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## Overview

This Standard is about jointing materials by electro-fusion processes. Electro fusion processes may be carried out in all weather conditions using non-automatic and automatic machines and on parent materials with the same SDR rating, and polymer type.

Jointing materials by electro fusion includes providing weather protection, checking joint preparation, equipment and consumables, monitoring machinery, making electro fusion joints to specification, shutting down equipment and dealing with waste.

This Standard is for anyone in water network construction who carries out electro fusion jointing.

## Performance criteria

### *You must be able to:*

1. work in line with health, safety and environmental regulations, guidelines and procedures at all times
2. carry out and review site specific risk assessments in accordance with company procedures
3. select and wear designated personal protective equipment
4. check any circumstances where job instructions or procedures appear incorrect with appropriate people
5. check that jointing and related equipment and consumables are as specified and fit for purpose
6. provide adequate weather protection in line with organisational procedures for the duration of jointing cycles
7. use lifting equipment when required in line with current regulations
8. report any damage or defects to tools, equipment or materials to appropriate people without delay
9. use appropriate electro-fusion jointing techniques to produce joints of the required quality
10. joint materials by electro-fusion processes in line with approved procedures and practices and statutory and regulatory requirements
11. confirm compliance of completed joints with specified standards and specified dimensional accuracy
12. shut down equipment to a safe condition on completion of jointing activities
13. deal with excess and waste materials and temporary attachments without delay in line with approved and agreed procedures
14. record and store jointing data and information in organisational information systems
15. resolve problems that are within your area of responsibility in line with organisational procedures
16. refer problems you cannot resolve to appropriate people using approved procedures

## Knowledge and understanding

### *You need to know and understand:*

1. legislation, procedures and codes of practice relating to health, safety and the environment including manual handling, use of equipment, hazardous materials, lifting equipment, work in excavations, risk assessments, accidents and personal protective equipment
2. personal protective equipment (PPE) required for the work
3. industry codes of practice and company procedures relating to electro fusion jointing
4. different types of pipe materials
5. how to interpret engineering specifications relevant to electro fusion processes
6. different stages that take place during the jointing process and the importance of allowing each phase to complete
7. compatibility between different materials in relation to standard dimension ratio (SDR) rating and polymer type
8. the need for pipe support, restraint, alignment and the consequences of poor support, restraint and mis-alignment
9. quality assurance procedures that can be used to recognise defects
10. the cause and effect of defects and contamination and how to avoid them
11. how to operate automatic and non-automatic machines
12. equipment maintenance procedures
13. equipment calibration procedures
14. consequences of poor equipment maintenance
15. reporting procedures including who to report to about damage and problems
16. information and data storage systems

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