COGPEM44 - SQA Unit Code FP59 04

Establish that an engineering maintenance process has been completed to specification

Overview

This unit is about your competence in ensuring that the work has been completed to company and or manufacturers' standards.

This unit deals with the following:

1 Establish that an engineering maintenance process has been completed to specification

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

Previous Version:

Adapted from Unit M3.13 of Process Engineering Maintenance NOS – version February 2004. This unit is a tailored version of an Electrical unit produced by the ECITB from the OSC Eng Engineering Competence Standards (ECS 6.01) which was originally designated MPS Mech 21.

COGPEM44 - SQA Unit Code FP59 04
Establish that an engineering maintenance process has been completed to specification

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 and make appropriate use of the specifications for the product or asset being checked

P3 use all the correct tools and inspection equipment and check that they are in usable condition

P4 carry out the checks in an appropriate sequence using approved methods and procedures

P5 identify and assess any defects or variations from the specification and take appropriate action

P6 report completion of compliance activities in line with organisational procedures

COGPEM44 - SQA Unit Code FP59 04
Establish that an engineering maintenance process has been completed to specification

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, including technical drawings (component, assembly, general arrangements, isometrics, 1st and 3rd angle projections), method statements, product worksheets and tolerances

K4 you must have a working knowledge and understanding of how to make an adequate check of compliance against criteria. This could be expected to include ex equipment and data sheets, commissioning procedures, manufacturers' data and local procedures

K5 you must have a working knowledge and understanding of identification of defects in plant and equipment. This should include what the typical defects and variations are that arise and how to identify them

K6 you must have a working knowledge and understanding of 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

K7 you must have a working knowledge and understanding of the inspection of equipment care and control procedures. This should include what your responsibilities are for ensuring the security of tools and equipment that you use. This could be expected to include ingress protection ratings, explosion protection equipment, corrosion, portable appliance testing, heating and ventilation and permit systems

K8 you must have a working knowledge and understanding of your responsibilities with regard to the reporting lines and procedures in your working environment

COGPEM44 - SQA Unit Code FP59 04
Establish that an engineering maintenance process has been completed to specification

Additional Information

Scope/range related to performance criteria

1 The level and extent of responsibility extends to dismantling the asset to a specified degree but you may alter and/or vary the sequence of actions and techniques followed at your discretion to achieve the best possible result 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 type of products or assets to be checked are mechanical plant and equipment related to engineering maintenance work. This would include:
- 2.1 Engines
- 2.2 Transmissions systems
- 2.3 Power transmissions systems
- 2.4 Turbines
- 2.5 Mechanical/hydraulic systems/actuators
- 2.6 Fluid/gas transmission systems

3 The inspection, test and record-keeping procedures to be followed are as set out in internal QA and QC procedures.

4 The aspects, characteristics and complexity of checks to be made are as set down in manufacturers' guidelines and procedures and will include ensuring compliance with relevant international standards. The type of checks made will depend on the engineering process carried out which may include:
- 4.1 Dismantling
- 4.2 Assembly
- 4.3 Positioning and Installation
- 4.4 Repair of Components
- 4.5 Removal and replacement of components
- 4.6 Adjustment
- 4.7 Planned maintenance activities testing

5 The quality standards and accuracy are as set down in work specifications

COGPEM44 - SQA Unit Code FP59 04
Establish that an engineering maintenance process has been completed to specification

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

COGPEM44 - SQA Unit Code FP59 04

Establish that an engineering maintenance process has been completed to specification

Developed by	Cogent
Version number	1
Date approved	May 2010
Indicative review date	May 2012
Validity	Current
Status	Tailored
Originating organisation	ECITB
Original URN	MPS Mech 21
Relevant occupations	Engineering Professionals; Engineering and manufacturing technologies; Manufacturing technologies
Suite	Process Engineering Maintenance
Key words	establish, engineering, maintenance, process, specification, completed