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| Overview | This standard covers the competence required to maintain, restore and repair marine electrical machinery and systems on board ship according to maintenance plans and instructions or as a result of an unacceptable variation. Tools and equipment are identified and used. Work areas are confirmed as safe for work to proceed and permit to work and environmental issues and procedures implemented. Machinery and systems are restored to correct settings and work is completed and tested and final checks to ensure maintenance has been effective are carried out.  **Target Group**  This standard applies to individuals at the operational level with responsibility for maintenance of electrical equipment on vessels of any type and of any registered power. |

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| **Performance criteria**  You must be able to: | 1. prepare a work sequence to maintain electrical and electronic systems and their components in accordance with maintenance plan, established regulations, procedures, guidelines, safety practice, and environmental protection 2. carry out isolation and earthing procedures correctly in accordance with the type and nature of the specific equipment 3. confirm that work areas, machinery and equipment are safe for work to proceed and comply with legislative requirements, codes of practice, isolation procedures, permit to work procedures and environmental concerns 4. carry out the maintenance, checks and tests in accordance with established safety rules and regulations, manufacturers instructions and good practice 5. identify details for further action where equipment and parts fail to meet required performance after maintenance 6. restore the equipment or system to the correct settings and specification using the appropriate method 7. recognise variances to specification, plans and schedules and implement effective corrective action 8. complete de-isolation procedures to vessel standards, operational requirements and specification 9. complete documentation and records accurately and to meet future requirements |

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| Knowledge and understanding  You need to know and understand: | 1. the working principles and constructional details of marine electrical machinery and systems 2. the possible hazards associated with the work area, equipment and machinery in the work area 3. the requirements and procedures for isolating and de-isolating machinery and systems 4. the organisational requirements for permits to work 5. the use of tools and equipment for maintenance and repair of electrical equipment 6. routine test procedures and technical requirements of tests 7. the correct settings for electrical machinery and systems 8. the adjustments required to maintain correct performance 9. the use of internal communication systems and effective forms of communication. 10. the importance and use of records for commercial and legislative purposes. 11. the application of Statutory Regulations and guidelines, organisational instructions and guidance and vessel contingency plans |

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