



Australian Government

Assessment Requirements for PMAOPS336 Operate and troubleshoot fixed-bed adsorption system

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 PMAOPS327 Operate fixed bed adsorption unit.

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.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- all items on a schematic of the fixed-bed adsorption system, including:
 - type of adsorber, the component plant items and their functions
 - principles of operation of dehydrator, gas treatment and extraction, including hydrate formation, adsorption and desorption
 - operating parameters and integrity limits, product specifications and tolerances including temperature, pressure and flow
 - procedures for starting, stopping, operating, controlling and isolating the system
 - emergency shutdown procedures
 - function of major components and troubleshooting techniques
 - process control philosophies and strategies
 - interactions between plant items and processes
- physics and chemistry to the level of being able to provide an overview of the science of the fixed-bed adsorption process
- adsorption abnormal situations and required action, including but not limited to:
 - variation and loss of feed
 - unstable control of pressure, temperature level and flows
 - control equipment failure
 - process plant trips
 - change in atmospheric conditions (rain, temperature, wind, lightning)
 - emergency situations
 - desiccant contamination
 - desiccant damage and bed collapse (over pressuring)
 - poor regeneration (flow, heat, cooling)

- problem with major component
- hierarchy of control
- adsorber system 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:
 - fixed-bed adsorption system
 - operating procedures
- abnormal situations must be relevant to fixed-bed adsorption systems.

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>