



Australian Government

UEPOPS140 Start up a boiler unit

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry – Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required to establish combustion in a boiler through to a stage at which combustion support energy is no longer necessary.

A boiler is a closed vessel in which water, under pressure, is converted into steam. Combustion is an important key to boiler operations; it occurs when oxygen combines with an element or compound to release heat.

Competency in this unit requires the ability to plan and prepare boiler unit start-up, conduct boiler unit - start-up, test and analyse boiler unit system faults, and complete documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

Power generation plant operators are trained and authorised to isolate, prepare plant and issue permits to work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

There are no prerequisite units

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 Plan and prepare boiler unit start-up work | 1.1 Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored |
| | 1.2 Work requirements are identified from relevant personnel and documentation in accordance with workplace procedures |
| | 1.3 Preoperational checks are carried out on boiler unit plant in accordance with manufacturers' recommendations and specifications and workplace procedures |
| 2 Conduct boiler unit start-up | 2.1 Boiler auxiliary systems are started up to support boiler unit start up, in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| | 2.2 Pre-light up conditions for boiler unit are established in accordance with workplace procedures |
| | 2.3 Combustion is established with fuel consumption kept at minimum levels in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| | 2.4 Fuel, air and feedwater flows are adjusted to achieve required steam conditions and demand in accordance with workplace procedures |
| | 2.5 Boiler unit plant is operated within limits of design in accordance with workplace procedures |
| | 2.6 Boiler unit plant is monitored to detect deviations from required operating conditions in accordance with workplace procedures |
| | 2.7 Corrective actions are taken to rectify boiler unit abnormalities in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 3 Test boiler unit plant operation | 3.1 Tests are performed in accordance with workplace procedures |
| | 3.2 Power generation system and boiler unit plant is observed for correct operational response in accordance |

- with workplace procedures
- 3.3** Boiler unit plant is returned to required operational status upon completion of testing in accordance with workplace procedures
- 4 Analyse system faults during boiler unit start-up**
- 4.1** Causes of abnormal boiler unit plant operating conditions are identified by analysing technical and operational information in accordance with workplace procedures
- 4.2** Boiler unit plant integrity and personnel safety are maintained through consultation with relevant personnel and technical and operational documentation in accordance with workplace procedures
- 4.3** Relevant personnel are notified when defects are detected in accordance with workplace procedures
- 5 Complete documentation**
- 5.1** Boiler unit plant problems, movements, and status are reported in accordance with workplace procedures
- 5.2** Documentation is updated in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEP Electricity Supply Industry – Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS409 Start up a boiler unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

