



Australian Government

Assessment Requirements for PMAOPS328 Operate and troubleshoot heating furnace

Release: 1

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Modification History

Release 1. Unit code and title changed. Application and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMAOPS323 Operate and monitor heating furnace.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit:

- at least 2 times, each in a separate work context, including:
 - shutting down in an emergency.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- all items on a schematic of the production unit, including:
 - principles of operation of plant and equipment
 - interactions between plant items and processes
 - operating parameters and integrity limits, and product specifications and tolerances including temperature, pressure and flow
 - operational shutdown processes and procedures, including cooling down, furnace pressure/vacuum and fuel/heat source isolation
 - the processes and procedures for starting a furnace, including heat input, warm-up of the reticulation system, systems operation, reticulation line pressure, heating fluid usage and supply, and component plant items
 - shutdown processes and procedures for internal inspection, including confirming furnace cooling down, vacuum/pressure, fuel/heat source isolation, and removal of combustion equipment and water from furnace
 - procedures for monitoring a furnace, including heating fluid reticulation line pressure/temperature, usage, supply and quality of heating fluid, combustion/heat source system, fuel system, combustion air supply, operation of control/safety devices, combustion management system, and component plant items
 - function, purpose and location of component plant items and troubleshooting techniques
 - emergency shutdown procedures
 - various modes of furnace storage and advantages and disadvantages of each
 - types and purpose of furnace fittings

- physics and chemistry to the level of being able to provide an overview of the science of the furnace process, including heating fluid properties
- furnace abnormal situations and required actions, including but not limited to:
 - fuel variations (rate and quality)
 - changes to heating requirements
 - coke, soot and scale build-up
 - flame pattern
 - weather conditions
- hierarchy of control
- furnace hazards:
 - possible causes
 - potential consequences
 - appropriate risk controls
 - reporting and escalation procedures.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - heating furnace
 - operating procedures
- abnormal situations must be relevant to heating furnace operations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>