



Australian Government

Assessment Requirements for UEEIC0029

Set up and adjust PID control loops

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including
 - using risk control measures
- checking and isolating process controller/transmitters/converters and control loops
- completing status reports and/or notifying work supervisor
- dealing with unplanned situations in accordance with workplace procedures
- determining sources of materials required for work
- determining to test and measure live work
- measuring and calculating values for solving process control loop problems
- obtaining and checking tools, equipment and testing devices for correct operation and safety
- obtaining scope of control problem from documentation and/or from work supervisor
- preparing to work on process control loops
- solving process control loop problems
- solving problems without damage to apparatus, the surrounding environment or services using sustainable energy principles.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- isolation procedures
- problems-solving techniques
- process control loop principles, including:
 - connection of controllers
 - introduction to control systems, including control loop components, purpose of control loop components, open and closed loop control, control loop block diagram, direct acting and reverse acting controllers

- process control terminology
- process controllers, including proportional-integral-derivative (PID) functions, applications of PID modes of control, applications of controller options, checking/adjustment of controllers and reset windup
- testing of control modes
- types of control and control modes
- process characteristics
- relevant industry standards
- relevant manufacturer specifications and operating instructions
- tuning and installation of control loops
- relevant process controller/transmitters/converters and control loops
- job safety assessments or risk mitigation processes
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation, including
 - status reports
- relevant workplace instructions, policies and procedures
- sustainable energy principles.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to solving problems in process control loops
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>