste heat recovery</p> <p>Engine fuel type..... Cons t/d</p> <p>Viscosity cSt at °C</p> <p>Auxiliary boilers (type and no.)</p> <p>Make</p> <p>Working pressure kg/m² or bar</p>	<p>Lifesaving Equipment</p> <p>Lifeboats (No.).....</p> <p>Life-rafts (No.)</p> <p>Capacity per boat (persons)</p> <p>Capacity per life-raft (persons)</p> <p>Immersion Suits (No. /type).....</p> <p>Lifejackets (No/type)</p> <p>Emergency Escape Breathing Devices (EEBDs) (no./type)</p> <p>Fire Fighting Equipment</p> <p>Fire extinguishers (no. and capacity)</p> <p>Types: Water liters Foam liters</p> <p> Dry powder..... kg CO₂..... kg</p> <p>Fire hoses (no. and size) mm</p> <p>Breathing apparatus (make).....</p> <p>ER fixed fire-fighting system (type)</p> <p>Other fixed fire-fighting system(s) (type)</p> <p>Auxiliaries</p> <p>Generators (type/make)</p> <p>Output</p> <p>Fuel type Cons t/d</p> <p>Emergency generator</p> <p>Purifiers (type/make/capacity)</p> <p>LO..... HFO MDO.....</p>	<p>Steering Gear</p> <p>Type.....</p> <p>Cargo Handling Gear</p> <p>Derricks/cranes (no. and SWL) tones</p> <p>Winches (types) tones</p> <p>Other cargo equipment.....</p> <p>.....</p> <p>Ballast tanks (No.).....</p> <p>Cargo tanks(No.).....</p> <p>Cargo pumps(No.).....</p> <p>Pipelines (sizes)</p> <p>Type and rating..... tones/hour</p> <p>Anchors</p> <p>Port weight tones</p> <p>Starboard weight tones</p> <p>Spare weight tones</p> <p>Cable (diameter)..... mm</p> <p>Length..... shackles</p> <p>Windlass (make/type).....</p>
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FOURTH SHIP

mv/ss	IMO Number.....	Call Sign.....
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<p>Dimensions and Capacities</p> <p>Length Over all..... m</p> <p>Breadth m</p> <p>Depth m</p> <p>Summer draft m</p> <p>Summer freeboard m</p> <p>Gross tonnage t</p> <p>Deadweight..... t</p> <p>Light displacement..... t</p> <p>Grain/Liquid capacity m³</p> <p>Main Engines</p> <p>Engine (make/type)</p> <p>Stroke Bore</p> <p>Output bhp/kW rpm</p> <p>Turbo charger</p> <p>Reduction gears type</p> <p>Type of waste heat recovery</p> <p>Engine fuel type..... Cons t/d</p> <p>Viscosity cSt at °C</p> <p>Auxiliary boilers (type and no.)</p> <p>Make</p> <p>Working pressure kg/m² or bar</p>	<p>Lifesaving Equipment</p> <p>Lifeboats (No.).....</p> <p>Life-rafts (No.)</p> <p>Capacity per boat (persons)</p> <p>Capacity per life-raft (persons)</p> <p>Immersion Suits (No. /type).....</p> <p>Lifejackets (No/type)</p> <p>Emergency Escape Breathing Devices (EEBDs) (no./type)</p> <p>Fire Fighting Equipment</p> <p>Fire extinguishers (no. and capacity)</p> <p>Types: Water..... liters Foam..... liters</p> <p> Dry powder..... kg CO₂..... kg</p> <p>Fire hoses (no. and size) mm</p> <p>Breathing apparatus (make).....</p> <p>ER fixed fire-fighting system (type)</p> <p>Other fixed fire-fighting system(s) (type)</p> <p>Auxiliaries</p> <p>Generators (type/make)</p> <p>Output</p> <p>Fuel type..... Cons t/d</p> <p>Emergency generator</p> <p>Purifiers (type/make/capacity)</p> <p>LO..... HFO..... MDO.....</p>	<p>Steering Gear</p> <p>Type.....</p> <p>Cargo Handling Gear</p> <p>Derricks/cranes (no. and SWL) tones</p> <p>Winches (types) tones</p> <p>Other cargo equipment.....</p> <p>.....</p> <p>Ballast tanks (No.).....</p> <p>Cargo tanks(No.).....</p> <p>Cargo pumps(No.).....</p> <p>Pipelines (sizes).....</p> <p>Type and rating..... tones/hour</p> <p>Anchors</p> <p>Port weight tones</p> <p>Starboard weight tones</p> <p>Spare weight..... tones</p> <p>Cable (diameter)..... mm</p> <p>Length..... shackles</p> <p>Windlass (make/type).....</p>
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mv/ss	IMO Number	Call Sign.....
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<p>Dimensions and Capacities</p> <p>Length Over all..... m</p> <p>Breadth m</p> <p>Depth m</p> <p>Summer draft m</p> <p>Summer freeboard m</p> <p>Gross tonnage t</p> <p>Deadweight t</p> <p>Light displacement t</p> <p>Grain/Liquid capacity m³</p> <p>Main Engines</p> <p>Engine (make/type)</p> <p>Stroke Bore</p> <p>Output bhp/kW rpm</p> <p>Turbo charger</p> <p>Reduction gears type</p> <p>Type of waste heat recovery</p> <p>Engine fuel type Cons t/d</p> <p>Viscosity cSt at °C</p> <p>Auxiliary boilers (type and no.)</p> <p>Make</p> <p>Working pressure kg/m² or bar</p>	<p>Lifesaving Equipment</p> <p>Lifeboats (No.).....</p> <p>Life-rafts (No.)</p> <p>Capacity per boat (persons)</p> <p>Capacity per life-raft (persons)</p> <p>Immersion Suits (No. /type)</p> <p>Lifejackets (No/type)</p> <p>Emergency Escape Breathing Devices (EEBDs) (no./type)</p> <p>Fire Fighting Equipment</p> <p>Fire extinguishers (no. and capacity)</p> <p>Types: Water liters Foam liters</p> <p> Dry powder..... kg CO₂..... kg</p> <p>Fire hoses (no. and size) mm</p> <p>Breathing apparatus (make).....</p> <p>ER fixed fire-fighting system (type)</p> <p>Other fixed fire-fighting system(s) (type)</p> <p>Auxiliaries</p> <p>Generators (type/make)</p> <p>Output</p> <p>Fuel type Cons t/d</p> <p>Emergency generator</p> <p>Purifiers (type/make/capacity)</p> <p>LO..... HFO..... MDO.....</p>	<p>Steering Gear</p> <p>Type.....</p> <p>Cargo Handling Gear</p> <p>Derricks/cranes (no. and SWL) tones</p> <p>Winches (types) tones</p> <p>Other cargo equipment.....</p> <p>.....</p> <p>Ballast tanks (No.).....</p> <p>Cargo tanks(No.).....</p> <p>Cargo pumps(No.).....</p> <p>Pipelines (sizes)</p> <p>Type and rating..... tones/hour</p> <p>Anchors</p> <p>Port weight tones</p> <p>Starboard weight tones</p> <p>Spare weight tones</p> <p>Cable (diameter)..... mm</p> <p>Length..... shackles</p> <p>Windlass (make/type).....</p>
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FIFTH SHIP

SIXTH SHIP

mv/ss	IMO Number	Call Sign
Dimensions and Capacities	Lifesaving Equipment	Steering Gear
Length Over all..... m	Lifeboats (No.).....	Type.....
Breadth m	Life-rafts (No.)	Cargo Handling Gear
Depth m	Capacity per boat(persons)	Derricks/cranes (no. and SWL) tones
Summer draft m	Capacity per life-raft(persons)	Winches (types) tones
Summer freeboard m	Immersion Suits (No. /type).....	Other cargo equipment.....
Gross tonnage t	Lifejackets (No/type)
Deadweight..... t	Emergency Escape Breathing Devices (EEBDs)	Ballast tanks (No.).....
Light displacement..... t	(no./type)	Cargo tanks(No.).....
Grain/Liquid capacity m ³	Fire Fighting Equipment	Cargo pumps(No.).....
Main Engines	Fire extinguishers (no. and capacity)	Pipelines (sizes)
Engine (make/type)	Types: Water.....liters Foam..... liters	Type and rating..... tones/hour
Stroke Bore	Dry powder..... kg CO ₂ kg	Anchors
Output bhp/kW rpm	Fire hoses (no. and size)mm	Port weight tones
Turbo charger	Breathing apparatus (make).....	Starboard weight tones
Reduction gears type	ER fixed fire-fighting system (type)	Spare weight tones
Type of waste heat recovery	Other fixed fire-fighting system(s) (type)	Cable (diameter)..... mm
Engine fuel type..... Cons t/d	Auxiliaries	Length..... shackles
Viscosity..... cSt at°C	Generators (type/make)	Windlass (make/type).....
Auxiliary boilers (type and no.)	Output	
Make	Fuel type..... Cons t/d	
Working pressure kg/m ² or bar	Emergency generator	
	Purifiers (type/make/capacity)	
	LO..... HFO..... MDO.....	

SECTION 4 SAFETY AT WORK

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
	Competence: Maintain safe operations				
	Application of safe working practices on board			<i>Operations, maintenance and repairs are planned and carried out in accordance with safety rules and procedures</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/Instructor (Initials/Date)
.1	Describe the system of permits to work on board				
.2	List the items to be checked in a work permit				
.3	List the items to be checked in a hot work permit				
.4	Describe an enclosed space				
.5	Describe the procedures to enter an enclosed space				
.6	Explain the use of gas analysis instruments to be used prior to entering: Fuel oil tanks				
.7	Ballast tanks				
.8	Void spaces				

.9	Describe the procedure adopted on finding someone overcome as a result of: Electric shock					
.10	Gassing incident in an enclosed space					
.11	Describe special safety precautions in dry dock					
.12	Demonstrate an understanding of safe working practices for use of welding and cutting equipment					

SECTION 5 TASKS FOR OFFICERS IN CHARGE OF AN ENGINEERING WATCH

FUNCTION: MARINE ENGINEERING AT THE OPERATIONAL LEVEL

Ref No	Training		Criteria for Evaluation	Competence Demonstrated	
				Designated Training Officer/In Service Assessor (Initials/Date)	
1.	Competence: Maintain a safe engineering watch		The duties are carried out in accordance with accepted principles, procedures and ship specific instructions. Communication is clearly and unambiguously given and received		
1.1	Relieve and hand over the watch				
	Task/Duty	Task Completed	Advice on Areas for Improvement	Task Completed	
		Supervising Officer/ Instructor (Initials/Date)		Supervising Officer/ Instructor (Initials/Date)	
.1	Follow the correct procedure for handing over a watch: At sea				
.2	In port				
.3	Follow the correct procedures for taking over and accepting a watch: At sea				
.4	In port				
1.2	Conduct the watch		The frequency and extent of monitoring machinery, equipment and systems conform to manufacturer's recommendations and accepted principles and procedures and are sufficient to deal with common operational errors and fault conditions. Questionable decisions and/or actions result in appropriate challenge and response		
.1	Assist with the duties of an engineer officer on: Seagoing watches				
.2	Port watches				
.3	Anchor watches				
.4	Under supervision, carry out all routine watchkeeping duties, checking the correct functioning of all automatic control and monitoring systems				

.5	Make adjustments as found necessary					
.6	Perform routine checks in machinery space for correct water levels					
.7	Blow down main engine scavenge drains					
.8	Ensure that compressed air automatic drains are functioning correctly					
.9	Check sheathing on high-pressure fuel pipes					
.10	Clean air side of the turbo charger					
.11	Carry out boiler water tests and corrective treatment					
.12	Check returns from heating coils and other possible sources of contaminated feedwater					
.13	Check the correct operation of the boiler including water level and burner					
.14	Carry out a soot-blowing procedure					
.15	Check all air receiver drains					
.16	Assist on the bridge during manoeuvring operations: Entering port					
.17	Leaving port					
.18	Understand that effective watchkeeping involves managing watch duties, including supervision, as well as maintaining the safe operation of propulsion plant and other machinery					
1.3	Response to black-out and emergency situations				<i>Immediate actions are executed in accordance with laid down procedures, and due regard paid to the actual situation. Effective leadership behaviors are demonstrated</i>	
.1	Take corrective action during emergency drills: Fire drill					
.2	Abandon ship drill					
.3	Black out drill					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
1.	Competence: Maintain a safe engineering watch					
1.3	Response to black-out and emergency situations (continued)			<i>Immediate actions are executed in accordance with laid down procedures, and due regard paid to the actual situation. Effective leadership behaviors are demonstrated</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.4	Assist with/demonstrate use of main engine local control and emergency maneuvering					
.5	Assist with/demonstrate procedure for returning main engine to normal running					
.6	Demonstrate in a drill, emergency running and maneuvering procedures					
.7	Demonstrate knowledge of emergency steering gear operation					
.8	Demonstrate a knowledge of how to reset machinery following failure and how to restart plant					
.9	State the priorities for restoring services					
.10	Demonstrate knowledge of first start arrangements					
1.4	Change-over of remote-automatic and local control systems			The operations are decisively carried out and in accordance with procedures stated. Questionable decisions and/or actions result in appropriate challenge and response		
.1	Change over to the stand by system for: Main engines					
.2	Generators					
.3	Main engine system pumps					
.4	Steering gear					

1.5	Complete the engine room log book and other records			All significant readings, movements and activities related to the engineering systems are properly recorded		
.1	Complete the engine room log book and record books					
.2	Record the complete engine movements in the log during periods of maneuvering					
.3	Evaluate record entries in the Alarm Record Book					
.4	Observe and note performance and condition of machinery using condition monitoring equipment, where appropriate					
.5	Observe and note normal operating temperatures/ pressures					
.6	Demonstrate a knowledge of and understand the purpose of the Alarm Record Book					
1.6	Knowledge of engine room resource management principles			Resources are allocated and assigned as needed in correct priority to perform necessary tasks		
.5	Prepare for stand by engines					

.1	Set realistic plans for allocation and use of engine room resources					
.2	Plan tasks to achieve timely outcome					
.3	Understand that to achieve a goal or an objective the plan must be specific with sufficient detail					
.4	Demonstrate collection and interpretation of management data to assess task progress					
.5	Lead progress review with team members to ensure task is attainable within the plan set					
.6	Lead task review on completion giving credit where due and noting areas where things may be done differently on another occasion					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
2.	Competence: Use English in written and oral form					
2.1	Use English engineering publications, operational manuals and fault finding instructions			<i>The publications and manuals relevant to the engineering duties are correctly interpreted</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	List English language publications or manuals used:					
.2	If appropriate, assist with completion of ship's Planned Maintenance System records in English					
2.2	Communicate with others in English language, as appropriate			Communications are clear and understood		
.1	Demonstrate correct use of terms used in the engine room and names of machinery, equipment and tools					
.2	Give and take orders in English concerning: Routine operations					
.3	Emergency drills					
.4	Ensure that others have understood orders correctly					
.5	Demonstrate an ability to communicate instructions effectively in the English language to a multi-lingual crew					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
3.	Competence: Use internal communication systems					
3.1	Operation of all internal communication systems on board			<i>Transmission and reception of messages are consistently successful. Communication records are complete, accurate and comply with statutory requirements</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Demonstrate operation of the ship's internal phone system					
.2	Use internal message system to send and receive information or instructions					
.3	Understand communication is a two-way exchange and demonstrate this in practice: Steering gear to engine room					
.4	Steering gear to bridge					
.5	Demonstrate correct station ID procedure when using hand held transceivers (portable radios)					
.6	Complete records accurately and in a timely way when recording information received by telephone or hand held transceivers (portable radios)					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
4.	Competence: Operate main and auxiliary machinery and associated control systems				Designated Training Officer/In Service Assessor (Initials/Date)	
4.1	Prepare machinery for departure from port			<i>All checks and actions are carried out in accordance with laid down instructions and all auxiliary and control systems are functioning properly All relevant checks and actions are recorded</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Draw a schematic arrangement of the main engine system, using blocks to indicate the main components					
.2	Prepare and test the steering gear and telegraphs					
.3	Confirm bridge and ER communications					
.4	Check starting air compressor and prepare starting air system					
.5	Prepare main and auxiliary machinery for port departure					
.6	Prepare main and auxiliary machinery for the sea passage					
.7	Demonstrate a knowledge of the use of high level and low level sea suctions					
4.2	Operate main and auxiliary machinery			<i>The machinery is operated in accordance with instructions, procedures and safe working practices. All instruments are monitored, necessary adjustments made and required actions carried out and properly recorded</i>		
.1	Sketch, in diagrammatic form, the main systems as appropriate for the ship: Auxiliary engine					
.2	Boiler system					
.3	Start main engine from local and remote control positions					
.4	Carry out post start-up checks of main engine and shafting					
.5	Manually operate main compressor and change over to normal automatic running mode					

.6	Record pressures and temperatures for normal running, and note system valve settings and positions in normal running mode				
.7	Respond to instructions from the bridge and operate the main engine controls during periods of maneuvering				
.8	Water wash exhaust side main engine turbocharger				
.9	Change local/manual control of machinery and systems to remote/automatic control as appropriate				
.10	Adjust main engine and auxiliary machinery for continuous running				
.11	Report abnormal conditions, making a record of same and note corrective action required				
.12	Prepare for running and operate an evaporator/fresh water generator				
.13	Apply tests and conditioning for purity and potability of fresh water				
.14	Check crankcase oil mist detector and demonstrate action to be taken in case of an alarm				
.15	Check governors				
.16	Take power diagram or readings and calculate mean effective pressure and indicated power				
.17	Carry out routine tests on: Engine cooling water				
.18	Fuel oil				
.19	Lube oil				
.20	Assist with shutting down main engine and auxiliary systems after finishing with engines				
.21	Fill a boiler and raise steam from cold				
.22	Raise the temperature of main engine fuel oil from cold to the correct level				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
4.	Competence: Operate main and auxiliary machinery and associated control systems					
4.2	Operate main and auxiliary machinery (continued)			<i>The machinery is operated in accordance with instructions, procedures and safe working practices. All instruments are monitored, necessary adjustments made and required actions carried out and properly recorded</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.23	Admit steam to a line or system, taking all precautions against thermal and pressure shock and avoiding water hammer					
.24	Check the security of steam pipes and any expansion pieces					
.25	Check that steam traps and drains are functioning					
.26	Close down a steam line, observing procedure for draining					
.27	Check quality of combustion, noting: Smoke from the funnel Clarity around the flame Flame shape, size and color Excess air, CO ₂ /CO reading Carbon and unburnt fuel deposits					
.28	Check returns from heating coils and other possible sources of contaminated feedwater					
.29	Check the correct functioning of all boiler condition indicators and alarms					
.30	Check that correct boiler water level is maintained					
.31	Demonstrate the correct procedure for blowing down a boiler gauge glass					
.32	Explain the effect of varying the temperature of circulating water					
.33	Start up and operate ship's refrigeration plant					

.34	Make up brine, if appropriate				
.35	Check density of the brine				
.36	Shut down and secure refrigeration/AC plant				
.37	Carry out refrigerant charging procedure				
.38	Carry out leak detection for refrigerant gases				
.39	Replenish driers and filters				
.40	Check pressure tank safety devices				
.41	Put sewage system on line and check correct operation				
.42	Operate waste handling equipment: Incinerator				
.43	Shredder/compactor				
.44	Other (state)				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
5.	Competence: Operate fuel, lubrication, ballast and other pumping systems and associated control systems				
5.1	Plan the operations of auxiliary and piping systems and service plants			<i>Operations are planned and all equipment and control system checked before operations are executed</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Sketch a line diagram of the oily water separator (OWS)				
.2	Sketch a line diagram of the BALLAST WATER SYSTEM				
.3	Sketch a line diagram of the engine room bilge water system				
.4	Sketch a line diagram of the hold bilge water system				
.5	Assist with the operation of the OWS				
.6	Demonstrate a knowledge of making correct entries in the Oil Record Book				
.7	Assist with planning ballast water management operations				
.8	Plan and line-up: Ballast water pump				
.9	Bilge pump				
.10	Demonstrate a knowledge of the bilge pump				
.11	Sketch a line diagram of the fuel oil bunker system				
.12	Assist with planning for: Receiving bunkers				
.13	Transfer of fuel from bunker tanks to service tanks				

5.2	Operate the systems for fuel oil, lube oil, ballast, bilge, MARPOL equipment and cargo pumping				<i>The operations are carried out in accordance with rules and procedures to ensure safety of operations and avoid pollution of the marine environment</i>		
.1	Under supervision, transfer fuel from bunkers to service tanks, observing all safety, ship stability and pollution prevention requirements						
.2	Drain water/sludge from settling tanks						
.3	Start, operate and monitor fuel oil purifiers						
.4	Demonstrate a knowledge of Sulphur Emissions Control Areas						
.5	Assist an officer with change over from heavy fuel oil to low viscosity fuel oil and vice versa, where applicable						
.6	Start, operate and monitor lube oil purifiers						
.7	Perform routine checks and top ups to maintain lube oil system tanks at the correct levels						
.8	Assist with loading and discharging cargo tanks, including stripping procedures						
.9	Set up and use an OWS in compliance with MARPOL						
.10	Operate an oil discharge monitor in compliance with MARPOL (oil tankers)						
.11	Use bilge holding tanks						
.12	Observe all pollution prevention requirements						
.13	Open up OWS units, clean all parts and reassemble						
.14	Observing all safety, ship stability and pollution prevention requirements, assist an officer with: Ballasting						
.15	Deballasting						
.16	Pump out hold bilges ensuring that all pollution prevention regulations and requirements are observed						
.17	Demonstrate the emergency arrangements for emptying engine room bilges in the event of flooding						

FUNCTION: ELECTRICAL ELECTRONIC AND CONTROL ENGINEERING AT THE OPERATIONAL LEVEL

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
6.	Competence: Operate electrical, electronic and control systems					
6.1	Basic configuration and operating principles of electrical equipment: Locate and use relevant manuals, drawings, diagrams and instructions for electrical equipment and distribution systems			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electrical systems can be understood and explained with drawings/instructions		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Explain the difference between a system diagram, a circuit diagram and a wiring diagram					
.2	Demonstrate an ability to use ship's diagrams to identify: Main circuit breakers Emergency switchboard connections Trips (over current, reverse power, low frequency) Transformers Fuses Supply voltages Shore connections Loads to each piece of equipment The types of motors and motor starters					
.3	Demonstrate a knowledge of symbols commonly used on circuit diagrams					
.4	Demonstrate a knowledge of the location of major control and protection					
.5	Demonstrate a knowledge of which electrical loads are classed as essential or non-essential, and how essential services are supplied					
.6	Locate shore power connection and state the procedures for connection/disconnection					
6.2	Prepare and start alternators or generators				<i>The operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations</i>	
.1	Assist with pre start-up checks and tests on electrical equipment and control systems					

.2	Prepare for starting in manual and remote modes					
.3	Carry out post start-up checks					
.4	Check that all controls are functioning correctly					
.5	Demonstrate knowledge of trips and how to reset for: Over current					
.6	Reverse power					
.7	Low frequency					
.8	Check exhaust pipes for leakage					
.9	Check efficiency of sheathing on high-pressure fuel pipes and associated leak-off indicators					
6.3	Parallel and change-over alternators or generators				<i>The operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations</i>	
.1	After start-up, run up to speed, use paralleling procedures and put on load, including shaft generators and emergency generators					
.2	Adjust the load share of machines running in parallel					
.3	Remove the load from a machine running in parallel, stop and shut down					
.4	Describe the safety features in the power distribution system which protect alternators in case of a major fault					
6.4	Start electric motors including high voltage installations, where appropriate			<i>The operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations</i>		
.1	Demonstrate an understanding of the starting methods for electric motors					
.2	Start up and operate a high capacity pump					
.3	Demonstrate a knowledge of protective switch gear associated with high voltage installations					
.4	Demonstrate an understanding of the ship's permit to work system concerning electrical equipment					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
6.	Competence: Operate electrical, electronic and control systems				Designated Training Officer/In Service Assessor (Initials/Date)	
6.5	Basic configuration and operating principles of electronic equipment: Characteristic of basic electronic circuit elements			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electronic systems can be understood and explained with drawings/instructions		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Sketch and describe a component providing electronic equipment control					
.2	Assist with routine checks and tests on electronic equipment					
.3	Demonstrate a knowledge of electronic circuit symbols					
.4	Demonstrate a knowledge of the characteristics of basic electronic circuit elements					
6.6	Flow chart for automatic and control systems			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electronic systems can be understood and explained with drawings/instructions		
.1	Demonstrate a knowledge of process signal symbols and terminology commonly used with control system diagrams					
.2	Sketch a part of the ship's electrical distribution system that uses sequential control circuits					
.3	List other items of equipment that use sequential control circuits					
.4	Demonstrate a knowledge of flowcharts for automatic and control systems for electronic equipment operation					
.5	Assist with routine checks and tests on electronic equipment control systems					

6.7	Functions, characteristics and features of control systems for machinery			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electronic systems can be understood and explained with drawings/instructions		
.1	Sketch and describe a system of electronic control					
.2	Demonstrate a knowledge of the functions, characteristics and features of the control system for: Main propulsion engine					
.3	Steam boiler					
.4	Steering gear					
6.8	Basic configuration and operating principles of electrical and electronic control systems: Automatic control methodologies and characteristics			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electronic systems can be understood and explained with drawings/instructions		
.1	Explain the term 'high gain' in a control system					
.2	Explain how instability in a control system can occur					
.3	Sketch a diagrammatic arrangement of an automatic control system you have worked on showing the control elements					
.4	Give examples of Proportional-Integral-Derivative (PID) controllers that may be adjusted to achieve improved results/stability					
.5	List tuning methods commonly used on board					
.6	List software applications used in PID loop tuning					
.7	Explain the fundamental difference in control system for : heating, ventilation and air conditioning systems					
.8	Give an example of a system where 'droop' has to be controlled					
.9	Describe the function of a PLC-based controller, identifying pre-set and adjustable parameters					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
6.	Competence: Operate electrical, electronic and control systems					
6.9	Proportional-Integral-Derivate (PID) control characteristics			The instructions and manuals relevant for safe and efficient operations are quickly identified and properly used. Electronic systems can be understood and explained with drawings/instructions		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Explain the basic principle of three term control					
.2	Demonstrate a knowledge of PID control characteristics and associated system devices for process control					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
7.	Competence: Maintenance and repair of electrical and electronic equipment					
7.1	Locate and interpret electrical and simple electronic diagrams			Manuals and diagrams are quickly located and those selected are most suitable for the task to be performed		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	List shipboard equipment for which relevant manuals/diagrams used: 1. 2. 3. 4. 5.					

.9	Assist with measuring the insulation resistance of a generator					
.10	Explain why insulation testing is best conducted while hot, or at working temperature					
.11	Carry out insulation tests on a motor using a Megger					
.12	Assist in the maintenance of a starter					
.13	Sketch a circuit diagram showing the arrangements for battery charging					
.14	Carry out routine testing and maintenance on emergency storage batteries					
7.5	Detect and repair electrical faults and malfunctions and take measures to prevent damage				<i>Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice</i>	
.1	Sketch the circuit diagram for the earth indicator lamps on the main switchboard					
.2	Carry out Megger testing for insulation resistance and continuity testing					
.3	Assist with fault finding on electrical equipment control systems					
.4	Assist with tracing earth faults					
7.6	Repair faults and correct malfunctions				<i>Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice</i>	
.1	Assist with maintenance, repair and fault finding on electronic control systems. List items worked on: 1. 2. 3. 4. 5.					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
7.	Competence: Maintenance and repair of electrical and electronic equipment				Designated Training Officer/In Service Assessor (Initials/Date)	
7.6	Repair faults and correct malfunctions (continued)			<i>Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.2	Assist with maintenance, repair and fault finding on AC electrical systems. List items worked on: 1. 2. 3. 4.					
.3	Assist with maintenance, repair and fault finding on DC electrical systems. List items worked on: 1. 2. 3. 4.					
7.7	Detection of electric malfunctions, location of faults and measures to prevent damage			<i>Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice</i>		
.1	Demonstrate a knowledge of earth faults and how to avoid them					
.2	Assist in tracing and correcting earth faults					
.3	Isolate and lock out associated equipment when engaged in repair or maintenance work					

.4	Carry out routine testing and maintenance on alarm systems, ensuring that the circuits are isolated, locked out and protected by notices and that appropriate permit to work is issued					
.5	Assist with correct earthing-down routine for maintenance work on high voltage equipment					
.6	Assist with fault finding on ship's lighting circuits and component testing					
.7	Assist with repairing or replacing various types of accommodation lights, cargo hold and deck flood lights used on board					
7.8	Knowledge of the function and performance tests and configuration of monitoring systems, automatic control devices and protective devices				<i>Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice</i>	
.1	Explain why on any system there should be separate sensors for monitoring and control					
.2	Check and replace defective sensors essential for engine operation					
.3	State at least one main engine monitoring system that automatically stops the engine in case of a fault					
.4	Repair or replace: Fuses					
.5	Control lamps					
.6	Temperature sensors					
.7	Pressure sensors					
.8	Carry out routine testing and maintenance on: Circuit breakers					
.9	Tripping mechanisms					
.10	Motor starters					
.11	Lights					
.12	Check alarm settings and pre-sets contained in a system maintenance log					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
7.	Competence: Maintenance and repair of electrical and electronic equipment				Designated Training Officer/In Service Assessor (Initials/Date)	
7.8	Knowledge of the function and performance tests and configuration of monitoring systems, automatic control devices and protective devices (continued)			<i>Dismantling, inspecting, repairing and reassembling equipment in accordance with manuals and good practice. Reassembling and performance testing is in accordance with manuals and good practice.</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.13	Outline the advantages and disadvantages of DC and AC motors					
.14	Outline how an electronic drive control can stop a motor overloading but keep it operating					
.15	Explain where heat is generated in an electronic drive and how it is dissipated					

FUNCTION: MAINTENANCE AND REPAIR AT THE OPERATIONAL LEVEL

Ref No	Training		Criteria for Evaluation	Competence Demonstrated	
8.	Competence: Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board			Designated Training Officer/In Service Assessor (Initials/Date)	
8.1	Knowledge of characteristic and limitations of materials and processes used in construction and repair of ships and equipment		The identification of important parameters for fabrication of typical ship-related components is appropriate. Selection of material is appropriate. Selection of materials is appropriate. Fabrication is to designated tolerances		
	Task/Duty	Task Completed		Advice on Areas for Improvement	Task Completed
.1	Demonstrate a knowledge of characteristics, properties and limitations of: Mild steel				
.2	High tensile steel				
.3	Stainless steel				
.4	Brass				
.5	Aluminium alloy				
.6	Copper				
8.2	Knowledge of characteristic and limitations of processes used for fabrication and repair		The identification of important parameters for fabrication of typical ship-related components is appropriate. Selection of material is appropriate. Selection of materials is appropriate. Fabrication is to designated tolerances		
.1	Demonstrate a knowledge of characteristics, properties and limitations of: Welding mild steel				
.2	Electric arc welding				
.3	Argon arc welding				
.4	Brazing				
.5	Riveting				
.6	Synthetic fixing methods				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
8.	Competence: Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board				Designated Training Officer/In Service Assessor (Initials/Date)	
8.3	Methods for carrying out safe emergency/temporary repairs			Use of equipment and hand tools, machine tools and measuring instruments is appropriate and safe		
	Task/Duty	Task Completed		Advice on Areas for Improvement	Task Completed	
		Supervising Officer/ Instructor (Initials/Date)			Supervising Officer/ Instructor (Initials/Date)	
.1	Demonstrate temporary repair to leaking pipe					
.2	List other temporary repairs made: 1. 2. 3. 4. 5.					
8.4	Safety measures to be taken to ensure a safe working environment and for using hand tools, machine tools and measuring instruments			Use of equipment and hand tools, machine tools and measuring instruments is appropriate and safe		
.1	Demonstrate an understanding of safe working practices and procedures for: Use of power operated tools					
.2	Machine tools					
.3	Welding equipment					
.4	Don appropriate personal protective equipment					
8.5	Use of hand tools and machine tools			Use of equipment and hand tools, machine tools and measuring instruments is appropriate and safe		
In the box below list the shipboard plant or equipment on which you have used, for example, the following hand tools: chisels, saws, spanners, files, hand-drills and machine tools, drill press, milling machine, saw, grinding machine and abrasive wheel						
	Item Fabricated or Repaired	Hand Tools/ Machine Tools Used	Task Completed	Advice on Areas for Improvement	Task Completed	
			Supervising Officer/ Instructor (Initials/Date)		Supervising Officer/ Instructor (Initials/Date)	
.1						

.2						
.3						
.4						
.5						
.6						
.7						
.8						
.9						
.10						
8.6	Use of measuring instruments				The selected measuring instruments used for repair and maintenance of machinery and equipment are relevant for the tasks; correct measures are taken and checked for compliance with stated tolerances	

In the box below list the shipboard plant or equipment on which you have used measuring equipment. Measuring instruments may include, for example, oddleg calipers, digital calipers, internal micrometer, depth guage and vernier gauge.

	Item Fabricated or Repaired	Measuring Instruments Used	Task Completed Supervising Officer/ Instructor (Initials/Date)	Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1					
.2					
.3					
.4					
.5					
.6					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
					Designated Training Officer/In Service Assessor (Initials/Date)	
8.	Competence: Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board			The selected measuring instruments used for repair and maintenance of machinery and equipment are relevant for the tasks; correct measures are taken and checked for compliance with stated tolerances		
8.6	Use of measuring instruments (continued)					
	Item Fabricated or Repaired	Measuring Instruments Used	Task Completed Supervising Officer/ Instructor (Initials/Date)	Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.7						
.8						
.9						
.10						
8.7	Use of sealants packings			<i>The selection of materials is appropriate</i>		
.1	Demonstrate the correct use of various types of sealants and packings and note when used: Gland seals					
.2	Flanges.....					
.3	Gasketing materials, including compressed non-asbestos, cork, rubber and fibre.....					
.4	Valve stem packing.....					
.5	Pump seal.....					
.6	Hydraulic seal.....					
.7	O-Ring seal.....					
.8	Flange joint sealants.....					
.9	Exhausts and piping.....					
.10	Shaft seals/packing.....					

8.8	Use of special tools for fabrication and repair work on board	<i>Correct tools are chosen and used in accordance with instructions, manuals and safe working practice</i>		
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In the box below list the machinery or equipment on which you have carried out repairs, or assisted in repairs with others, showing the special tools used. This includes dismantling, inspection, repair and reassembly work. As a minimum carry out repairs requiring use of: hydraulic tools, bearing pullers and torque wrench. Machinery may include steering gear, engine room pumps and fans, deck winches and windlass, galley and catering equipment and air conditioning.

	Item Fabricated or Repaired	Special Tools Used	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1							
.2							
.3							
.4							
.5							
.6							
.7							
.8							
.9							
.10							

8.9	Use of machine tools and welding equipment for fabrication and repairs	<i>The selected material is suitable for the part to be fabricated and the work is carried out within the designated tolerances and in accordance with safe working practice</i>		
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In the box below list the parts which you have fabricated (made), or assisted in making, using machine tools. For example: centre lathes, drill press, gas welding/brazing equipment, gas cutting equipment including plasma arc, electric arc welding and other special equipment.

	Item Fabricated or Repaired	Machine Tools or Equipment Used	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1							
.2							

Ref No	Training	Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
8.	Competence: Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board			
8.9	Use of machine tools and welding equipment for fabrication and repairs (continued)	<i>The selected material is suitable for the part to be fabricated and the work is carried out within the designated tolerances and in accordance with safe working practice</i>		

In the box below list the parts which you have fabricated (made), or assisted in making, using machine tools. For example: centre lathes, drill press, gas welding/brazing equipment, gas cutting equipment including plasma arc, electric arc welding and other special equipment.

	Item Fabricated or Repaired	Measuring Instruments Used	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.3							
.4							
.5							
.6							
.7							
.8							
.9							
.10							

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
9.	Competence: Maintenance and repair of shipboard machinery and equipment					
9.1	Locate and use relevant data sources, manuals and drawings Before starting any maintenance or repair work ensure that you have completed the tasks concerned with Safety at Work on page 26. In addition, ensure that you are familiar with the procedures for safe isolation of electrical equipment for your present ship, and that you are in possession of an appropriate permit to work.			The manufacturers' instructions and drawings relevant for the job are quickly identified and properly used		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Demonstrate a knowledge of the ship's Planned Maintenance System					
.2	Demonstrate an understanding of manufacturers' instructions and drawings for use in maintenance tasks					
.3	State what is required in a Planned Maintenance System					
.4	Assist with input to the ship's Planned Maintenance System					
.5	Retrieve reports from a computer-based maintenance system					
.6	Participate in a survey of running machinery using condition monitoring equipment, if applicable					
.7	Assist in interpretation of results of such survey					
.8	Describe how items of spare gear are stored and maintained in good condition					
9.2	Ensure safety of all personnel working on plant or equipment			<i>Isolation, dismantling and reassembly of plant and equipment is in accordance with accepted safe working practices and procedure</i>		
.1	State special precautions to be taken for repair and maintenance work in hazardous areas					
.2	Demonstrate an understanding of safe working practices and procedures for: Use of portable power operated tools					

Ref No	Training		Criteria for Evaluation	Competence Demonstrated	
				Designated Training Officer/In Service Assessor (Initials/Date)	
9.	Competence: Maintenance and repair of shipboard machinery and equipment				
9.2	Ensure safety of all personnel working on plant or equipment (continued)		<i>Isolation, dismantling and reassembly of plant and equipment is in accordance with accepted safe working practices and procedure</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)	Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Entry into enclosed spaces (tank entry)				
.2	Work beneath floor plates				
.3	Use of lifting gear				
.4	Moving heavy machinery				
.5	Work within refrigeration machinery spaces				
.6	Work on electrical machinery				
.7	Disposal of oily waste materials				
.8	Use of appropriate protective clothing				
.9	Working at height				
.10	Manual lifting and carrying				
9.3	Undertake maintenance and repairs to the main engine		<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
.1	Take and log readings of crankshaft deflections				
.2	Change, inspect, check condition, wear and clearance overhaul and test, as appropriate: Inlet valves				
.3	Fuel injection valves				

.4	Air start valves				
.5	Relief valves				
.6	Exhaust valves, where appropriate				
.7	Fuel pumps				
.8	Cam shafts				
.9	Crosshead bearings				
.10	Fuel oil filters				
.11	Lube oil filters				
.12	Air filters				
.13	Use turning gear, under supervision, taking all safety precautions				
.14	Change and/or overhaul the following main engine components, checking clearances, where appropriate: Pistons				
.15	Cylinder heads				
.16	Turbochargers				
.17	Top end bearings				
.18	Bottom end bearings				
.19	Indicator cocks				
.20	Main bearings				
.21	Piston-rod scraper box/stuffing box				
.22	Crosshead guides				
.23	Tie bolts				
.24	Holding-down bolts and chocks				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
9.	Competence: Maintenance and repair of shipboard machinery and equipment					
9.3	Undertake maintenance and repairs to the main engine (continued)			<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.25	Inspect scavenge trunk and exhaust spaces and report on: Cleanliness/deposits					
.26	Scavenge drains					
.27	Scavenge valves					
.28	Carry out a crankcase inspection					
9.4	Undertake maintenance and repairs to the auxiliary engine			<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
.1	Take and log readings of crankshaft deflections					
.2	Change, inspect, check condition, wear and clearance, overhaul and test: Fuel injection valves					
.3	Air start valves					
.4	Relief valves					
.5	Inlet valves					
.6	Exhaust valves					
.7	Fuel pumps					
.8	Camshaft					

.9	Fuel oil filters						
.10	Lube oil filters						
.11	Air filters						
.12	Jacket cooling water pump						
.13	Change and/or overhaul the following components, checking and adjusting clearances, where appropriate: Pistons						
.14	Cylinder heads						
.15	Turbochargers						
.16	Top end bearings						
.17	Bottom end bearings						
.18	Indicator cocks						
.19	Main bearings						
.20	Holding-down bolts and chocks						
.21	Carry out a crankcase inspection						
.22	Commission engine after overhaul						
9.5	Undertake maintenance and repair to the auxiliary boiler				<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
.1	Take a boiler out of service						
.2	Isolate boiler						
.3	Blow a boiler down						
.4	Open up a boiler						

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
9.	Competence: Maintenance and repair of shipboard machinery and equipment					
9.5	Undertake maintenance and repair to the auxiliary boiler (continued)			<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.5	Examine a boiler, reporting on its condition: Internally					
.6	Externally					
.7	Open up and inspect: Safety valves					
.8	Feed check valves					
.9	Ancillary valves					
.10	Overhaul and test water gauge glass and check that passages, cocks and valves are clear					
.11	Change and overhaul burner					
9.6	Undertake maintenance and repair to plant and equipment			<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
.1	Open up purifiers/separators for cleaning and maintenance					
.2	Reassemble purifiers/separators					
.3	Carry out routine maintenance on a main compressor					
.4	Check and service: Control air filters					
.5	Control air driers, replacing desiccant					

.6	Carry out routine maintenance on refrigeration plant				
.7	Carry out routine maintenance on fresh water generator				
.8	Open up and overhaul positive displacement pump				
.9	Open up and overhaul centrifugal pump				
.10	Overhaul and test valves including: Gate				
.11	Stop disk non return				
.12	Screw lift				
.13	Relief				
.14	Two or three way				
.15	Shut-off cock				
.16	Carry out routine maintenance on: Anchor windlass				
.17	Cargo winches				
.18	Cargo cranes				
.19	Mooring winches				
.20	Capstans				
.21	Hatch covers				
.22	Steering gear				
.23	Engine room lifting gear				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
9.	Competence: Maintenance and repair of shipboard machinery and equipment					
9.6	Undertake maintenance and repair to plant and equipment (continued)			<i>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice. Recommissioning and performance testing is in accordance with manuals and good practice. Selection of materials and parts is appropriate</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.24	List other items of plant and equipment on which you have worked: 1. 2. 3. 4. 5.					
9.7	Undertake maintenance and repair to emergency equipment			<i>Isolation, dismantling and reassembly is in accordance with accepted practices and procedures. Correct tools are chosen and used without causing damage to machinery or equipment</i>		
.1	Carry out routine maintenance on: Fire pumps					
.2	Fire flaps					
.3	ER fire extinguishing system and equipment					
.4	Emergency generator					
.5	Emergency compressor					
.6	Remote stops for pumps with overboard discharges					
.7	Fuel valve trips					
.8	Breathing apparatus sets and recharging breathing apparatus bottles					
.9	Survival craft					

FUNCTION: CONTROLLING THE OPERATION OF THE SHIP AND CARE FOR PERSONS ON BOARD AT THE OPERATIONAL LEVEL

Ref No	Training			Criteria for Evaluation	Competence Demonstrated	
10	Competence: Application of leadership and team working skills				Designated Training Officer/In Service Assessor (Initials/Date)	
10.1	Plays team role			<i>Displays awareness of others working nearby and in common goals. Communicates clearly and unambiguously in language understood. Challenges questionable decisions in a seamanlike manner. Freely shares information concerning the maneuver or task in hand</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Understand that as a team member everyone has different experience and has a role to play in any task					
.2	Participate actively in task planning meetings involving different ranks					
.3	Understand communication is a two-way exchange and demonstrate this in practice both in the engine room and when working on deck					
.4	Maintain awareness of changing situations					
.5	Accept authority but not be afraid to question if in doubt					
.6	Check own understanding of situation is shared by other team members					
.7	Participate actively in task review and evaluation meetings involving different ranks					
10.2	Exhibits leadership ability			<i>Takes initiative and carries others along with what needs to be done in timely way</i>		
.1	Think ahead and plan tasks that will follow the immediate task or maneuver					
.2	Set priorities correctly when seeing conflict between immediate needs and tasks that may be held back					
.3	Allocate resources effectively to achieve desired outcomes					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
10	Competence: Application of leadership and team working skills				
10.2	Exhibits leadership ability			<i>Takes initiative and carries others along with what needs to be done in timely way</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.4	Check results and take corrective actions as needed/instructed				
.5	Demonstrate confidence and maturity to refer to senior officer if in doubt				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
11	Competence: Ensure compliance with pollution prevention requirements				
11.1	Implement proactive measures to protect the marine environment			<i>The operations are properly planned and comply with international regulation in spirit as well as in word. Ensures that a positive environmental reputation is maintained</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Understand that environmental protection includes both sea and air which are protected by mandatory MARPOL regulations				
.2	Name at least two Particularly Sensitive Sea Areas (PSSAs) 1..... 2.....				
.3	Demonstrate by example preparedness to take personal responsibility for actions to protect the marine environment				

.4	Understand that marine pollutants must be landed ashore for safe disposal in compliance with MARPOL					
.5	Understand there are strict rules covering the storage and disposal of oily water mixtures applicable to all ships					
.6	Understand there are strict rules covering disposal of noxious liquid substances applicable to all ships					
.7	Understand there are strict rules covering disposal of harmful substances carried in packaged form applicable to all ships					
.8	Understand there are strict rules covering pollution prevention by sewage applicable to ships					
.9	Understand there are strict rules for prevention of pollution by garbage from ships, applicable to all ships					
.10	Understand there are strict rules covering air pollution from ships at sea which will progressively apply to all ships					
.11	Understand the impact of SOx, NOx, VOC and PM and why efforts are needed to reduce atmospheric pollution					
11.2	Ensure that procedures are agreed and properly planned before bunkering				<i>The operations are properly planned, all scuppers are blocked and pipes and hoses inspected before bunkering takes place</i>	
.1	Plug deck scuppers					
.2	Demonstrate knowledge of ship's bunkering procedures					
.3	Participate in bunkering operations					
.4	Demonstrate the emergency shutdown procedure					
11.3	Initiate immediate investigation to detect the source on discovering any pollution around the ship				<i>All available resources are utilized to detect the source and the master or authorities are informed as appropriate</i>	
.1	Participate in an emergency response exercise for controlling spillage of oil or other noxious or toxic substances on board					
.2	Be aware of the importance of immediately reporting and investigating potential pollution incidents					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
11	Competence: Ensure compliance with pollution prevention requirements				
11.4	Stop or prevent leakages and spills of harmful liquids and solid substances			<i>The situation is thoroughly assessed and the actions taken are well organized and exercised and due consideration taken of the extent of the pollution</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Demonstrate use of Material Safety Data Sheets and the IMDG Code to obtain information on cargo hazards and handling instructions				
.2	Participate in drill for clean-up of hazardous spillage				
11.5	Sound all tanks and compartments if any damage is suspected			<i>The soundings are readily available and the results immediately reported to the master</i>	
.1	Participate in an emergency response exercise for stranding				
.2	Perform soundings of bilges, peak tanks, double bottom and other tanks and record information if any hull damage is suspected				
11.6	Carry out bilge, ballast and bunkering operations			<i>All operations are carried out in accordance with MARPOL and due regard paid to the Shipboard Oil Pollution Emergency Plan (SOPEP)</i>	
.1	Locate the ship's ballast water management plan and demonstrate an understanding of its content				
.2	Understudy the engineer officer conducting a ballasting operation				
.3	Have knowledge of requirements of MARPOL and Annexes				
.4	Demonstrate an understanding of Oil Discharge Monitor Equipment operation (oil tankers)				
.5	Demonstrate an understanding of the record keeping required in the Oil Record Book				

Ref No	Training		Criteria for Evaluation	Competence Demonstrated	
12.	Competence: Maintain seaworthiness of the ship			Designated Training Officer/In Service Assessor (Initials/Date)	
12.1	Inspect hull and hull openings, compartments, hatch covers and equipment, and take action where defects are detected		The inspection is properly carried out, due regard paid to the prevailing circumstances and areas where defects are most likely to occur. Any defect is immediately reported and recorded and the suggested or executed action adequate for the situation		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Demonstrate an understanding of the precautions required for: Entry into enclosed spaces				
.2	Working at height				
.3	Using power tools				
.4	Manual lifting and carrying				
.5	Where applicable, assist with the opening, closing and securing of hatches				
.6	Assist with the maintenance of watertight doors, ports and hatches				
.7	Carry out routine maintenance and repair on: Anchor windlass				
.8	Cargo handling equipment				
.9	Mooring winches				
.10	Carry out full inventory check of the engine stores				
.11	Prepare steel plates and other surfaces for protective coating				
.12	Apply protective coats to appropriate surfaces				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
12.	Competence: Maintain seaworthiness of the ship				
12.2	Ensure that all loose objects are securely fastened to avoid damage			<i>Inspection is carried out at regular intervals and more frequently in heavy weather or if other incidents occur. Heavy or otherwise dangerous objects are given the highest priority and good seamanship</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Ensure that all gear, tools, spares etc. are properly stowed and secured				
12.3	Arrange for regular control measures to ensure watertight integrity			<i>Peaks, bilges, tanks and other compartments are sounded regularly, the results recorded and any irregularities reported and examined further</i>	
.1	Take and record the daily soundings of engine room tanks, bilges and other spaces: By manual means				
.2	By use of gauges				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)
13.	Competence: Prevent, control and fight on board				
13.1	Operate fire and smoke detecting equipment			<i>The equipment is tested and operated at regular intervals and in accordance with manufacturers' manuals and ship specific instructions</i>	
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)
.1	Understand use and assist in the maintenance of: Portable foam extinguisher				
.2	Portable CO ₂ extinguisher				
.3	Portable dry powder extinguisher				

.4	Portable water extinguisher					
.5	Maintain hoses, nozzles and couplings					
13.2	Ensure that all persons on watch are able to detect and correct hazardous situations and actions and keep the ship clean and tidy				<i>Personnel on watch making inspections in areas at risk from possible fires are supervised. Ensure readily combustible materials are stored safely and the watch demonstrate an attitude of alertness to fire prevention</i>	
.1	Perform fire patrol duties					
.2	Re-stow gear and secure after maintenance work					
13.3	Instruct the watch in locating fire-fighting appliances and emergency escape routes and sound alarm				<i>Instruct watch in use of portable or other fire extinguishers. Demonstrate an ability to raise the alarm</i>	
.1	Carry out a full inspection of fire-fighting equipment and report to the chief engineer					
.2	Participate in an emergency response exercise for fire at sea and in port					
13.4	Locate fire stations and demonstrate proper use of fixed installations and other fire-fighting appliances and agents				<i>All stations are located and the most suitable one selected in the event of a fire. Proper equipment and extinguishing agents for the various materials on fire are selected</i>	
.1	Assist with the testing of the following systems, where fitted: Fire detection and alarm systems					
.2	Fire alarms					
.3	Fixed automatic sprinklers					
.4	Fixed steam systems					
.5	Fixed foam extinguishers					
.6	Fixed CO ₂ systems					
.7	Fire flaps and dampers					
.8	Automatic and manual fire doors					
.9	Emergency shut off valves, pump stops and main engine stops					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
13.	Competence: Prevent, control and fight on board					
13.4	Locate fire stations and demonstrate proper use of fixed installations and other fire-fighting appliances and agents (continued)			<i>All stations are located and the most suitable one selected in the event of a fire. Proper equipment and extinguishing agents for the various materials on fire are selected</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.10	Describe the operation of the fixed fire extinguishing system for the engine room					
.11	State the safety precautions required prior to operating the system					
13.5	Locate and use fire protective equipment (fire-fighter's outfit, including breathing apparatus)			<i>The equipment is quickly donned and used in such a way that no accidents are likely to occur</i>		
.1	Demonstrate the procedures and precautions required for entry into an enclosed space					
.2	Recognize the different uses for a Self Contained Breathing Apparatus (SCBA) set and an Emergency Escape Breathing Device					
.3	Demonstrate donning and use of SCBA sets					
.4	Demonstrate donning and use of a fire-fighter's outfit					
.5	Demonstrate donning and use of a fire-fighter's outfit with a SCBA set					
.6	Demonstrate the use of a SCBA record/control board					
13.6	Demonstrate ability to act in accordance with the fire-fighting plan during fire drills			<i>During debriefing after an exercise or a real fire extinguishing incident, the reasons for each action taken, including the priority in which they were taken, are explained and accepted as the most appropriate</i>		
.1	Take charge of a fire party during an exercise					
.2	Demonstrate the use and location of all engine room safety appliances					
.3	Demonstrate a knowledge of all engine room escape routes					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
14.	Competence: Operate life-saving appliances					
14.1	Organize abandon ship drills			<i>On sounding the alarm all persons meet at the designated lifeboat station wearing safety belts or immersion suits and carry out their duties on request</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
	Understand the hazards to seafarers of manning life boats for drills and exercises					
.2	Understand the need to be familiar with the operation of on-load release mechanisms					
.3	Recognise that fall prevention devices (FPDs), where fitted, should be used in drills (to prevent unforeseen detachment)					
.4	Recognise the need for meticulous inspection and maintenance of on-load release mechanisms					
.5	Identify the permanent marking on survival craft with regard to the number of occupants					
.6	Locate and test the operation of: Radio devices including satellite EPIRBs and SARTs					
7	Pyrotechnic distress signals					
.8	State precautions for disposal of out of date pyrotechnics					
.9	Understudy an officer in charge of an abandon ship drill					
14.2	Launch, handle and recover a lifeboat				<i>Correct orders for embarkation, launching and immediately clearing the ship's side are given. The boat is safely handled under motor or oars, as appropriate. The boat is safely recovered and ready</i>	
.1	Assist with preparation and swinging out of lifeboats and be aware of potential risks					
.2	Assist with preparation and boarding of free fall lifeboat and be aware of potential risks					

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)		
14.	Competence: Operate life-saving appliances						
14.2	Launch, handle and recover a lifeboat (continued)			<i>Correct orders for embarkation, launching and immediately clearing the ship's side are given. The boat is safely handled under motor or oars, as appropriate. The boat is safely recovered and ready</i>			
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)		
.3	Assist with lowering a lifeboat to clear the ship and ride to a sea anchor						
.4	Start and operate a lifeboat engine						
.5	Crew a boat under: Oars <input type="checkbox"/> Power <input type="checkbox"/>						
.6	Cox a boat under: Oars <input type="checkbox"/> Power <input type="checkbox"/>						
.7	Assist with recovering and securing a lifeboat						
.8	Assist with recovering and securing a free fall lifeboat						
14.3	Launch or throw overboard a life raft, and maneuver it clear of ship's side				<i>The duties for the person designated for the raft are clearly allocated, orders efficiently executed, the raft is quickly righted if inverted, and all persons boarded before the raft moves away from the ship</i>		
.1	Demonstrate an understanding of the procedure for launching and inflating life rafts, if the opportunity arises						
14.4	Operate radio life-saving appliances			<i>Radio contact is established without alerting anybody by transmitting false signals</i>			
.1	Rig and operate the portable lifeboat radio under supervision						

14.5	Ensure that all required equipment on board a rescue craft is functioning and maintained as specified in the SOLAS Training Manual			<i>Proper use of pyrotechnics, food, water and signaling equipment is satisfactorily demonstrated</i>		
.1	Demonstrate an understanding of statutory equipment required in survival craft and its correct use					
.2	State minimum food and water requirements for occupants of survival craft					
.3	Locate and understand operation of pyrotechnics including precautions for their disposal					
.4	Explain the operation of rocket line throwing apparatus					
.5	Explain the operation of distress rockets, flares and other pyrotechnics					
.6	Assist with the maintenance of: Lifeboats and rescue boats					
.7	Lifeboat equipment and provisions					
.8	Launching davits and gear					
.9	Buoyant apparatus, e.g. lifebuoys, lifejackets and attachments					
.10	Immersion suits and thermal protective aids					
.11	Other survival craft, specify type.....					
.12	Assist with the routine maintenance of a lifeboat engine					

Ref No	Training		Criteria for Evaluation	Competence Demonstrated	
15.	Competence: Apply medical first aid on board ship			Designated Training Officer/In Service Assessor (Initials/Date)	
15.1	Stop excessive bleeding, ensure breathing and put casualties in proper position		<i>The actions demonstrated are in compliance with accepted recommendations given in international medical first aid guidance</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)	Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Participate in an emergency first aid drill at sea				
.2	Demonstrate a basic understanding of first aid principles: Stopping bleeding				
.3	Treatment of suffocation/drowning				
.4	Placing casualty in the recovery position				
15.2	Detect signs of shock and heat stroke and act accordingly		<i>The treatment recommended or given is adequate. Ability to request Radio Medico for advice is demonstrated</i>		
.1	Demonstrate how to handle a casualty in shock				
.2	Demonstrate procedures for dealing with heat stroke				
15.3	Treat burns, scalds, fractures, and hypothermia		<i>Recommended guidelines for proper actions are explained. Principles for avoiding hypothermia are demonstrated</i>		
.1	State procedure for dealing with a casualty of electric shock				
.2	Demonstrate procedure for treating burns				
.3	Demonstrate procedure for treating minor fractures				
.4	State procedures for avoiding hypothermia				
.5	Demonstrate procedures for treating casualty with hypothermia				

Ref No	Training			Criteria for Evaluation	Competence Demonstrated Designated Training Officer/In Service Assessor (Initials/Date)	
16.	Competence: Monitor compliance with legislative requirements					
16.1	State where laws, rules and regulations concerning ship operation and pollution prevention are available			<i>The statement given is correct and includes relevant bodies or organizations which may be contacted to obtain special information or guidance which is not easily accessible</i>		
	Task/Duty	Task Completed Supervising Officer/ Instructor (Initials/Date)		Advice on Areas for Improvement	Task Completed Supervising Officer/ Instructor (Initials/Date)	
.1	Locate on board copies of: SOLAS					
.2	MARPOL					
.3	Shipboard Oil Pollution Emergency Plan (SOPEP)					
.4	Garbage Record Book					
.5	Locate copies of certificates issued under SOLAS, MARPOL, Load Line, STCW, ILO MLC, and other regulations					
16.2	Use legislation to check on board operations comply with international regulations			<i>Correct response is established within an acceptable period of time and consequential actions executed</i>		
.1	Participate in engine room oil and oily waste handling operations in compliance with MARPOL					
.2	Dispose of garbage in compliance with MARPOL and ship's Garbage Management Plan					
.3	Assist in checking machinery and equipment prior to survey					
.4	Participate in shipboard inspection prior to an International Oil Pollution Prevention (IOPP) survey					
16.3	Searching for stowaways			<i>A comprehensive and thorough search is conducted and findings reported to the responsible officer</i>		
.1	Carry out a stowaway search					

SECTION 6 TASK SUMMARY CHART

The purpose of the summary chart is to provide you, your company and your ships' officers with a guide and continuous check on the numbers of tasks or duties listed in Section 7 that you have completed, and those that remain outstanding. Tick off only those tasks which you have completed. In the charts below, the green boxes simply indicate the start of a new group of tasks or duties.

FUNCTION - Marine Engineering at the Operational Level

1. COMPETENCE - Maintain a safe engineering watch

1.1.1	1.1.2	1.1.3	1.1.4	1.2.1	1.2.2	1.2.3	1.2.4	1.2.5	1.2.6	1.2.7	1.2.8	1.2.9	1.2.10	1.2.11	1.2.12
1.2.13	1.2.14	1.2.15	1.2.16	1.2.17	1.2.18	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.3.7	1.3.8	1.3.9	1.3.10
										i					
1.4.1	1.4.2	1.4.3	1.4.4	1.4.5	1.5.1	1.5.2	1.5.3	1.5.4	1.5.5	1.5.6	1.6.1	1.6.2	1.6.3	1.6.4	1.6.5
1.6.6															

2. COMPETENCE - Use English in written and oral form

2.1.1	2.1.2	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5

3. COMPETENCE - Use internal communication systems

3.1.1	3.1.2	3.1.3	3.1.4	3.1.5	3.1.6

4. COMPETENCE - Operate main and auxiliary machinery and associated control systems

4.1.1	4.1.2	4.1.3	4.1.4	4.1.5	4.1.6	4.1.7	4.2.1	4.2.2	4.2.3	4.2.4	4.2.5	4.2.6	4.2.7	4.2.8	4.2.9
4.2.10	4.2.11	4.2.12	4.2.13	4.2.14	4.2.15	4.2.16	4.2.17	4.2.18	4.2.19	4.2.20	4.2.21	4.2.22	4.2.23	4.2.24	4.2.25
4.2.26	4.2.27	4.2.28	4.2.29	4.2.30	4.2.31	4.2.32	4.2.33	4.2.34	4.2.35	4.2.36	4.2.37	4.2.38	4.2.39	4.2.40	4.2.41
4.2.42	4.2.43	4.2.44													

5. COMPETENCE - Operate fuel, lubrication, ballast and other pumping systems and associated control system

5.1.1	5.1.2	5.1.3	5.1.4	5.1.5	5.1.6	5.1.7	5.1.8	5.1.9	5.1.10	5.1.11	5.1.12	5.1.13	5.2.1	5.2.2	5.2.3
5.2.4	5.2.5	5.2.6	5.2.7	5.2.8	5.2.9	5.2.10	5.2.11	5.2.12	5.2.13	5.2.14	5.2.15	5.2.16	5.2.17		

FUNCTION - Electrical, Electronic and Control Engineering at the Operational Level

6. COMPETENCE - Operate electrical, electronic and control systems

6.1.1	6.1.2	6.1.3	6.1.4	6.1.5	6.1.6	6.2.1	6.2.2	6.2.3	6.2.4	6.2.5	6.2.6	6.2.7	6.2.8	6.2.9	6.3.1
6.3.2	6.3.3	6.3.4	6.4.1	6.4.2	6.4.3	6.4.4	6.5.1	6.5.2	6.5.3	6.5.4	6.6.1	6.6.2	6.6.3	6.6.4	6.6.5
6.7.1	6.7.2	6.7.3	6.7.4	6.8.1	6.8.2	6.8.3	6.8.4	6.8.5	6.8.6	6.8.7	6.8.8	6.8.9	6.9.1	6.9.2	

7. COMPETENCE - Maintenance and repair of electrical and electronic equipment

7.1.1	7.2.1	7.2.2	7.2.3	7.2.4	7.2.5	7.3.1	7.3.2	7.3.3	7.3.4	7.3.5	7.3.6	7.3.7	7.3.8	7.3.9	7.3.10
7.4.1	7.4.2	7.4.3	7.4.4	7.4.5	7.4.6	7.4.7	7.4.8	7.4.9	7.4.10	7.4.11	7.4.12	7.4.13	7.4.14	7.5.1	7.5.2
7.5.3	7.5.4	7.6.1	7.6.2	7.6.3	7.7.1	7.7.2	7.7.3	7.7.4	7.7.5	7.7.6	7.7.7	7.8.1	7.8.2	7.8.3	7.8.4
7.8.5	7.8.6	7.8.7	7.8.8	7.8.9	7.8.10	7.8.11	7.8.12	7.8.13	7.8.14	7.8.15					

FUNCTION - Maintenance and Repair at the Operational Level

8. COMPETENCE - Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board

8.1.1	8.1.2	8.1.3	8.1.4	8.1.5	8.1.6	8.2.1	8.2.2	8.2.3	8.2.4	8.2.5	8.2.6	8.3.1	8.3.2	8.4.1	8.4.2
8.4.3	8.4.4	8.5.1	8.5.2	8.5.3	8.5.4	8.5.5	8.5.6	8.5.7	8.5.8	8.5.9	8.5.10	8.6.1	8.6.2	8.6.3	8.6.4
8.6.5	8.6.6	8.6.7	8.6.8	8.6.9	8.6.10	8.7.1	8.7.2	8.7.3	8.7.4	8.7.5	8.7.6	8.7.7	8.7.8	8.7.9	8.7.10
8.8.1	8.8.2	8.8.3	8.8.4	8.8.5	8.8.6	8.8.7	8.8.8	8.8.9	8.8.10	8.9.1	8.9.2	8.9.3	8.9.4	8.9.5	8.9.6
8.9.7	8.9.8	8.9.9	8.9.10												

9. COMPETENCE - Maintenance and repair of shipboard machinery and equipment

9.1.1	9.1.2	9.1.3	9.1.4	9.1.5	9.1.6	9.1.7	9.1.8	9.2.1	9.2.2	9.2.3	9.2.4	9.2.5	9.2.6	9.2.7	9.2.8
9.2.9	9.2.10	9.2.11	9.2.12	9.3.1	9.3.2	9.3.3	9.3.4	9.3.5	9.3.6	9.3.7	9.3.8	9.3.9	9.3.10	9.3.11	9.3.12
9.3.13	9.3.14	9.3.15	9.3.16	9.3.17	9.3.18	9.3.19	9.3.20	9.3.21	9.3.22	9.3.23	9.3.24	9.3.25	9.3.26	9.3.27	9.3.28
9.4.1	9.4.2	9.4.3	9.4.4	9.4.5	9.4.6	9.4.7	9.4.8	9.4.9	9.4.10	9.4.11	9.4.12	9.4.13	9.4.14	9.4.15	9.4.16
9.4.17	9.4.18	9.4.19	9.4.20	9.4.21	9.4.22	9.5.1	9.5.2	9.5.3	9.5.4	9.5.5	9.5.6	9.5.7	9.5.8	9.5.9	9.5.10
9.5.11	9.6.1	9.6.2	9.6.3	9.6.4	9.6.5	9.6.6	9.6.7	9.6.8	9.6.9	9.6.10	9.6.11	9.6.12	9.6.13	9.6.14	9.6.15
9.6.16	9.6.17	9.6.18	9.6.19	9.6.20	9.6.21	9.6.22	9.6.23	9.6.24	9.7.1	9.7.2	9.7.3	9.7.4	9.7.5	9.7.6	9.7.7
9.7.8	9.7.9														

FUNCTION - Controlling the Operation of the Ship and Care for Persons On Board at the Operational Level

10. COMPETENCE - Application of leadership and team working skills

10.1.1	10.1.2	10.1.3	10.1.4	10.1.5	10.1.6	10.1.7	10.2.1	10.2.2	10.2.3	10.2.4	10.2.5

11. COMPETENCE - Ensure compliance with pollution prevention requirements

11.1.1	11.1.2	11.1.3	11.1.4	11.1.5	11.1.6	11.1.7	11.1.8	11.1.9	11.1.10	11.1.11	11.2.1	11.2.2	11.2.3	11.2.4	11.3.1
11.3.2	11.4.1	11.4.2	11.5.1	11.5.2	11.6.1	11.6.2	11.6.3	11.6.4	11.6.5						

12. COMPETENCE - Maintain seaworthiness of the ship

12.1.1	12.1.2	12.1.3	12.1.4	12.1.5	12.1.6	12.1.7	12.1.8	12.1.9	12.1.10	12.1.11	12.1.12	12.2.1	12.3.1	12.3.2

13. COMPETENCE - Prevent, control and fight fires on board

13.1.1	13.1.2	13.1.3	13.1.4	13.1.5	13.2.1	13.2.2	13.3.1	13.3.2	13.4.1	13.4.2	13.4.3	13.4.4	13.4.5	13.4.6	13.4.7
13.4.8	13.4.9	13.4.10	13.4.11	13.5.1	13.5.2	13.5.3	13.5.4	13.5.5	13.5.6	13.6.1	13.6.2	13.6.3			

14. COMPETENCE - Operate life-saving appliances

14.1.1	14.1.2	14.1.3	14.1.4	14.1.5	14.1.6	14.1.7	14.1.8	14.1.9	14.2.1	14.2.2	14.2.3	14.2.4	14.2.5	14.2.6	14.2.7
14.2.8	14.3.1	14.4.1	14.5.1	14.5.2	14.5.3	14.5.4	14.5.5	14.5.6	14.5.7	14.5.8	14.5.9	14.5.10	14.5.11	14.5.12	

15. COMPETENCE - Apply medical first aid on board ship

15.1.1	15.1.2	15.1.3	15.1.4	15.2.1	15.2.2	15.3.1	15.3.2	15.3.3	15.3.4	15.3.5

16. COMPETENCE - Monitor compliance with legislative requirements

16.1.1	16.1.2	16.1.3	16.1.4	16.1.5	16.2.1	16.2.2	16.2.3	16.2.4	16.3.1