EUSDSG12

Install and remove gas pipework in domestic settings

Overview

This standard is about installing and removing gas pipework in domestic settings. This could be for new installations, exchanging or replacing existing pipework or for removing obsolete pipework. Pipework will be up-to 35mm.

This standard covers the work activities of designing, fabricating, installing and removing gas pipework including the disconnection, de-commissioning and commissioning that is involved. It can apply to any type of fuel gas or combinations of fuel gas including, but not restricted to, natural gas, LPG, blended or 100% hydrogen.

This standard should be used in conjunction with:
•EUSDSG4 Prepare to work on gas systems or appliances in domestic settings; and
•EUSDSG14 Carry out gas tightness testing and check system safety in small settings

This standard is for gas engineers who work in domestic settings and for emergency first responders.

Performance criteria

You must be able to:

1.Make sure all operational checks have been carried out prior to starting installation or removal of gas pipework
2.Check that conditions within gas systems will permit safe de-commissioning and re-commissioning
3.Select and use the correct tools, test equipment and other equipment for all aspects of the work
4.Use designated safe isolation methods, tests, and procedures to de- commission gas systems and components
5.Take precautionary actions to ensure that temporarily de- commissioned appliances, systems, or components do not present a safety hazard
6.Minimise damage to customer property and building features throughout all stages of work
7.Disconnect and remove appliances, gas system components in line with installation plans
8.Design, assemble and install the correct sizing and configuration of gas system pipework, fittings and components to meet requirements
9.Bend pipe materials suitable for carrying gas or copper pipework to set measured distances in line with job requirements
10.Position pipework and confirm it meets location, siting and clearances required by appliance manufacturers' and industry standards' specification
11.Provide adequate ventilation for new or replacement pipework installations and systems in line with industry standard practice
12.Provide adequate support(s) for pipework installation to conform with industry standards' specification
13.Position and protect pipework installation in and through walls and in multi-occupancy dwellings to meet industry standards for sleeving and materials and purpose designed channels and shafts
14.Position and protect external and below ground level installations against damage to meet industry standards and requirements
15.Ensure existing gas systems are clean and free of debris
16.Fix and connect gas pipework, valves, fittings and components to supply in line with installation requirements
17.Mark any live gas pipes with a notice to indicate the pipe contains gas
18.Install and label additional emergency control valve (AECV) to supply in appropriate locations when required for remote meter installations
19.Advise property occupiers that earth bonding needs to be carried out by competent people
20.Confirm the complete pipework installation complies with the manufacturers' specification, industry standards, safety schemes and regulations
21.Use designated safe isolation fittings and procedures and warning notices to prevent the unauthorised use of un-commissioned or de-commissioned gas appliances, gas systems, electrical systems and components
22.Check and confirm the gas system operating pressures meet industry standards
23.Use electrical testing procedures to confirm the integrity of installed earthing systems
24.Apply any required protective coating to pipework and joints after gas tightness testing has been completed.
25.Check and confirm the correct operating pressures at appliance connection points to confirm intended designs

26.Check and confirm the operation of installed gas valves and components to ensure they function safely and operate in accordance with manufacturers' instructions
27.Complete all relevant documentation and paperwork in line with industry standards
28.Instruct property occupiers on the correct operation of user controls and isolation valves and provide them with their copy of any literature
29.Resolve problems within own area of responsibility and competence in accordance with approved procedures
30.Advise of any delays to the work, unresolved problems, unsafe situations and required remedial actions to those who require the information

Knowledge and understanding

You need to know and understand:

1.Regulations and guidance governing health and safety in the workplace, environmental protection and the use of risk assessments including safe access, working at heights and substances hazardous to health

2.Legislation covering your general responsibilities for your own safety and that of others
3.The limits of your own autonomy and responsibility
4.Gas industry unsafe situations procedures and how to isolate unsafe gas appliances, gas systems and components
5.Potential hazards that could arise from all de-commissioning, installation and commissioning activities and checks to be carried out before work takes place including earthing systems and whether pipework is safe to touch
6.How to access and interpret normative documents, guidance documents, manufacturers' instructions, industry standards, safety schemes and regulations
7.Required pre-work checks including operating pressures and volumes
8.Industry standard practices for new installations, exchanging or replacing existing pipework or for removing obsolete pipework
9.Industry practices, work standards, safety precautions and hazardous substance regulations for types of pipe, jointing materials and fittings suitable for carrying gas including connecting to lead composition pipes
10.Industry standards' requirements for location, siting, clearance, support, positioning and fixing methods for gas pipework, valves, systems and components including floors, ducts, through walls, buried in walls, in concrete floors, multi-occupancy buildings and protected shafts containing stairs, lifts or other protected fire escape routes
11.How to design and configure pipework to meet requirements
12.Industry standard practices and work standards for pipe installation within suspended & joisted floors including methods of lifting and replacing chipboard flooring and floorboards
13.The installation and protection of installations to meet industry standards requirements including firestopping using intermediate and fire compartment floors and, for external installations, protection against mechanical damage and minimum depth below ground level
14.The industry practices and methods of bending pipe materials to set measured distances including double sets/offset bends, 90-degree bends and crank sets/passover bends
15.The requirements for installation of the different types of pliable corrugated stainless-steel tubes available
16.Procedures and work methods for connecting pipework, valves and components to both new and existing gas systems and appliances and to input services including; gas, ventilation and cross bonding
17.The procedures and work methods to ensure correct gas pipe identification
18.How to measure and record installation and site details for prefabrication and the benefits of making up pipework away from areas that could cause flash back or damage.
19.How to confirm that services and system requirements are adequate for gas system and components
20.Safe isolation methods, tests, and procedures for temporary and permanent de-commissioning of gas systems, components and appliances including use of temporary continuity bonds, non-

contact voltage detectors, voltage indicators, proving units, multimeters
21.Measures to prevent un-commissioned and de-commissioned appliances or systems being brought into operation
22.How to confirm that the provision of ventilation meets the industry standards' requirements for the installation including in voids, shafts and ducts,
23.How to calculate correct sizing of pipework so all appliances operate safely to manufacturers' requirements
24.How to recognise when connection to earthing system components is required
25.Correct operating pressures and how to check them
26.Checks and tests to confirm suitability of gas supply and earthing system, including the installation and positioning of the main equipotential bonding
27.When it is appropriate to apply protective coating to pipework
28.Methods of working which protect building décor, customer property and existing systems and components
29.The steps to take when problems arise with work activities
30.Job management structures and methods of reporting and recording job progress or problems delaying progress
31.How to complete all installation and commissioning documentation and records to be left with the property
32.System handover procedures and how to demonstrate the operation of gas systems, valves and components to end users

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