

## Overview

This national occupational standard defines the competence required to joint materials for non routine operations by butt fusion, 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.

This standard is for those responsible for managing field operations during gas network construction activities. These activities will usually include the leadership and direction of the members of a team and decision making regarding the approach to take when undertaking the work.

This unit consists of three elements:

1. prepare and make joints using butt fusion techniques
2. use and communicate data and information
3. resolve problems which arise from jointing materials

## Performance criteria

*You must be able to:*

### **Make joints using Butt Fusion techniques**

1. work safely and ensure compliance with health, safety, environment and other regulations and guidelines
2. carry out site specific risk assessment, and review in accordance with company procedures
3. select, check and wear the designated personal protective equipment (PPE)
4. follow the job instructions and procedures accurately for preparing and making joints
5. check and confirm joint preparation complies with the specification and meets quality requirements.
6. check that jointing and related equipment and consumables are as specified and fit for purpose
7. provide adequate weather protection during the entire jointing cycle.
8. carry out and monitor the machine operations in accordance with specifications and job instructions
9. make butt joints of the required quality and specified dimensional accuracy
10. de-bead and carry out approved quality assurance test on bead
11. ensure joint and bead are identifiable by marking in accordance with company procedures
12. shut down the equipment to a safe condition on completion of jointing activities
13. follow approved and agreed procedures to manage excess and waste materials and temporary attachments.

### **Use and communicate data and information**

- 14. follow all approved procedures and practices and statutory and regulatory involved in the work activity**
  
- 15. check with designated personnel any circumstances where information appears incorrect**

**16. use organisational information systems to record and store jointing data and information**

**17. follow all approved operational and organisational procedures for lone working**

**Resolve problems which arise during jointing materials**

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

19. resolve day to day problems within the responsibility of the job role

20. refer matters outside the responsibility of the job role to the designated people using approved procedures

21. follow approved emergency procedures immediately in the event of an emergency situation

## Knowledge and understanding

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

1. the main responsibilities of the employer and employee under the Health and Safety at Work Act
2. the main responsibilities of the employer and employee under environmental legislation
3. the company reporting lines, roles, responsibilities and levels of authority
4. the safe procedures for handling hazardous materials
5. organisational accident recording and reporting procedures
6. the range and use of personal protective equipment for the work

### **Butt Fusion Jointing**

7. health, safety and environment legislation and environmental procedures relevant to the work activities
8. manual handling procedures
9. industry codes of practice and company procedures.
10. why only pipes of similar specifications can be joined together
11. how to interpret engineering specifications relevant to the engineering activity
12. different stages that take place during the jointing process and the importance of allowing each phase to complete
13. the need for pipe support and alignment including the consequences of poor support and misalignment
14. different densities of pipe materials and their implications
15. the different types of pipe material used and their compatibility for jointing
16. the cause and potential effects of defects and contamination
17. maintenance procedures, equipment calibration, consequences of poor maintenance
18. different quality assurance procedures that can be applied in recognising defects including non-destructive and destructive testing
19. how to produce fusion performance reports

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**Originating  
Organisation** Energy & Utility Skills

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**Relevant  
Occupations** Gas Team Leaders, Craftspersons and Technicians

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**Suite** Gas Network Construction

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