

APPROVED ENGINE COURSE 2
40 HOURS COURSE

40 hours divided by 8 hours a day

DAY 1

- 0900-1000 Registration and Course Introduction
- 1000-1115 Refrigeration Plant
Lecturer will go through the Power Point Presentation on a Typical Compression type Refrigeration Plant.

After the session candidate will be able to describe the Functioning of a Compressor, Evaporator, Condenser and Expansion Valve. Condition of Refrigerant around different points around the circuit. Identify system faults and corrective actions.
- 1115-1315 Lecturer will take the candidates to the workshop and demonstrate procedure to check level and familiarize with various components of the Fridge system.
- 1315-1400 Lunch
- 1400-1500 MARPOL & COSWAP

Lecturer will go through a power point presentation on Pollution legislation regarding MARPOL Annex iv and vi and COSWAP.

After the session the candidate will be able to demonstrate knowledge of MARPOL Annex iv and vi. Candidate will be able to relate COSWAP with different Engineering maintenance tasks.
- 1500-1700 DOCUMENTATION RELATING TO ENGINEERING OPS.

Lecturer will demonstrate the filling up of various documentation pertaining to Engineering operations like E/R Log Book, ORB and Fuel, Lube and Chemical Consumption record book.

After the session the Candidate will be able to fill up a page of E/R log book, ORB and Fuel and Lube Oil consumption record book. A practice exercise will be done in class room by students.

DAY 2

0900-1000 Review and Assessment

1000-1100 PREVENTIVE MAINTENANCE SYSTEMS

Lecturer will go through a power point presentation on the various maintenance management systems on board. Demonstrate the use of various techniques that can be used in a condition monitoring system.

After the session the Candidate will be able to demonstrate understanding of various maintenance Management system on board ship, including Condition based monitoring.

1100-1315 PRACTICAL SESSION FOR A CONDITION BASED MAINTENANCE MONITORING SYSTEM.

Lecturer will demonstrate in the workshop various types of condition-based maintenance monitoring system.

1315-1400 Lunch

1400-1500 RISK ASSESSMENTS AND PERMIT TO WORK

Lecturer will go through a power point presentation demonstrating carrying out risk assessment for any Mechanical maintenance tasks. Risks involved with enclosed spaces and how to minimize these risks.

After the session the candidate will be able to competently carry out filling up of Risk Assessments sheets and permits to work.

1500-1700 PRACTICAL USE OF OXYGEN AND COMBUSTIBLE GAS ANALYSERS

Lecturer will demonstrate the practical use of O2 and combustible gas analyzers.

After the session candidate will be able to be competent in using the above equipment's.

DAY 3

0900-1000 Review and Assessment

1000-1100 LOLER

Lecturer will go through a power point presentation on LOLER, Safe manual lifting Techniques and Inspection of lifting equipment.

After the session the candidate will be able to safely demonstrate competency in LOLER and safe manual Lifting Techniques.

1100-1315 PRACTICAL INVOLVING SAFE LIFTING OF A 50KG OBJECT

Candidates will carry out a safe lifting operation of a 50kg object under the Lecturer's guidance in the Workshop.

1315-1400 Lunch

1400-1500 ELECTRICAL DISTRIBUTION SYSTEM ON BOARD

Lecturer will go through a power point presentation on the Electrical distribution system on board a ship. All protection devices and use of PPE will be stressed upon.

After the session the candidate will be able to show competence in knowledge of Ship's electrical system and use and importance of PPE when carrying out work on Electrical systems.

1500-1700 PRACTICAL USE OF MEGA TESTER AND CONTINUITY TESTER

Lecturer will demonstrate the practical use of Megger Tester and continuity meter after which the candidate will show competence in these procedures.

DAY 4

0900-1000 Review and Assessment

1000-1100 BASIC SHIP BOARD HYDRAULIC SYSTEMS

Lecturer will go through a power point presentation on basic components of a shipboard Hydraulic system, including symbols, and maintenance requirements.

After the session the candidate will be able to identify basic faults within the system and its rectification.

1100-1315 PRACTICAL MAINTENANCE TASK ON HYD SYSTEM

Candidate will be allowed to undertake a basic Filter cleaning routine on a Hydraulic system after taking all necessary safety precautions.

1315-1400 Lunch

1400-1500 THEORY CLASS ON PRACTICAL SKILLS FOR BASIC SHIP BOARD MAINTENANCE

Lecturer will go through a power point presentation on the tensioning techniques for fasteners and their inspections.

After the session candidate will be able to demonstrate safe knowledge when handling fasteners.

1500-1700 PRACTICAL SESSIONS ON FASTENING TECHNIQUES

Candidates will be shown practically the different techniques used for fastening. The correct method for using split pins and lock nuts. Also, candidates will be given opportunity to change an Air Filter on a compressor.

DAY 5

0900-1000 Review and Assessment

1000-1100 FRESH WATER SYSTEM ON BOARD

Lecturer will go through a power point presentation on the stowage and treatment of fresh water on board as per regulations.

After the session candidate will have adequate know how of the storage and treatment procedures of fresh water.

1100-1315 FRESH WATER TESTING PROCEDURES

Lecturer will demonstrate the various fresh water tests that can be carried out on board and candidates will be given opportunity to carry out these tests themselves in the workshop area using test kits.

1315-1400 LUNCH

1400-1600 SEWAGE TREATMENT PLANT ON BOARD SHIPS

Lecturer will go through a power point presentation on the theoretical knowledge on the need an operation of a ship board STP. Awareness on hazards of H₂S, Ammonia and methane will be stressed upon.

After the session candidate will be able to display fair knowledge on a STP. Any risks involved in its Maintenance and awareness of noxious gases involved.

1600-1700 Course completion Quiz and feedback