Unit 27

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| Title: | Electrical Safety on Merchant Vessels |
| Level: | 2 |
| Credit value: | 2 |
| Learning outcomes  The learner will: | Assessment criteria  The learner can: |
| 1. Understand the dangers of working on electrical equipment | 1.1 Identify Permit to Work requirements for work on electrical apparatus.  1.2 Explain why work on electrical apparatus must not be carried out by non-qualified persons  1.3 Describe the basic safe isolation procedures to be carried out before work on electrical equipment can take place |
| 2. Know the immediate actions to take in the event of electric shock | 2.1 Identify the effects of electric shock  2.2 Describe the immediate actions in case of electric shock |
| 3. Know the main terminology and typical layout of marine electrical distribution systems | 2.1 Label the main components on a line diagram of a ships electrical distribution system   * 1. Describe the functions of :   + Main and emergency busbars   + Transformers   + Alternators/generators/emergency generators   + Circuit breakers   + Switches   + Batteries   + Distribution boards   + Rectifiers/invertors |
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| Additional information about the unit |  |
| Unit aim(s) | To enable persons to work safely in the engine rooms of typical merchant vessels at the support level.  To introduce engine-room electrical systems to new entrants to the marine industry. |
| Unit expiry date |  |
| Details of the relationship between the unit and relevant national occupational standards | MNTB/SFIA Marine NOS  NOS A11 (part), A31 (part), C02 (part), C32(part). The other parts of these standards will be met by shipboard training which will also consolidate the knowledge gained in this unit. |
| Details of the relationship between the unit and other appropriate standards or curricula | MNTB/SFIA Underpinning Knowledge Library Documents |
| Assessment requirements specified by a sector or regulatory body | Assessment will be by a combination of the following methods – assignment; knowledge based testing; project work; presentation; practical demonstration; other, - as agreed by the external verifier |
| Endorsement of the unit by a sector or other appropriate body | Maritime Skills Alliance  Merchant Navy Training Board |
| Location of the unit within the subject/sector classification system | Transportation and Operations |
| Name of the organisation submitting the unit | SQA |
| Availability for use | 1/04/11 |
| Availability for delivery | Restricted |
| Guided Learning Hours | 18 |