
Overview

This unit is about your competence in completing checks on Instrument and control systems. You will be required to complete the checks following your company procedures. The checks may be routine or non routine in nature. To record the results you will follow company procedures and your organisation's safe working practices at all times and working within the work permit procedures.

This unit deals with the following:

1. Inspect instrument and control systems

During this work you must take account of the relevant installation procedures and safe working practices AS THEY APPLY TO YOU.

Previous Version:

Adapted from Unit I3.17 of Process Engineering Maintenance NOS – version February 2004 This unit is a contextualised version of a unit produced by the OSC Eng Engineering Competence Standards which was originally designated ECS 6.06.

COGPEM80

Inspect instrument and control systems

Performance criteria

- You must be able to:*
- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
 - P2 follow the correct specification for the product or equipment being inspected
 - P3 use the correct equipment to carry out the inspection
 - P4 identify and confirm the inspection checks to be made and acceptance criteria to be used
 - P5 carry out all required inspections as specified
 - P6 identify any defects or variations from the specification
 - P7 record the results of the inspection in the appropriate format
 - P8 deal promptly and effectively with problems within your control and report those that cannot be solved

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Inspect instrument and control systems

Knowledge and understanding

You need to know and understand:

- K1 you must have a working knowledge and understanding of what your responsibilities are in respect of Health, Safety and Environment. This should include the limits of your personal responsibility, your legal responsibility for your own health and safety and the health and safety of others
- K2 you must have a working knowledge of the relevant regulations and the safe working practices and procedures required within your work area
- K3 you must have a working knowledge and understanding of the engineering drawings and related specifications to which you will be expected to work. This will include technical drawings (component, assembly, general arrangements, isometrics 1st and 3rd angle projections) method statements and product worksheets, tolerances
- K4 you must have a working knowledge and understanding of the inspection methods and techniques that are approved by the company
- K5 you must have a working knowledge and understanding of calibration of equipment and authorisation procedures that are approved by the company. This should include the procedure for recertification and how to interpret the calibration certificate
- K6 you must have a working knowledge and understanding of the inspection equipment care and control procedures that are approved by the company. This should include storage, both in situ and transit, and the checking of calibration certificates
- K7 you must have a working knowledge and understanding for the identification of defects in products, equipment or systems. This should include what the typical defects are that arise and how to identify them, typical examples are: weathering, wear and tear, corrosion
- K8 you must have a working knowledge and understanding of the quality control systems and documentation procedures. This should include how defects and variations should be dealt with and what factors determine the actions to be taken, and why it is important to maintain records of the checks made and the assessments that result from those checks, what information should be entered on those records and where they should be kept
- K9 you must have a working knowledge and understanding of the reporting lines and procedures in your working environment

Additional Information

Scope/range related to performance criteria

- 1 The level and extent of responsibility extends to selecting and modifying methods at your discretion to optimise the effectiveness of the monitoring and assessment undertaken in the conditions applying. In some cases, you may still be expected to refer to others for final authorisations, even though you remain responsible for identifying and implementing decisions
- 2 The types of product to be inspected involve multiple technology or are of a single technology interacting with other assets in a dynamic manner. Typical systems could be:
 - 2.1 Measurement systems
 - 2.2 Control systems
 - 2.3 Analysers, protection and detection devices
- 3 The aspects, characteristics and complexity of checks are as set down in manufacturer's guidelines and procedures and will include ensuring compliance with relevant international standards, equipment manufacturer specifications and company procedures. The type of checks made will depend on the engineering process carried out which may include:
 - 3.1 Dismantling
 - 3.2 Assembly
 - 3.3 Positioning and installation
 - 3.4 Repair of components
 - 3.5 Removal and replacement of components
 - 3.6 Removal and replacement of components
 - 3.7 Adjustment
 - 3.8 Planned maintenance activities
- 4 The inspection methods and techniques and type of equipment to be used are as set out in internal QA and QC procedures.
- 5 The quality standards and accuracy to be achieved are as set down in work specifications.

COGPEM80

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Scope/range related to knowledge and understanding

The Knowledge and Understanding levels expressed indicate the minimum level of knowledge and understanding sufficient to perform your role in a manner that would normally be associated with the minimum acceptable performance of a competent person undertaking your role.

The expression "working knowledge and understanding" indicates you are able to:

- 1 Identify and apply relevant information, procedures and practices to your usual role in your expected working environments needing only occasional recourse to reference materials
- 2 Describe, in your own words, the principles underlying your working methods. This does not mean the ability to quote "Chapter and verse". Rather you must know what supporting information is available, how and where to find it and from whom to seek further guidance and information confirm any additional required detail
- 3 Interpret and apply the information obtained to your role, your working practice and in your expected working environment

COGPEM80

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