
Overview

This national occupational standard defines the competence required to joint materials by fusion on utilities above 180mm diameter, using non-automatic and automatic machines, on parent materials with the same SDR rating and polymer type. The jointing process may be carried out in all weather conditions in accordance with industry standards and specifications.

Performance criteria

You must be able to:

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Prepare for jointing

P1 carry out a site specific risk assessment and review in accordance with company procedures

P2 select and wear the designated Personal protective Equipment (PPE)

P3 check and confirm that jointing and related equipment and consumables are as specified and fit for purpose

P4 check and confirm there is adequate weather protection during the entire jointing cycle

You must be able to:

Make joints using butt fusion techniques

P5 carry out and monitor the machine operations to use butt fusion joints of the required quality

P6 check and confirm compliance with: - Job instructions - Correct preparation - Specification - Specified dimensional accuracy

P7 de-bead and carry out approved quality assurance test on bead

P8 confirm joint and bead are identifiable by marking in accordance with company procedures

P9 shut down the equipment to a safe condition on completion of jointing activities

P10 handle excess and waste materials and temporary attachments, in line with approved and agreed procedure

You must be able to:

Make joints using electro-fusion techniques

P11 use the correct electro-fusion jointing technique to produce joints of the required quality and confirm compliance with the specified standard and specified dimensional accuracy

P12 confirm that on completion of jointing activities the equipment is shut down to a safe condition

P13 confirm temporary attachments, excess and waste materials are dealt with promptly in line with approved and agreed procedure

You must be able to:

Use and communicate data and information

P14 comply with approved procedures and practices involved in the work activity

P15 conform with designated personnel any circumstances where information appears incorrect

P16 use organisational information systems to record and store jointing data and information

You must be able to:

Resolve problems which arise from jointing materials

P17 report promptly to the designated person, damage or defects to tools, equipment, materials

P18 report promptly to the designated person, matters outside the responsibility of the job role

P19 resolve day to day problems within the responsibility of the job role

P20 handle emergency situations as specified in approved procedures

Knowledge and understanding

You need to know and understand:

General

- K1 the main responsibilities of the employer and employee under the Health and Safety at Work Act
- K2 the health and safety guidance governing work in excavations
- K3 the safe procedures for handling hazardous materials
- K4 organisational accident recording and reporting procedures
- K5 the range and use of personal protective equipment (PPE) for the work

You need to know and understand:

Fusion jointing above 180mm diameter

- K6 health, safety and environmental legislation and environmental procedures relevant to the work activities
- K7 manual handling procedures
- K8 industry codes of practices and company procedures
- K9 different types of pipe materials
- K10 why only pipes of similar specifications can be joined together
- K11 how to interpret engineering specifications relevant to the engineering activity
- K12 different stages that take place during the jointing process and the importance of allowing each phase to complete
- K13 the need for pipe support, restraint, alignment and the consequences of poor support, restraint and mis-alignment
- K14 the cause and effect of defects and contamination
- K15 equipment maintenance procedures
- K16 equipment calibration procedures
- K17 consequences of poor equipment maintenance
- K18 different quality assurance procedures that can be applied in recognising defects
- K19 the correct reporting procedures

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