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**NEW ZEALAND MARITIME SCHOOL**

**NZ Diploma in Marine Electro-technology (NZ2894)**

**(STCW 1978 A-III/6, as amended in 2010)**

**Electro-Technical Officer, Year 2 Cadets, 2020.**

**Course Code**

942.646 - AS01.

**Course Title**

Maintenance and Repair of Control and Safety Systems of Shipboard Hotel Equipment Learning Outcomes Assessment.

**Format**

Written assignment of 1500 words including diagrams and marked Competent (C) or Not-Yet Competent (NYC). Weighting = 50%.

**Due Date**

To be submitted by email to [nick.cossar@manukau.ac.nz](mailto:nick.cossar@manukau.ac.nz) for the due date of 09/08/2020.

**Tutor**

Nick Cossar

[nick.cossar@manukau.ac.nz](mailto:nick.cossar@manukau.ac.nz)

**Student Name:**

**Student ID:**

**Date:**

Investigate Electrical and Mechanical Control and Safety Systems used in a modern ship’s elevator system as per learning Outcome 1: Demonstrate advanced knowledge and understanding of elevators.

Describe main parts of vessel elevator:

* shaft
* pit
* machinery room
* electric motor with gearbox and brake and motor drive
* car
* counterweight
* car door
* landing doors
* hoisting ropes with pulleys
* over-speed governor
* tacho-generator
* control cabinet
* cabin call system

 Explain elevator working modes:

* normal
* inspection
* learning
* priority
* fire
* hospital
* luggage

Explain operation of elevator safety devices:

* safety circuit
* emergency stops
* car door light barrier and overcurrent protection
* over-speed governor
* operation, testing and repair of elevator trap alarm or intercom

Describe maintenance procedures for main elevator components:

* hoisting ropes and rope diverting pulleys
* equipment in the elevator shaft
* car with guides and car door
* landing doors
* electric motor with gearbox and cooling fan
* motor drive and control cabinet
* diagnostic system for troubleshooting and repairs

**Resources**

* + CANVAS.
  + Hall – Practical Marine Electrical Knowledge.
  + Hughes – Electrical and Electronic Technology.
  + Lloyds of London Rules and Regulations for the Classification of Ships July 2018.