

Overview

This Standard is about jointing materials by butt fusion processes. Butt 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 butt fusion includes providing weather protection, checking joint preparation, equipment and consumables, monitoring machinery, making butt joints to specification, de-beading, shutting down equipment and dealing with waste.

This Standard is for anyone in water network construction who carries out butt 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. prepare and make joints in accordance with job instructions and procedures
5. check any circumstances where job instructions or procedures appear incorrect with appropriate people
6. check and confirm joint preparations comply with specifications and quality requirements.
7. check that jointing and related equipment and consumables are as specified and fit for purpose
8. provide adequate weather protection in line with organisational procedures for the duration of jointing cycles
9. carry out and monitor machine operations in accordance with specifications and job instructions
10. report any damage or defects to tools, equipment or materials to appropriate people without delay
11. make butt joints of the required quality and specified dimensional accuracy
12. de-bead and carry out approved quality assurance tests on bead
13. mark joint and bead so they are identifiable in accordance with company procedures
14. shut down equipment to a safe condition on completion of jointing activities
15. deal with excess and waste materials and temporary attachments without delay in line with approved and agreed procedures
16. joint materials by butt fusion processes in line with approved procedures and practices and statutory and regulatory requirements
17. record and store jointing data and information in organisational information systems
18. resolve problems that are within your area of responsibility in line with organisational procedures
19. 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, 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 butt fusion jointing
4. why only pipes of similar specifications can be joined together
5. how to interpret engineering specifications relevant to butt fusion processes
6. how to operate automatic and non-automatic machines
7. different stages that take place during the jointing process and the importance of allowing each phase to complete
8. the need for pipe support and alignment and the consequences of poor support and mis-alignment
9. cause and effect of misalignment split defects
10. problems caused by inadequate bead, excessive bead pipe specifications and how to avoid them
11. compatibility between different materials in relation to standard dimension ratio (SDR) rating and polymer type
12. how defects in materials and consumables can affect butt jointing processes
13. the importance of equipment calibration and the consequences of poor maintenance
14. quality assurance procedures that can be used to recognise defects including non-destructive and destructive testing
15. reporting procedures including who to report to about damage and problems
16. information and data storage systems

Joint materials by butt fusion processes on water networks

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