
Overview

This standard identifies the competences you need to assist in the installation of engineering services equipment used in food and drink operations, in accordance with approved procedures. You will be able to assist in the installation of a range of services equipment including fresh and waste water distribution equipment; workplace and environmental control equipment; emergency power generation equipment; heating, ventilating, air conditioning and refrigeration equipment; gas and compressed air equipment; process and instrumentation control equipment. Food and drink operations is a term used in this standard to cover the following sub sectors of Meat, Drinks, Confectionery, Fresh Produce, Bakery, Seafood and Dairy.

This standard does not involve maintenance/repair type activities, including removal and replacement of existing equipment. You will be able to use the appropriate tools and equipment throughout the installation activities, and to apply a range of installation methods and techniques to position, level and align the equipment, and to make connections to the various mechanical, electrical, fluid power, water or fuel supplies, as appropriate to the equipment installed. The installation activities will include making checks and adjustments, in line with your permitted authority, and assisting others to ensure that the installed equipment functions to the required specification.

You will be able to work with a minimum of supervision, alone or in conjunction with others, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

The installation activity may be carried out as a team effort, but you must demonstrate a significant personal contribution to the installation activities, in order to satisfy the requirements of the standard, and you must demonstrate competence in all the areas required by the standard.

Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety, environmental and other relevant food and drink regulations, directives and guidelines
2. obtain and correctly interpret documentation and instructions for the equipment being installed (including job installation drawings and quality documentation)
3. follow all relevant instructions/documentation for the installation being carried out including using relevant fault and condition
4. check that the tools and equipment are in a safe and usable condition ready for installation operations
5. confirm that authorisation to carry out the installation activities has been given
6. assist in the activity and installation, including positioning and securing of the equipment and using appropriate methods and techniques
7. check that safe access and working arrangements for the installation area have been provided
8. confirm that services have been safely isolated, ready for the installation (including mechanical, electricity, gas, steam, air or fluids)
9. check that all required installation consumables are available
10. check the installation, and make any adjustments in accordance with the specification
11. follow specified and appropriate installation techniques and procedures at all times
12. deal with any problems and report any that cannot be solved in accordance with organisational procedures
13. dispose of waste materials in accordance with safe working practices and approved procedures
14. complete the relevant paperwork and documentation in accordance with organisational requirements and within the limits of your authority

Knowledge and understanding

You need to know and understand:

1. the health and safety and environmental requirements of the area in which the installation activity is to take place, and the responsibility these requirements place on you not to compromise food safety
2. the isolation and lock-off procedure or permit-to-work procedure that applies, including critical control points
3. the specific health and safety food and drink precautions to be applied during the installation procedure, and their effects on others
4. the requirements of the British Retail Consortium (BRC) guidelines and standards in relationship to the installation activities
5. the specific requirements of your customer/client specifications in relationship to the installation activities
6. your responsibilities in relationship to Hazard Analysis and Critical Control Points (HACCP), Threat Assessment and Critical Control Points (TACCP), Vulnerability Assessment and Critical Control Points (VACCP) during the installation activities
7. the importance of wearing protective clothing and other appropriate safety equipment (PPE) during the installation
8. what constitutes a hazardous voltage and how to recognise victims of electric shock
9. how to reduce the risks of a phase to earth shock (including insulated tools, rubber mating and isolating transformers)
10. the hazards associated with installing engineering services equipment, and with the tools and equipment used, and how to minimise them and reduce any risk
11. how to obtain and interpret information from job instructions and other documentation used in the installation activities (including installation drawings, specifications, manufacturers' manuals, BS7671/IET regulations, symbols and terminology)
12. the basic principles of operation of the equipment being installed, and its operating sequence
13. the principles of the equipment's design features for safe operation in a food or drink environment including minimising the chance of contaminants or foreign bodies in the final product
14. methods of marking out the site for positioning the equipment, and the tools and equipment used for this
15. methods of drilling holes in masonry for rag bolts and expanding bolts (including use of grouting and adhesives)
16. the various mechanical fasteners that will be used, and their method of installation
17. methods of lifting, handling and supporting the equipment during

- the installation activities
18. methods of levelling and aligning the equipment, and the types of tools, instruments and techniques used
 19. the methods of connecting the equipment to the services including mechanical connections, pipe connections, electrical connections
 20. the installation and termination of a range of electrical components (including plugs, switches, sockets)
 21. the care, handling and application of test instruments used in the installation activities (including measuring instruments, levelling devices, electrical test equipment, fluid test equipment)
 22. the processes in place to segregate the tools and equipment used into high or low risk areas
 23. the checks required to ensure that all tools, materials and components are all accountable before operating the equipment
 24. how to conduct any necessary checks to ensure the equipment integrity, functionality, accuracy and quality of the installation (including the fitting of covers/guards to all moving parts, and covers on electrical connections)
 25. the cleaning requirements/policies in place before the equipment is in full operational production
 26. how to recognise installation defects (including misalignment, ineffective fasteners, foreign object damage)
 27. the problems that can occur with the installation operations, and how these can be overcome
 28. the fault-finding techniques to be used if the equipment fails to operate correctly
 29. the recording documentation to be completed for the activities undertaken
 30. the extent of your own responsibility and to whom you should report if you have problems that you cannot resolve

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