



## MAGNETIC COMPASS ADJUSTER COURSE

### **Introduction**

This training covers magnetic compass adjustment in detail and enables participants to perform adjustments on ships magnetic compass to eliminate or reduce compass error due to ships induced magnetism (deviation). The course will impart on candidates the principles, best practices, competence and tools required in the process of calibrating magnetic compass and taking into account the importance of conducting compass adjustments and repairs in a professional way in accordance with the rules and standards for testing and certification of magnetic compasses.

This training will imbed the must know knowledge and understanding to ensure that magnetic compasses are maintained in good working order, adjusted and for evidence, a table of residual deviations is made available to the ship owner and or master. Compass adjusters ensure that ships have onboard working compass in good condition to avoid major navigational disasters.

Even with modern design of vessels using electronic navigation equipment like the gyro compass, unexpected emergencies, like major power failures or electronic power malfunctions can threaten a vessel's safe passage, thus requiring a fall back to the old magnetic compass as a backup even for today's sophisticated modern ships.

### **Objectives**

The training will involve interactive lectures and dialogues to establish a firm theoretical understanding on the legal requirements and the operational aspects of the magnetic compass and a whole day will be committed to practical sessions to enable participants to gain the required knowledge, skills and competency to be a qualified compass adjuster.

### **Outline**

This course content will cover the following areas.

1. Introduction including legal aspects and requirements.
2. What is a compass adjustment?
3. Magnetic effects of electric currents.
4. Ships magnetism.
5. Effects of permanent and induced magnetism.
6. Compass design, general principles with special reference.
7. Compass compensation
8. Limits of accuracy of results obtained.
9. Various types of transmitting magnetic compass bowls and repeaters.
10. Checking accuracy of instruments used in connection with compasses
11. Principle of compass adjustment
12. Methods of detecting mechanical error in compasses at sea.
13. Assessment of safe distance of navigational and other equipment of the compass.

### **Course Outcomes**

After successful completion of the course the participant will have the understanding, knowledge and competency as a qualified compass adjuster, to perform the following tasks:

- 1) Competently carrying out checks on compass to ensure it's in good working condition.
- 2) Checking on the performance of magnetic compasses and
- 3) Carrying out necessary adjustments on a vessels magnetic compass as required.

### **Pre-requisite**

The candidate needs to be a mariner, boat Masters or ships navigation Officer, to easily understand the concepts and applications to vessels during the training.

### **Training Facilities**

Classroom with necessary facilities for theory and access to compass to facilitate practical simulation exercises.

### **Certificates**

On successful completion of the course a certificate of completion will be issued to candidates, certifying that the holder has successfully completed the course and passed the assessment criteria to be a qualified compass adjuster approved by the National Maritime Safety Authority.

To be awarded a certificate in magnetic compass adjuster, participants must submit all assigned projects and receive a pass mark above 70%, within a period of no more than one year.

### **Miscellaneous**

Candidates attending this training must be 100% in attendance.

### **Training Details and Costs**

<b>Duration:</b>	2 months
<b>Time:</b>	08.00am to 04.00pm
<b>Tuition Fees:</b>	K7, 560.00 per person
<b>Venue:</b>	PMTC, Konedobu
<b>Min number of persons:</b>	10 persons

For further information please contact:

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