NEW ZEALAND MARITIME SCHOOL

NZ Diploma Electro-technology

Year 1 ETO Cadets, 2019.

NZ2511-02.

(STCW-78 III/1, as amended in 2010)

Course 942.467

'Electrical Maintenance and Repair Procedures'

Learning Outcomes Assessment

Research each of the Four Learning Outcomes and answer with your interpretation. Use reading material provided on Canvas, library material or other suitable sources. Where possible provide reference to the sources. Email back to the tutor when complete.

Tutor: John Lamb
jlamb@manukau.ac.nz

Student Name: _____

Student ID: _____

Date: _____

Outcome 1: Demonstrate knowledge of safety precautions to take prior to undertaking shipboard electrical maintenance and repair work

Identify safety hazards which can be present when working on shipboard electrical equipment.
Name proper Personal Protective Equipment (PPE) to be used when working on various shipboard electrical equipment.
Explain Lockout-Tagout procedures prior to electrical maintenance and repair work.
Explain use of fixed and portable earthing devices and how to apply them safely.
Explain safe electrical maintenance/repair work procedures for flammable areas.
Explain how to interpret and follow shipboard instructions relating to electrical maintenance and repair work.
Explain how to interpret and follow electrical equipment/manufacturer safety guidelines for repair and maintenance work.

Answer here

Outcome 2: Demonstrate knowledge of and interpret basic electrical drawings

PERFORMED USING VISIO SOFTWARE AND IN CLASS ANALYSIS. No answers required here. Student to submit Visio drawing file.

Interprets main features of ships electrical system technical drawings for maintenance and repair purposes.
Interprets main features of ships electrical equipment drawings for maintenance and repair purposes.
Identifies the symbols for electric generators, motors, transformers, contacts, switches, breakers, relays, time-delay relays, thermal relays, contactors, signal lights, fuses, measurement sensors and electric measuring devices, lighting fixtures, switches, sockets, connection boxes.
Identifies the following diagram types:

- block
- system
- circuit
- wiring (connection)
- view (layout)

Outcome 3: Test for and detect basic faults and restore electrical equipment and machinery to operating condition

Explain how to detect basic equipment/machinery electrical malfunction.
Explain how to locate basic electrical faults.
Explain how to take action to prevent further damage due to a fault.
Correctly uses measuring and calibration instruments during testing and restoration. IN LAB.
Explain how to interpret and follow shipboard instructions and procedures for fault detection and system/equipment restoration.

Answer here

Outcome 4: Demonstrate knowledge of the basic maintenance requirements of ships fire detection systems

PERFORMED BY IN CLASS ANALYSIS OF AUTRONICA BS320 FIRE DETECTION SYSTEMS AND DRAWINGS FROM SHIPS MANUALS. No answers required here. Student to submit drawing file from C-Master Pipe-lay Barge with notes.

Interprets typical shipboard electrical fire detection system and maintenance documentation.
Knows common fire detection testing procedures.
Knows typical fire detection system electrical system preventative maintenance procedures.