
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 worksite operational requirements, procedures and safe working practices as they apply to you.

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Performance criteria

You must be able to:

- P1 Work safely at all times, complying with health and safety, environmental and other relevant **regulations, legislations and guidelines**
- P2 Identify accurately the technical and production implications of the **specifications** to be met
- P3 Select the correct **equipment** to achieve the specified outcomes and identify which configuration would be the most appropriate for safe and efficient operation
- P4 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
- P5 Check and confirm that the materials for the operation meet the **specifications**
- P6 Ensure the materials are ready for the operation in a safe and secure manner
- P7 Use complex hand based techniques in a safe and effective manner
- P8 Monitoring operation taking steps to deal with problems so that an optimum outcome is achieved and in line with standard operating procedures
- P9 Recognise variations in the outcomes promptly and make adjustments as needed to optimise the achievement of **specifications**
- P10 Identify the probable causes of any **problems** which occur promptly and take effective **action** to overcome the problem and achieve the required **specification**
- P11 Seek immediate advice from specialist colleagues if **problems** cannot be solved by direct intervention
- P12 Pass on outputs which meet the **specification** to the next stage in production safely discarding any which do not
- P13 Meet production schedules and make economic use of materials and service
- P14 Make sure that process documentation and records is kept up to date, accurate, complete and is stored effectively
- P15 Making sure that equipment is left in a suitable state after use
- P16 Remove any residual and waste **materials** into suitable storage, handling them safely to avoid loss and contamination
- P17 Clean any waste and contamination off the **equipment** and surrounding work area using specified cleaning materials and procedures
- P18 Return any removable components to the correct storage locations after use
- P19 Use the correct procedures to call for any equipment maintenance needed
- P20 Work safely at all times, complying with health and safety, environmental

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and other relevant **regulations, legislations and guidelines**

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Knowledge and understanding

You need to know and understand:

- K1 The specific organisational health, safety and environmental policies and other **regulations, legislation and guidelines** for your work area and why they are important
- K2 The different types potential **hazards**, how they can be minimised and the action to take in the event of a work area hazard
- K3 What the workplace procedures are for reporting potential **hazards** you are unable to deal with
- K4 When, which and how personal protective equipment should be used
- K5 The importance of checking equipment, how to do this and to whom you should report defects
- K6 What risks are associated with the working environment
- K7 What risk control measures are in place and how to comply with them
- K8 Where to find **work procedures** and production requirements and how to interpret these
- K9 What sort of documents are kept and how to complete them and the implications of not maintaining them accurately and legible
- K10 The importance of disposing of waste **materials** safely and how to do this
- K11 The sorts of **problems** that might occur and who you should report these to
- K12 The purpose and importance of **quality assurance** checks, and when and how these should be carried out
- K13 What sorts of process equipment are used in manual operations
- K14 How to recognise possible faults and defects in equipment from their appearance, sound and smell
- K15 Which symptoms indicate a **problem** that needs maintenance attention
- K16 Which equipment adjustments and maintenance can be carried out by the operator and which need specialist attention
- K17 What procedures to follow to carry out basic maintenance of equipment, including replacement of components, lubrication, tightening of connections and cleaning
- K18 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
- K19 What checks should be run through to make sure that equipment is fit for use and has no faults or defects
- K20 Why equipment may need to be dismantled and cleaned after use
- K21 Where equipment is kept
- K22 What materials are used in different processes
- K23 What happens to materials as they are processed
- K24 What hazards to people and the environment arise from mishandling and

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misprocessing materials

- K25 What precautions and procedures should be applied when handling materials at each stage of the process and in storage
- K26 What information is normally given in a process specification
- K27 Where to get the specification for a given job
- K28 How to read and interpret a process specification
- K29 What level of control is possible with manual operations
- K30 What sort of adjustments can be made to ensure the right outcomes in manual operations
- K31 How to read and analyse relevant data in tables, printouts and schematics
- K32 What conventions are used in the process
- K33 What units of measurement are used and what they mean

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Additional Information

Glossary

1. **Regulations/Legislation/Guidelines:** organisational procedures and guidelines, Work place Policies, Health, safety and environmental requirements and regulations relevant to the work and work area being carried out
2. **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
3. **Hazards:** and control measures: waste, spillage, obstructions use of tools, hazardous materials. personal protective equipment, equipment, lifting and moving items
4. **Materials:** residual materials that can be recycled, waste materials for disposal
5. **Operating Procedures/Work Procedures:** Work instructions, Method Statements, Standard Operating Procedures
6. **Equipment:** manual and powered tools
7. **Specifications:** quantity, dimensions, quality
8. **Quality assurance** that will be determined by: The nature of the equipment being maintained, company policy, company national or international standards
9. **Documentation:** Records, analysis sheets, report sheets, log book

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