
Overview

This unit is concerned with producing process outcomes by carrying out complex manual operations. It is suitable for process industries' personnel who have responsibility for complex manual operations at any stage of the process, including complex manual packaging.

This unit deals with the following:

1. Prepare for complex manual process operations
2. Control the outcomes of complex manual operations
3. Restore the manual process equipment and work area after use

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

Previous Version

Adapted from Unit D4 of Polymer Processing and Related Operations NOS – version November 2004. NB This unit is a tailored version of a Combined Working Practices unit produced by PINTOG, which was originally designated Unit 28.

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Performance criteria

You must be able to:

- P1 identify accurately the technical and production implications of the specifications to be met
- P2 select the correct equipment to achieve the specified outcomes and identify which configuration would be the most appropriate for safe and efficient operation
- P3 check and confirm that the equipment to be used has no obvious faults and defects and is supplied with the correct services for safe and effective operation
- P4 check and confirm that the materials for the operation meet the specifications
- P5 ensure the materials are ready for the operation in a safe and secure manner
- P6 use complex hand based techniques in a safe and effective manner
- P7 monitor the operation in line with standard operating procedures
- P8 recognise variations in the outcomes promptly and make adjustments as needed to optimise the achievement of specifications
- P9 identify the probable causes of any problems which occur promptly and take effective action to overcome the problem and achieve the required specification
- P10 seek immediate advice from specialist colleagues if problems cannot be solved by direct intervention
- P11 pass on outputs which meet the specification to the next stage in production safely discarding any which do not
- P12 meet production schedules and make economic use of materials and service
- P13 make sure that process documentation is kept up-to-date, accurate, complete and is stored effectively
- P14 follow the safety, health and environmental procedures for the operation
- P15 remove any residual and waste materials into suitable storage, handling them safely to avoid loss and contamination
- P16 clean any waste and contamination off the equipment and surrounding work area using specified cleaning materials and procedures
- P17 return any removable components to the correct storage locations after use
- P18 use the correct procedures to call for any equipment maintenance needed

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Knowledge and understanding

You need to know and understand:

- K1 what sorts of process equipment are used in manual operations
- K2 how to recognise possible faults and defects in equipment from their appearance, sound and smell
- K3 which symptoms indicate a problem that needs maintenance attention
- K4 which equipment adjustments and maintenance can be carried out by the operator and which need specialist attention
- K5 what procedures to follow to carry out basic maintenance of equipment, including replacement of components, lubrication, tightening of connections and cleaning
- K6 what precautions and procedures are followed in making equipment and system adjustments off-line and under operational condition; which sorts of adjustments are made off-line and which under operational conditions
- K7 what checks should be run through to make sure that equipment is fit for use and has no faults or defects
- K8 why equipment may need to be dismantled and cleaned after use
- K9 where equipment is kept
- K10 what materials are used in different processes
- K11 what happens to materials as they are processed
- K12 what hazards to people and the environment arise from mishandling and misprocessing materials
- K13 what precautions and procedures should be applied when handling materials at each stage of the process and in storage
- K14 what information is normally given in a process specification
- K15 where to get the specification for a given job
- K16 how to read and interpret a process specification
- K17 what level of control is possible with manual operations
- K18 what sort of adjustments can be made to ensure the right outcomes in manual operations
- K19 what safety standards apply to the process environment
- K20 what sorts of risks are present in a process environment
- K21 what risk control measures are in place and why it is important to comply with them
- K22 what personal protective equipment requirements are appropriate to different processing tasks
- K23 how to read and analyse relevant data in tables, printouts and schematics
- K24 what conventions are used in the process
- K25 what units of measurement are used and what they mean

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Additional Information

Glossary

Problems

Those you can deal with directly, those which require the assistance of another operator to solve, those which you need to report and seek specialist assistance, those with an obvious probable cause, those with two or more possible causes, those with no obvious cause

Equipment

Manual and powered tools

Specifications

Quantity, dimensions, quality

Action

Repair and completing remedial work

Materials

Residual materials that can be recycled, waste materials for disposal

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