



EXAMPLE DOCUMENT ONLY

CBTA

Air

SP/TRN/TM85

Candidate's Name:

Candidates Signature: _____

Assessor's Name: _____

Assessor's Signature: _____

Date Completed: CBT A Reassessment: _____

For first time candidates, the entire CBTA is to be completed. For the purposes of re-assessment only the demonstrative section requires completion.

Written

Question	Answer	Assessor check
What types of air does Iona site have?	Service air, Instrument air, Compressor start air.	
How many air compressors are at the Iona site and what are the unit numbers?	Three air compressors C-721/722/723	
Why do we have different requirements for air?	<p>Service Air</p> <p>Service air is provided for both utility air usage (air-powered tools, air powered pumps etc) and for start air for the main gas compressors. The service air header is controlled at a pressure of 800 kPag by a self-contained regulator, PCV-7427. This maintains the pressure in the service air header.</p> <p>Instrument Air</p> <p>Air flows from the Service Air Receiver to the Air Drier Package, X-721 which dries the air to a water dew point down to -40 °C but mainly runs between -20°C to 30°C. The air to the drier is controlled at a pressure of 690 kPag by a self contained pressure regulator, PCV-7431. The air then enters the Instrument Air Receiver, V-721 from which the instrument air distribution header is supplied.</p> <p>Compressor Start Air</p>	

	<p>Start air is required for starting the main gas compressor engines. Air from the Service Air Receiver flows to the Start Air Receiver, V-724/726 for the engine to be started. The vessel is pressurised to 1,250 kPag before the air is used for starting the engine. Any water build-up in the Start Air Receivers is drained manually into buckets and deposited into the Wash Down Sump (T-401) or the Engine Drain Sump (T-403) for proper disposal</p>	
<p>What equipment is associated to the air compressors?</p>	<p>Driver (electrically) , compressor, dryers (mole sieve media X-721), regulators, receivers.</p>	
<p>How does Instrument Air vary from the two other compressed air services on site; Service Air and Compressor Start Air?</p>	<p>Instrument air is dried via X-721 to -40 but mainly runs around -20/-30. This is required to prevent icing and moisture issues in plant instruments.</p>	
<p>In terms of the air driers explain “absorbing” and “regeneration”.</p>	<p>Regeneration- Air driers contain a mole sieve bed to remove water from the air. These beds become saturated in water and require to be regenerated, flow is reversed using a small flow of dry air to strip the build-up of moisture in the media bed to atmosphere.</p> <p>Absorption- The mole sieve beds contain media which creates a torturous path for the airflow. The media is of a porous nature which leads to the moisture being stripped from the air flow.</p> <p>Over time the media becomes saturated in absorption (on line) mode and is automatically switched over into regeneration while the offline bed is brought into service. There is always one bed in absorption and the other in regeneration.</p>	

Oral

Question	Assessor check
Explain the terms lead and lag.	Lead and Lag is an expression used when explaining a mode of operation. Lead means that unit is online in operation. Lag is a secondary unit in the same process stream that is on standby, ready to start if the lead unit fails.

Demonstrative

Question	Assessor check
Demonstrate a unit and breaker reset after a power dip.	
Conduct a set of reads on the air compressors and explain why we drain the air receiver C-721?	

EXAMPLE DOCUMENT ONLY

The candidate is assessed as being:

Competent

Not yet competent

Areas requiring improvement:

[Empty rectangular box for notes]

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For first time candidates only:

Department Manager's name: D

Department Manager's signature: _____

Date: _____

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