

Ref:	NR/L2/CTM/012/048
Issue:	1
Date:	06 March 2010
Compliance date:	04 September 2010

NR/L2/CTM/012/048 Competence & Training in Signal Engineering

SWT Mod 4: Signalling Functional Tester.

1 Purpose.

The purpose of this competence standard is to define the competence requirements for persons required to undertake the duties of Signalling Functional Tester.

2 Scope.

This competence standard covers the role of persons undertaking the functional testing of trackside signalling equipment to demonstrate that the appropriate design, installation and testing specifications are met and that the application is fit for entry into service. Includes the testing of Trackside Equipment such as Signals, Points, Track circuits, Axle counters, AWS, TPWS and level crossing equipment (e.g. road lights and barriers).

The level and extent of responsibility will include their own safety and that of others who might be affected by their work. The person will be expected to refer to others for authorisation when required, will be responsible for the implementation of the instructions and will work within set procedures and specifications. The person is responsible for the quality of their completed work.

This competence standard shall be used to assess the competence of people undertaking functional testing of trackside signalling equipment.

3 Competence Standard.

This Competence Standard comprises three elements.

Element 1 Prepare to undertake testing of signalling systems and equipment.

Element 2 Undertake tests/checks to confirm compliance with the design and specifications.

Element 3 Determine the status of the tested signalling systems and equipment.

The first element is concerned with the safe access of work locations, to determine the scope of the work and status of the previously tested equipment. To confirm personnel are available and authorised. To confirm tools, test equipment is available and that documentation is current and accurate. Deal with deficiencies.

The second element deals with working safely at all times complying with health and safety

and other relevant regulations and guidelines. To follow procedures for use of tools. The setting up of tests, recording / reviewing the results and carrying out further testing. Dealing with damage to operational equipment. Establishing communications with relevant people, restoring the work area to a safe condition, dealing with problems. Identification of materials, equipment for re-use, storage or disposal.

The third element deals with working safely in accordance with regulations, having correct test data. Identification of accuracy of test data, recording of analysis, deciding the course of action from the evidence gathered. Identifying the status of the system.

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To prove competence in this unit, the person shall demonstrate their ability to complete maintenance in accordance with instructions. The person will have to show they can follow recording, reporting and escalation procedures.

4 Assessment.

4.1 Initial Assessment

A modular training course is available for Mod 4 which leads to initial competence in this module. Subject to mentorship requirements, and employers competence assessment in accordance with NR/L2/SIG/30014/B410.

Additional equipment specific courses will also be required to attain competence in other trackside equipment types.

It is also possible to carry out conversion training and assessment to convert to Mod 4 from SMTH, without attendance at the full modular course(s), due to the previous experience and underpinning knowledge of those holding an SMTH certificate.

The tester will work towards their IRSE license.

4.2 Re-Assessment

Licence holders will undergo surveillance after 5 years in order to retain their licence with a renewal IRSE Licensing assessment required after 10 years. Employers may have their own additional assessment processes in addition to this, and shall employ suitable surveillance of SWT staff.

4.3 Knowledge Evidence that is common to the whole unit.

You shall have knowledge and understanding of:

- a) Health and safety legislation, regulations and safe working practices and procedures.
- b) What the site access procedures are for different locations, and when they are required.
- c) How to interpret information to identify the location of safe access points.
- d) Test reporting documentation and procedures
- e) Reporting lines and procedures.
- f) Analysis methods and techniques.
- g) Lines and methods of effective communication.
- h) Which communication methods/protocols are applicable and how to demonstrate that colleagues understand which is required.

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Sig Mod 4 Unit – Functional Tester of Trackside Signalling equipment
Element 1: Prepare to undertake testing of signalling systems and equipment
<p>Performance statements.</p> <p><i>You shall be able to:</i></p> <ol style="list-style-type: none"> Confirm work locations are accessed safely, within any agreed timescales and in accordance with the site access procedures. (Railway Specific) Accurately determine the scope of the work to be carried out, and the status of the previously tested equipment. (Railway Specific) Obtain confirmation that the personnel required for the testing activity are available and authorised to undertake the tasks. (Railway Specific) Conform that all tools and test equipment to be used are available, appropriate for the work, serviceable and suitable for the working conditions. (Railway Specific) Confirm that all documentation required for the work is available, accessible and a current issue. (Railway Specific) Obtain sufficient documentation for reporting and recording the work to be undertaken in compliance with organisational requirements. (Railway Specific) Deal effectively with any deficiencies and the non-availability of documentation, tools or test equipment in accordance with organisational procedures. (Railway Specific) Confirm information supplied to the individual testing team members accurately identifies the work to be completed. (Railway Specific) Confirm that the traceability of the issue and use of test equipment is in accordance with instructions. (Railway specific)
<p>Scope of Competence.</p> <ol style="list-style-type: none"> Identify the necessary safety requirements and take relevant action to confirm the safety of yourself, others and railway operations. Accurately establish the location of the task. Locations may include: <ul style="list-style-type: none"> External (e.g. trackside) / Confined spaces Areas to which the Public have access / Elevated structures Internal (e.g. signal box, equipment room, etc) Scope of work includes: <ul style="list-style-type: none"> Verifying the previously completed testing Verification testing to be undertaken Functional testing to be undertaken The test equipment includes that used for: <ul style="list-style-type: none"> Measurement Simulation Integration Documentation includes: <ul style="list-style-type: none"> Test plans Design diagrams Specifications Records of previously completed testing Industry procedures