High Voltage (Management Level)

This course is suitable for marine engineering officers, electrical or electro-technical officers, engineer surveyors and marine superintendents. The training gives seafarers the essential education and training in High Voltage (HV) installations to meet the Knowledge, Understanding and Proficiency requirements as set out in STCW 2010 Tables A-III/2 and A-III/6 for electrical, electronic and control systems at the management level.

The course will consist of a blend of classroom and practical training using dedicated facilities to enable the student to achieve the following training outcomes:

- Management of high voltage operations on board a ship, including familiarisation with HV safety rules, procedures and legislation, knowledge of electrical hazards, and completion of safety records and documentation
- Understanding the high voltage system and the maintenance of distribution capability, including operational and safety features, function of protection devices, HV switch room arrangements, analysing the protection of marine distribution systems and practical maintenance
- Identification of faults within a high voltage system and reconfiguration of the system to maintain electrical supply, including identification of fault levels and conditions, and compiling and implementing a switching plan to isolate a high voltage distribution fault

Further information

Please see MIN 423(M) for further information on requirements for revalidation of Certificates of Competency (CoCs).

A High Voltage system (over 1,000V) is where voltage is generated and distributed at high voltage or transformed to and distributed at high voltage. It does not include systems where high voltage is utilised locally (e.g. ignition systems, radio transmission, radar and other navigational equipment).

The 2010 Manila Amendments to the STCW Code introduced the requirement for Engineer and Electro-Technical Officers to undergo education and training in High Voltage systems, at both the operational and management levels. This requirement comes into force on 1 January 2017 but affects the revalidation of Engineer and Electro-Technical Officer CoCs from 1 January 2012.

No additional action is required for officers who do not work on and do not intend to work on ships with High Voltage systems. These officers will receive the following CoC limitation:

“From the 1 January 2017 this certificate is not valid for service on ships fitted with High Voltage (over 1,000V) systems”.

To avoid having this High Voltage limitation, Senior Engineer and Electro-Technical Officers will have to provide documentary evidence of completion of a High Voltage (Management Level) course.