EUSICG4i

Commission new and existing gas systems, installations and components in industrial properties

Overview

This standard is about commissioning gas systems, installations and components. It is for the industrial property parts of the non-residential downstream gas industry. It can apply to gas systems, installations and components for any type of fuel gas or combinations of fuel gas.

It includes carrying out pre-commissioning checks, identifying and resolving problems with gas systems, installations and components, liaising with people from other trades and handing over commissioned systems to users.

Any person carrying out this role must have site specific competence relevant to the level of risk.

This standard is for those who commission gas systems, installations or components in non-residential downstream, industrial properties.

Performance criteria

You must be able to:

You must be able to:
1. ensure that isolation is carried out by appropriate people before starting work
2. work in line with plans, safe systems of work and risk assessments
3. confirm gas systems, installations and components comply with industry standards
4. check and confirm that conditions within gas systems, installations and components meet safety requirements
5. carry out tightness testing and purging procedures which confirm the integrity of installed gas systems, installations and components at the appropriate pressure for the gas being supplied
6. confirm with input services personnel that the integrity and conditions in associated electricity, water, ventilation and flue/extraction systems will permit safe pre commissioning
7. select and use tools and equipment that are appropriate for commissioning activities
8. check and confirm that gas system operating pressures meet industry standards
9. check and confirm appliance gas operating pressures and heat inputs meet industry standards and manufacturers' requirements
10. check combustion performance is within acceptable parameters
11. confirm combustion ventilation and flue/extraction systems' performance against manufacturers' and industry standard requirements using combustion and atmosphere analysis
12. confirm that gas systems, installations and components function and operate in accordance with safety and industry requirements and manufacturers' instructions
13. liaise and cooperate with people from other trades at appropriate points in the work
14. verify that existing electrical, water, ventilation and flue/extraction systems, installations and components function and operate in accordance with safety requirements, industry requirements and manufacturers' instructions
15. test and confirm that safety devices, gas shut off valves and interlocks are operating as per specification
16. resolve problems in accordance with approved procedures where checks and tests reveal gas appliance, gas system or components:

    16.1.do not meet design requirements
    16.2.have defects or deficiencies
    16.3.cannot be restored to full performance
    17. reporting problems you cannot rectify to responsible person(s)
    18. liaise with responsible person(s) and others who will be affected by the work activities to minimise disruption to work
    19. comply with authorisation and verification processes that ensure correct working practices of other input services
    20. advise all people who are affected by work about any delays as soon as they occur
    21. report any delays in work schedules to job supervisors in line with agreed reporting procedures
    22. advise responsible person(s) of any unsafe situations, and actions required to remedy those situations, without delay
    23. complete required records and documentation for gas systems, installations and

components
24. ensure that isolation is lifted by appropriate people once work is completed
25. interact with customers at appropriate times during your work
26. instruct all responsible person(s) on the correct operation and ongoing procedures for plant and equipment and gas systems and provide them with copies of appliance literature

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
2. legislation covering general responsibilities for own safety and that of others
3. the industry standards and stages involved in pre-commissioning and commissioning new and existing gas systems, installations and components
4. how to use plans, method statements and risk assessments
5. hazard operability standards, failure mode, deficit analysis and hazard identification for industrial plant
6. the implications of your work on industrial processes
7. the impact of gas systems on industrial processes
8. the use of dynamic risk assessment in emergency situations
9. the tools and equipment necessary to provide safe access to work at heights or in restricted or confined spaces
10. methods of working which protect the building décor, customer property and existing systems and components
11. the tools, equipment, materials and components required for commissioning activities
12. the care and maintenance requirements of tools and equipment, and checks for safe condition
13. how to secure and store tools, equipment, materials and components to meet safety requirements and minimise loss or wastage
14. steps to take when required materials, components, tools and equipment are not available on site
15. potential hazards that could arise from commissioning activities
16. how to access and interpret required information including statutory and normative documents, industry standards, guidance documents and manufacturers' instructions
17. the range of industrial gas systems, installations and components their typical uses and how they operate
18. the need to liaise with others whose procedures or routines may be affected by the suspension of the gas appliance and gas system operation
19. the points in the commissioning process where co-operation and liaison with other input service personnel about electricity, water, kitchen ventilation and flue/extraction systems may be required
20. the procedures and work methods for connecting industrial gas-fired plant and equipment to both new and existing input services including gas, water, electric, ventilation and flue/extraction systems
21. the routines and sequences for commissioning industrial gas-fired plant and equipment, gas systems, installations and components in accordance with manufacturers' specification and industry standards
22. the procedures for checking the correct, safe operation and performance of industrial gas-fired plant and equipment, gas systems, installations and components against the design specification
23. normal gas pressures in the geographical area in which you are working and procedures for checking and confirming gas system operating pressures
24. procedures for checking and confirming appliance operating pressure and heat input
25. tests, checks and use of flue gas analysers to confirm the suitability of the gas combustion

performance
26. tests, checks and use of atmosphere analysers to confirm the integrity, suitability and performance of ventilation and flue/extraction systems
27. gas system, installation and component handover procedures and associated documentation
28. how to demonstrate the operation of industrial gas-fired plant and equipment, gas systems, installations and components to end users and the implications of the shift system on the delivery of handover training
29. steps to take when problems arise in the work activities
30. job management structures and methods of reporting and recording job progress or problems delaying progress
31. how to isolate unsafe gas-fired plant and equipment, gas systems, components and gas-fired plant and equipment
32. processes, procedures, equipment and legislative requirements for applying tightness testing and purging to appliances, gas systems, installations and components
33. processes and procedures, equipment and legislative requirements for applying electrical tests to plant and equipment, electrical systems, installations and components to ensure safe functioning
34. how to communicate with customers and when it is appropriate to do so

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