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## Overview

This standard is about your contribution to starting up equipment. This must include rotating equipment, non-rotating and storage equipment, heat transfer equipment, control equipment.

This standard deals with the following:

1. Prepare to start up
2. Start up equipment
3. Communicate information during start-up
4. Recognise and communicate abnormal start-up conditions

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

This Standard is suitable for those working in the downstream fuel environment.

Previous version:

Adapted from Unit 2 of Refinery Field Operations NOS – version April 2005

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## Performance criteria

- You must be able to:*
- P1 Obtain relevant authorisation for start-up to proceed
  - P2 Correctly identify equipment and checked status
  - P3 Correctly follow operational procedures for checks and tests
  - P4 Identify the locations of emergency isolation valves and their reset mechanisms
  - P5 Identify any discrepancies between the plant drawings and the procedures
  - P6 Report any discrepancies to the appropriate personnel
  - P7 Correctly line up the equipment
  - P8 Ensure that the appropriate personnel know that start-up is imminent
  - P9 Correctly start up equipment in accordance with specified procedures
  - P10 Achieve operational conditions at each stage before proceeding to the next
  - P11 Achieve normal operating conditions within required timescale
  - P12 Inform relevant personnel when start-up is complete
  - P13 Complete all relevant documentation
  - P14 Identify abnormal conditions
  - P15 Inform the appropriate personnel about the impact the abnormality
  - P16 Work safely in accordance with operational requirements

## Knowledge and understanding

*You need to know and understand:*

- K1 how to select, use and care for PPE
- K2 How to access relevant documentation and statutory legislation
- K3 The function of the equipment to be started in the operation of the plant and process
- K4 The properties of the material contained in the equipment
- K5 The potential hazards associated with checks and tests
- K6 The start-up and operating procedures for the equipment
- K7 The start-up over-ride procedures for the equipment
- K8 Line up and control systems as on process and instrumentation diagrams
- K9 Trip systems and logic sequences
- K10 The reasons for the defined sequence in the start-up and the consequences of not following it
- K11 The reasons for timing of each stage
- K12 The reasons for operating equipment to specified conditions
- K13 The possible process excursions and acceptable tolerances
- K14 The normal range of operating conditions and acceptable conditions
- K15 The reasons for achieving conditions within a given timescale
- K16 The consequences of correct conditions not being achieved
- K17 Alarm systems
- K18 Operating conditions and parameters
- K19 Who to contact in the event of any abnormal condition
- K20 The parameters to be measured, checked and the acceptable tolerances
- K21 The reasons for recording the equipment conditions
- K22 The nature and extent of information to be communicated
- K23 The appropriate selection and effective use of communication links between field operators and others
- K24 The importance of clarity and accuracy
- K25 The location of equipment records and methods of recording
- K26 How to identify abnormal conditions
- K27 The appropriate responses to alarm conditions including higher authority
- K28 The potential hazards during start-up and the actions to be taken
- K29 The consequences of delayed response to hazards
- K30 How to identify the need for appropriate assistance, the correct people and where to find them
- K31 The availability of standby equipment
- K32 The emergency procedures

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