Basic Electricity (STRCTR-52)

Length
80 hours (10 days)

Objective
Week 1 covers requirements of the 46 CFR 11.950 and the 1995 STCW Convention Chapter III, Section A-III/1. It provides the detailed knowledge to support the training outcomes related to Electrical, Electronic and Control Engineering at the Operational Level, as well as the practical skills required in control sheets OICEW-3-1A, OICEW-3-1B, OICEW-3-1C and OICEW-3-1D. Subjects covered include Basics of Electricity, Magnetism, Electrical Circuits, Resistors, Ohm's Law, Kirchoff's Laws, Power, Batteries, Lighting Systems, Protective and Control Devices.

Week 2 covers requirements of the 46 CFR 11.9520 and the 1995 STCW Convention Chapter III, Section A-III/1. It provides the detailed knowledge to support the training outcomes related to Electrical, Electronic and Control Engineering at the Operational Level, as well as the practical skills required in control sheets OICEW-7 -1A -1B -1C -1D -1E. Subjects covered include AC Theory, AC Reactive Components and Power, AC Generators, Voltage Regulators, AC Motors, Transformers, Semiconductors and Logic Gates.

This Course is USCG Approved and STCW Compliant. The course certificate will state:

"Any applicant who has successfully completed our *Basic Electricity (STRCTR-52)* course will satisfy the following specific TASKs from the National Assessment Guidelines for Officer in Charge of an Engineering Watch NVIC 17-14: TASKs 7.1.A; 7.2.A; 7.2.B; and 7.3.A Applicants who have successfully completed this course need not present completed "Control Sheets" for these assessments in application for STCW certification. This course does not satisfy the Electrical Machinery and Basic Electronics training requirement of 46 CFR 11.329(a)(4)(x)."

Scope
This course is intended to meet USCG requirements as listed above in the USCG Approved and STCW Compliant Course Certificate section.

Entry standards
This course is intended for candidates for certification as officers in charge of the engineering watch OICEW in a manned engine room or designated duty engineers in a periodically unmanned engine room. The candidates must be approved by the United States Coast Guard to apply for such certification.

Please be prepared for class with the following:

- No extra class material required

Simulators and Training Tools
Course equipment:
For practical exercises we will use the TINA Simulation Software and the following AMATROL electrical simulation equipment.

- AMATROL T7017 AC/DC Electrical Learning Simulator
- AMATROL 85-MT2 Electrical Machines Simulator
- AMATROL 85-MT2-B DC Generators
- AMATROL AC Motors and Generators Simulator
- AMATROL AC Motor Starters Simulator

For the Practical Assessments we will use the MC90 Kongsberg Full Mission Simulator.

Teaching Facility
STAR Center, Dania Beach, Florida