
Overview

This unit is about controlling the operation of integrated process systems to within the required operational parameters.

This unit deals with the following:

- 1 Control integrated process systems
- 2 Monitor integrated process systems

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices AS THEY APPLY TO YOU.

Previous version:

Unit PTC3.2 Processing Operations Hydrocarbons NOS – November 2006

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Performance criteria

You must be able to:

- P1 effectively maintain the process system in the required steady state
- P2 achieve required process system specification through appropriate work methods/ techniques
- P3 ensure steady state conditions by appropriate process systems throughput
- P4 accurately identify process system faults and take appropriate action
- P5 accurately identify critical situations and take appropriate action
- P6 ensure that all information supplied and recorded is accurate, complete and legible
- P7 work safely in accordance with operational requirements and associated **Safe Systems of Work**
- P8 accurately identify and rectify faults and problems
- P9 correctly take samples and carry out relevant tests and comparative testing
- P10 take appropriate action to maintain process parameters
- P11 promptly report deviations outwith your responsibility
- P12 effectively maintain your work area to be clean and hazard free

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Knowledge and understanding

You need to know and understand:

- K1 how to use “Safe Systems of Work” processes to identify hazards and mitigate or reduce risks to as low as reasonable practicable (ALARP)
- K2 how to select, use and care for Personal Protective Equipment (PPE) to include sight/hearing protection, coveralls, gloves, footwear, hard hats, respirators
- K3 the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements
- K4 how to interpret operational requirements (e.g. policies, procedures, instructions, codes of practice, standards, schedules)
- K5 equipment internals and their function
- K6 functioning of process control including instrumentation and logic
- K7 normal plant conditions and the tolerances within which they operate
- K8 sources of information and interpretation of drawings and manuals regarding the plant
- K9 composition and properties of feedstock (to include toxicity, flammability, specific gravity and temperature)
- K10 reactions taking place, conditions and effects of changes (to include chemical and physical properties)
- K11 the effects of changes in ambient conditions on plant operation
- K12 effects of loss of any utility and its reinstatement
- K13 how to identify and deal with critical situations (to include process deviations, extreme weather conditions, spillages, uncontrolled emissions)
- K14 how to deal with process system throughput (to include increase/decrease throughput, specified sequence, recommended rate)
- K15 how to identify process system faults (to include lack of services and supply, variances in services, mechanical and electrical breakdown, process and utility setting deviations)
- K16 the limits of your own responsibilities
- K17 the principles of hydrocarbon hydrate formation – prevention and dispersion
- K18 the actions appropriate to critical situations (to include quick shut down, return process with safe parameters, operate standby equipment)
- K19 the nature of information required (to include oral, written, equipment status, process status, handover reports)
- K20 what steady state conditions are and how they are achieved
- K21 how to identify and rectify faults
- K22 types and causes of conditions and the relevant actions (to include report, record, adjust) to take when they occur
- K23 how to deal with oral and written information
- K24 how to perform leak testing and sampling and how to interpret results

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K25 how to monitor system (to include flare and vent, emergency shut down, fire and gas)

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Additional Information

Scope/range

Candidates must prove competence across the following items (or “systems”) as appropriate to the workplace and Evidence Specification:

- 1 wells
- 2 oil storage/discharge process
- 3 gas process
- 4 oil/gas process and export
- 5 water injection
- 6 metering
- 7 utilities

In addition, the following terms in bold relate directly to those shown in **bold** in the Performance Statements.

- 1 **Safe Systems of Work** must include processes or systems that incorporate Hazard Identification, Risk Assessment, Permit to Work and any other associated systems.

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