

Record of Assessment  
for  
**OFFICER IN CHARGE OF AN  
ENGINEERING WATCH**

---

*Candidate's Name*

---

*Candidate's Signature*

---

*Candidate's Mariner Reference No.*

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

**NOTE TO QUALIFIED ASSESSOR(S):** In performing your function as a Qualified Assessor, you may use your initials only to indicate you have personally witnessed the demonstration of skill or ability by the person being assessed. The Assessment Guidelines in Enclosure (2) will provide satisfactory evidence of meeting the standard of competence specified in Section A-III/1 of the STCW Code. The use of these Assessment Guidelines is not mandatory and an alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Maintain a safe engineering watch	Thorough knowledge of principles to be observed in keeping an engineering watch	1.1.A	Inspect machinery space; take over watch (EOOW 101 / Apprentice 310 / Journeyman 310)		
		1.1.B <i>Note 5</i>	Keep watch (Motor) (EOOW DIESEL 102 / Apprentice 310 / Journeyman 310)		
		1.1.C <i>Note 1</i>	Keep watch (Steam) (EOOW STEAM 102 / Apprentice 310 / Journeyman 310)		
		1.1.D <i>Note 4</i>	Keep watch (Gas Turbine) (EOOW GT 102 / Apprentice 310 / Journeyman 310)		
		1.1.E	Maintain log book (EOOW 102 / Apprentice 308 / Journeyman 313)		
		1.1.F	Hand over watch (EOOW 102 / Apprentice 301 / Journeyman 301)		

**Notes:**

- Note 1* A candidate who does not perform this task will receive an endorsement that is not valid for steam vessels.
- Note 2* A candidate who does not perform this task will receive an endorsement that is limited to motor and/or gas-turbine propelled vessels without distilling plants.
- Note 3* A candidate who does not perform this task will receive an endorsement that is limited to motor and/or gas-turbine propelled vessels without waste-heat or auxiliary boilers.
- Note 4* A candidate who does not perform this task will receive an endorsement that is not valid for gas-turbine propelled vessels.
- Note 5* A candidate who does not perform this task will receive an endorsement that is not valid for motor vessels.
- Note 6* A candidate who does not perform this task will receive an endorsement that is not valid for motor or gas-turbine propelled vessels.
- Course* The assessment is satisfied by completion of an appropriate approved or accepted course.

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Maintain a safe engineering watch	Safety and emergency procedures; change-over of remote/automatic to local control of all systems	1.2.A	Change-over procedures from remote/automatic to local control systems (EOOW 102 / Apprentice 322 / Journeyman 329)		
		1.3.A	Observe safety precautions during watch (5100.19/ EOOW 102 / Apprentice 322 / Journeyman 328)		
	Safety precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems	1.3.B	Take immediate action in the event of fire (EOOW 102 / Apprentice 322 / Journeyman 328)		
		1.3.C	Take immediate action in the event of accident (EOOW 102 / Apprentice 322 / Journeyman 328)		
		1.3.D	Take immediate action in the event of oil system fire or accident (EOOW 102 / Apprentice 322 / Journeyman 328)		
	Engine room resource management	1.4.A	Demonstrate knowledge of Engine Room Resource Management (ERM) principles (EOOW 102 / Journeyman 328, COURSE)		
Use English in written and oral form	Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties	2.1.A	Complete written examination for a corresponding National Officer Endorsement (ASVAB/AFQT Score: Required to Enter Service)		
Use internal communication systems	Operation of all internal communication systems on board	3.1.A	Demonstrate the ability to assist in testing internal communications, (e.g., sound powered phone, portable radio), engine order telegraph, alarm systems, and ship's whistle EOOW 102 / Fuel Oil Management / Recruit Training / SWO training / Apprentice 267 / Journeyman 313		
Operate main and auxiliary machinery and associated control systems	Basic construction and operation principles of machinery systems	4.1.A	Demonstrate understanding of basic construction and operating principles of engine room and deck equipment (EOOW 203 / Apprentice 201/ Journeyman 201)		
		4.1.B <i>Note 1</i>	Light off a main propulsion boiler (Apprentice 312 / Journeyman 311)		
		4.1.C <i>Note 1</i>	Secure a main propulsion boiler (Apprentice 312 / Journeyman 311)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Operate main and auxiliary machinery and associated control systems	Safety and emergency procedures for operation of propulsion plant machinery, including control systems	4.2.A	Understand safety and emergency procedures for operation of propulsion plant machinery including control systems (EOOW 102 and 105 / Apprentice 312 / Journeyman 319)		
		4.2.B <i>Note 1</i>	Identify action to be taken in event of a propulsion boiler carry-over (EOOW Steam/Apprentice 318 /Journeyman 319)		
		4.3.A <i>Note 5</i>	Assist in preparing main propulsion diesel engine for operation (EOOW DIESEL / Apprentice 330 / Journeyman 335)		
	Preparation, operation, fault detection and necessary measures to prevent damage for the following machinery items and control systems	4.3.A <i>Note 1</i>	Assist in preparing main steam turbine for operation (EOOW STEAM/ Apprentice 331 / Journeyman 320)		
		4.3.B <i>Note 4</i>	Assist in preparing main gas turbine for operation (EOOW GT 102 / 110 / 203 / Apprentice 336 / Journeyman 328)		
		4.3.C <i>Note 5</i>	Monitor main diesel engine operation (EOOW DIESEL / Apprentice 330 / Journeyman 335)		
		4.3.D <i>Note 1</i>	Monitor main steam turbine operation (EOOW STEAM/ Apprentice 322 / Journeyman 320)		
		4.3.E <i>Note 4</i>	Monitor main gas turbine operation (EOOW GT 101 / Apprentice 336 / Journeyman 328)		
		4.3.F <i>Note 5</i>	Assist in securing main propulsion diesel (EOOW DIESEL 301 / Apprentice 338 / Journeyman 335)		
		4.3.G <i>Note 1</i>	Assist in securing main steam turbine operation (EOOW STEAM 301 / Apprentice 322 / Journeyman 320)		
		4.3.H <i>Note 4</i>	Assist in securing main gas turbine operation (EOOW GT 301 / Apprentice 336 / Journeyman 328)		
		4.3.I <i>Notes 4, 5</i>	Monitor the oil-fired or waste heat auxiliary boiler (EOOW DIESEL 301 / Apprentice 333 / Journeyman 334)		
		4.3.J <i>Note 1</i>	Test boiler water (Apprentice 310 / Journeyman 334)		
		4.3.K <i>Note 1</i>	Control boiler water quality (Apprentice 318 / Journeyman 334)		
		4.3.L <i>Note 1</i>	Bottom blow boiler (Apprentice 312 / Journeyman 309)		
		4.3.M	Secure on line low pressure air compressor and start up and place on line standby unit (EOOW ANY 301 / Apprentice 325 / Journeyman 327)		
		4.3.N <i>Note 5</i>	Start fresh water generator <i>No. 4.3.U may be used as a substitute</i> (EOOW ANY 301 / Apprentice 330 / Journeyman 334)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Operate main and auxiliary machinery and associated control systems	Preparation, operation, fault detection and necessary measures to prevent damage for the following machinery items and control systems	4.3.O <i>Note 5</i>	Shut down fresh water generator <i>No. 4.3.U may be used as a substitute</i> (EOOW ANY 301 / Apprentice 330 / Journeyman 334)		
		4.3.P <i>Note 2</i>	Start fresh water distiller (EOOW ANY 301 / Apprentice 330 / Journeyman 334)		
		4.3.Q <i>Note 2</i>	Shut down freshwater distiller (EOOW ANY 301 / Apprentice 330 / Journeyman 334)		
		4.3.R	Start automated/ non-automated purification plant (EOOW ANY 301 / Apprentice 313 / Journeyman 308)		
		4.3.S	Shut down fuel oil or lube oil purifier (EOOW ANY 301 / Apprentice 313 / Journeyman 308)		
		4.3.T	Start ,an A/C or refrigeration system (EOOW ANY 301 / Apprentice 314 / Journeyman 327)		
		4.3.U	Monitor an A/C or refrigeration system (EOOW ANY 301 / Apprentice 314 / Journeyman 327)		
		4.3.V	Secure an A/C or refrigeration system (EOOW ANY 301 / Apprentice 314 / Journeyman 327)		
		4.3.W	Monitor a reverse osmosis plant <i>Nos. 4.3.N &amp; O may be used as a substitute</i> (EOOW ANY 301 / Apprentice 330 / Journeyman 324)		
Operate fuel, lubrication, ballast and other pumping systems and associated control systems	Operational characteristics of pumps and piping systems including control systems	5.1.A	Demonstrate understanding of operating characteristics of pumps and piping systems including control systems (EOOW ANY 105/ Apprentice 201/ Journeyman 201)		
	Operation of pumping systems	5.2.A	Plan for and conduct an onboard fuel transfer (EOOW ANY 301 / Apprentice 315 / Journeyman 332)		
		5.2.B	Plan for and conduct a ballasting of a double-bottom or wing tank (EOOW ANY 301 / Apprentice 315 / Journeyman 332)		
		5.2.C	Plan for and conduct a de-ballasting of a double-bottom or wing tank (EOOW ANY 301 / Apprentice 315 / Journeyman 332)		
		5.2.D	Plan for and pump out the engine room bilge wells (EOOW ANY 301 / Apprentice 333 / Journeyman 373)		
		5.2.E	Plan for and pump out a cargo-hold or the shaft alley bilge wells (EOOW ANY 301 / Apprentice 333 / Journeyman 373)		
	Oily-water separators (or similar equipment) requirements and operation	5.3.A	Monitor the oily-water separator system (EOOW ANY 301 / Apprentice 333 / Journeyman 327)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Operate electrical, electronic, and control systems	Basic configuration and operation principles of electrical, electronic and control equipment	6.1.A	Operating characteristics of the electrical generating and distribution systems (EOOW ANY 202 / Apprentice 262 / Journeyman 330)		
		6.1.B <i>Note 5</i>	Conduct pre-start inspection and start a diesel generator (EOOW ANY 301 / Apprentice 337 / Journeyman 330)		
		6.1.C <i>Note 1</i>	Conduct pre-start inspection and start a steam turbo-generator (EOOW STEAM 301 / Apprentice 313 / Journeyman 374)		
		6.1.D	Connect ship service generator to main switchboard and remove one from the line (BECC/ BECC ADV)		
		6.1.E	Demonstrate knowledge of motor controllers, other sequential control system, and high voltage circuits (BECC/ BECC ADV)		
	Electronic equipment	6.2.A	Demonstrate knowledge of basic electronic elements and diagrams (BECC/ BECC ADV)		
	Control systems	6.3.A	Describe the fundamentals of automation and control system technology		
Maintenance and repair of electrical and electronic equipment	Safety requirements for working on shipboard electrical systems, including the safe isolation of electrical equipment required The interpretation of electrical and simple electronic diagrams	7.1.A	Plan for and use test equipment (BECC/ BECC ADV)		
		Maintenance and repair of electrical system equipment, switchboards, electric motors, generator, and DC electrical systems and equipment	7.2.A	Troubleshoot a malfunctioning motor controller (BECC/ BECC ADV)	
		7.2.B	Repair a malfunctioning motor controller (BECC/ BECC ADV)		
	Detection of electric malfunction, location of faults and measures to prevent damage	7.3.A	Detect location of grounds (EOOW ANY 216 / Apprentice 346 / Journeyman 316)		
	Construction and operation of electrical testing and measuring equipment	7.4.A	Disassemble and reassemble an electric motor (BECC/ BECC ADV)		
	Function and performance tests of the equipment and their configuration:	7.5.A	Respond to and clear at least 2 alarms from the engine control monitoring system (EOOW ANY 301 / Apprentice 301 / Journeyman 301)		
		7.5.B	Steering gear test (EOOW ANY 220 / 301 / Apprentice 304 / Journeyman 343)		
		7.5.C	Test low lube oil (LO) shutdown protective device (EOOW ANY 301/ Journeyman 398)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Appropriate use of hand tools, machine tools, and measuring instruments for fabrication and repair on board	Materials used in construction and repair ships and equipment. Processes used for fabrication and repair Fabrication and repair of systems and components. Safe working practices in the workshop. Safety measures to ensure a safe working environment Use of hand tools, machine tools and measuring instruments	8.1.A	Hand and machine tool projects (BECC)		
		8.1.B	Welding projects (BECC ADV/ HT A)		
		8.1.C	Oxy-acetylene cutting project (BECC ADV/ HT A)		
	Methods for carrying out safe emergency and temporary repairs	8.2.A	Demonstrate ability to understand urgency of problem and carry out safe emergency/ temporary repairs (BECC)		
	Use of various types of sealants and packings	8.2.B	Replace or repack a mechanical seal or gland on a centrifugal pump (BECC)		
		8.2.C	Repack a valve (BECC)		
		8.2.D	Replace a flange gasket (BECC)		
	Application of safe working practices Safety measures to be taken Use of hand tools	8.3.A	Open, clean, inspect and close a lube oil or fuel oil purifier (BECC/ EOOW 301)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Maintenance and repair of shipboard machinery and equipment	Safety measures for repair and maintenance, including the safe isolation of shipboard machinery and equipment Basic mechanical knowledge and skills Maintenance and repair, such as dismantling, adjustment and reassembling of machinery and equipment Use of specialized tools and measuring instruments Design characteristics and selection of materials in construction of equipment Machinery drawings and handbooks Piping, hydraulic and pneumatic diagrams	9.1.A	Overhaul a centrifugal pump or reciprocating pump (BECC/ BECC ADV OJT/3M/PMS)		
		9.1.B	Tighten an excessively leaking rotary pump packing stuffing box while in operation (BECC)		
		9.1.C	Adjust an operating reciprocating pump stroke rate (BECC)		
Ensure compliance with pollution prevention requirements	Prevention of pollution of the marine environment Knowledge of precautions to prevent pollution of the marine environment Anti-pollution procedures and all associated equipment Importance of proactive measures to protect the marine environment	10.1.A	Put into service and then secure the sewage waste-treatment plant (EOOW ANY 301/ Journeyman 394)		
		10.1.B	Put into service and then secure the oily-water separator/oil content monitor system (EOOW ANY 301/ Journeyman 327)		
Maintain seaworthiness of the ship	Working knowledge and application of stability, trim and stress tables, diagrams and stress-calculating equipment	11.1.A	Determine stability data for vessel (DCASE/PO Advance)		
	Understanding of the fundamentals of watertight integrity	11.2.A	Actions to ensure and maintain the watertight integrity of the ship (BECC/DCASE)		
	Understanding of fundamental actions to be taken in the event of partial loss of intact buoyancy	11.3.A	Describe actions to be taken for a partial loss of intact buoyancy (BECC/DCASE)		
	General knowledge of the principal structural members of a ship and the proper names for the various parts	11.4.A	Describe principal structure members of a ship and the proper names for various parts (DECC/DCASE/BDOC)		
Prevent, control and fight fires on board	Fire prevention and fire-fighting appliances	12.1.A	Successfully complete approved or accepted <i>Basic and Advanced Fire-Fighting</i> courses (Navy Basic & Advance Firefighting, COURSE)		

**RECORD OF ASSESSMENT  
OFFICER IN CHARGE OF AN ENGINEERING WATCH**

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Description (Navy Training References)	Assessor's Initials	Date
Operate life-saving appliances	Life-saving Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, satellite EPIRBs, SARTs, immersion suits and thermal protective aids	13.1.A	Successfully complete an approved or accepted <i>Proficiency in Survival Craft</i> course  (COURSE)		
Apply medical first aid on board ship	Medical aid Practical application of medical guides and advice by radio, including ability to take effective action based on such knowledge in the case of accidents or illnesses likely to occur on board ship	14.1.A	Successfully complete an approved or accepted <i>Medical First Aid Provider</i> course  (5100.19/ DC PQS, COURSE)		
Monitor compliance with legislative requirements	Basic working knowledge of the relevant IMO conventions concerning safety of life at sea and protection of the marine environment	15.1.A	Demonstrate the ability to use and understand the SOLAS, MARPOL and STCW Conventions.  (BECC/APEC/Oil King/5100.19)		
Application of leadership and team-working skills	Working knowledge of shipboard personnel management and training	16.1.A	Describe the basic duties and responsibilities of vessel personnel (BECC/RTC)		
	A knowledge of related international maritime conventions and recommendations, and national legislation	16.2.A	Describe the basic international maritime conventions and national regulations (EOOW/ BDOC???)		
	Ability to apply task and workload management, and effective resource management	16.3.A	Plan for and assist in taking on bunkers  (BECC/OIL KING)		
	Knowledge and ability to apply decision-making techniques	16.4.A	Supervise a fire or emergency team  (BECC/ DC A/ Advance DC 309/311)		
Contribute to the safety of personnel and ship	Knowledge of personal survival techniques Knowledge of fire prevention and ability to fight and extinguish fires Knowledge of elementary first aid Knowledge of personal safety and social responsibilities	17.1.A	Successfully complete approved <i>Basic Training</i> or present evidence of maintaining the standards of competence in <i>Basic Training</i>  (RTC/BECC)		



