



Australian Government

UEPOPS068 Operate a hydro generator synchronous condenser pump unit

Release: 1

UEPOPS068 Operate a hydro generator synchronous condenser pump unit

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 start-up, maintain a steady state of running and then shutdown a hydro unit operating either as a generator, synchronous condenser or pump.

Using synchronous condenser operations in hydro generation facilities can improve the quality of electric power being supplied, and it assists in stabilising the network during faults.

Competency in this unit requires the ability to plan and prepare work and to operate, test, analyse and report on hydro generator synchronous condenser plant. 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.

- | | |
|---|--|
| 1 Plan and prepare work | <ul style="list-style-type: none">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 monitored1.2 Work requirements are identified from relevant personnel and documentation in accordance with workplace procedures1.3 Turbine running up and loading schedule are ascertained from relevant documentation in accordance with workplace procedures1.4 Hydro generator synchronous condenser plant inspection, preoperational tests and field preparation for service are carried out in accordance with manufacturers' recommendations and specifications, and workplace procedures1.5 Hydro generator synchronous condenser plant operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures1.6 Sequence for recommissioning of hydro generator synchronous condenser plant is determined in accordance with workplace procedures |
| 2 Operate hydro generator synchronous condenser plant | <ul style="list-style-type: none">2.1 Hydro generator synchronous condenser plant is operated in accordance with manufacturers' recommendations and specifications, and workplace procedures2.2 Hydro generator synchronous condenser plant is monitored to detect deviations from normal operating conditions, in accordance with workplace procedures2.3 Corrective actions are taken to rectify abnormalities in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 3 Test hydro generator synchronous condenser plant operation | <ul style="list-style-type: none">3.1 Tests are performed on hydro generator synchronous condenser plant in accordance with workplace procedures3.2 Hydro generator synchronous condenser plant is returned to required operational status upon completion |

- of testing in accordance with workplace procedures
- | | | |
|---|------------|--|
| 4 Analyse hydro generator plant faults | 4.1 | Cause of abnormal hydro generator synchronous condenser plant operating conditions are identified by analysing technical and operational information in accordance with workplace procedures |
| | 4.2 | Hydro generator synchronous condenser plant integrity and personnel safety is maintained through consultation with relevant personnel, 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 | 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 UEPOPS335 Operate a hydro generator synchronous condenser pump unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>