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MINOR ELECTRICAL WORKS

TS 3.10.13

GENERIC TECHNICAL SPECIFICATION
FOR CIVIL, STRUCTURAL AND BUILDING ENGINEERING

SECTION NO : 13

TITLE : MINOR ELECTRICAL WORKS

GENERIC TECHNICAL SPECIFICATION FOR CIVIL, STRUCTURAL AND BUILDING ENGINEERING

This document shall be read in conjunction with Generic Technical Specification Civil, Structural and Building Engineering – Introduction, ref: TS 3.10.00.

The clause numbering system relates to the numbering system in CESWI6 Specification.

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MINOR ELECTRICAL WORKS

13.1 Electrical Installations

- 13.1.1 All electrical installations shall comply with BS 7671:2008 'Requirements for electrical installations', IEE Wiring Regulations, Seventeenth Edition and its associated Guidance Notes 1 to 8.
- 13.1.2 The *Contractor* shall supply to the *Contract Administrator* for approval circuit/wiring including connections for the equipment drawings and schematic circuit diagrams with AC and DC connections for each type of equipment. This is a **Hold Point**.
- 13.1.3 The connection of the supply by the *Contractor* shall be a **Notification Point**.

13.2 Earthing - Panel on Oil Containment Scheme

- 13.2.1 For earthing within a substation reference shall be made to TGN(T) 124: 'Design of NGC Earthing Systems' and BS 7430.
- 13.2.2 Within the Employer's substations, all below ground earthing including spurs from the earth mat to 300mm above ground level shall be in suitably sized copper earth tape.
- 13.2.3 Such tapes shall be continued to the equipment kiosk/cubicle/cabinet and terminated at a purpose design connection point. This connection shall be of bolted construction.
- 13.2.4 The use of flexible earth cables shall be restricted to connections within conduit from the local supply point to the equipment housing. Flexible earth cables shall not be used below ground.
- 13.2.5 All brazing operations shall be undertaken by trained personnel
- 13.2.6 All metal enclosures shall be earthed. The means provided shall be rigidly fixed to the enclosure.
- 13.2.7 Direct earth shall be made to the nearest substation earth tape.
- 13.2.8 Connection shall be made by a brazed connection or crimped flexible lead bolted to earth tape. With bolted galvanised/copper joints a transition washer shall be used.
- 13.2.9 For brazed joints the method of brazing shall be as follows:
- (i) Thoroughly clean surfaces to be joined
 - (ii) Apply flux, heat, wait for flux to liquefy and apply braze. Joints shall be brazed on a minimum of three edges.
 - (iii) Check smooth fillet on all visible joints
 - (iv) Clean to remove all flux
 - (v) On completion of brazed jointing, a microhmmeter shall be used to measure joint resistance. Any joint having a resistance in excess of 5 microhm shall be remade.
- 13.2.10 All tray work shall be earthed and joints linked by 16mm flexible or solid copper link for continuous traywork. All glands shall be bonded. All metal enclosure doors shall be bonded. All terminal rail fitted shall be earthed by a suitable earth terminal.