

COGPPRO12

Unit 12: Start Up and Maintain a Machine-Based Production Process within Polymer Processing and Related Operations



Overview

This unit is for those with responsibility for starting up and running a machine-based production process to achieve production requirements. It is suitable for process operators who work within an organisational context that provides them with procedures to work to and criteria for making decisions and taking actions. The process operation may relate to continuous or batch production and may be a primary or secondary operation.

This unit deals with the following:

1. Start up and run the production process
2. Having a sound knowledge of the materials for processing operation
3. Monitor and maintain the production process

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, legislation and guidelines** in accordance with company procedure
 - P2 Start up the production process in accordance with organisational procedures
 - P3 Follow appropriate **work methods and techniques** to achieve production
 - P4 Identifying and taking appropriate actions to deal with start up problems and emergencies and take **remedial action**
 - P5 Identify types of materials and their characteristics in preparation for processing operations
 - P6 Processing materials effectively and efficiently
 - P7 Identify non-conforming materials and products and take **appropriate action**
 - P8 Safely dispose of waste materials safely in accordance with organisational and legal requirements
 - P9 Follow organisational procedures in the event of an **emergency**
 - P10 Ensuring the consistency and continuity of material supplies to the process operation to meet **production requirements**
 - P11 Adjust material temperature settings to be within set parameters and melt specification in accordance with the manufacturers recommended specifications
 - P12 Where to locate and interpret information relating to the type of material and any significant arrangements from the material safety data sheet
 - P13 Identify non-conforming materials and take prompt action to isolate and report them to the appropriate person
 - P14 Carry out production processes to minimise downtime and wastage
 - P15 Carrying out and complete **quality assurance checks** in accordance with organisational procedures
 - P16 Identify processing **faults** and take appropriate remedial action to deal with these
 - P17 Identify equipment and service defects and promptly report these to the appropriate person
 - P18 Forward output to the next operation to meet **production requirements** meeting requirements for quantity, quality and rate of output
 - P19 Complete documentation required for monitoring production, quality and product identification accurately and legibly in accordance with organisational requirements
 - P20 Deal with **problems** within your responsibility and report any you cannot deal with in accordance with company procedures

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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 records 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 How to interpret and use specifications
- K13 The function of different processing equipment used and how these interact in the production process
- K14 What services are required to maintain process operations, the implications of variances in **supply** and what actions to take in response to these
- K15 The different types of materials required for the process operation, their properties and handling characteristics
- K16 Where to locate and interpret information relating to the type of material and any significant arrangements from the material safety data sheet
- K17 The running conditions required for the process operation
- K18 How to operate and control the processing equipment to achieve and maintain the required running conditions
- K19 Which **work methods** to use to achieve production requirements
- K20 The importance of achieving production requirements and the consequences of not doing so
- K21 The sorts of processing problems that might occur and the appropriate remedial actions to take in response to these
- K22 The importance of identifying non-conforming materials and products and the actions to take in
- K23 What material loading systems are used for the processing operation

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- and how to use these effectively and safely
- K24 What the production schedule is and the implications of failing to meet timescales and deadlines
- K25 The effects of downtime and wastage and how these can be minimised
- K26 The purpose and importance of **quality assurance** checks, and when and how these should be carried out
- K27 The purpose of different records and the implications of not maintaining them effectively
- K28 What the contingency procedures for responding to an accident, fire, loss of power or equipment breakdown are
- K29 The different types of documentation that is required

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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:** services, equipment, materials, products; incomplete procedures, imprecise instructions, inaccurate information, damage, wear, malfunction
3. **Hazards** and control measures: waste, spillage, obstructions, hazardous materials. personal protective equipment
4. **Materials:** raw materials, part-processed materials, re-processed materials, finished products, process related materials, e.g. packaging, processing equipment and waste materials
5. **Operating Procedures/Work Procedures:** Work instructions, Method Statements, Standard Operating Procedures
6. **Work methods and techniques:** material handling, operation and control of equipment, handling products
7. **Production requirements:** product specification, process specification, production schedule, rate of production, quantity of output
8. **Remedial actions:** implementing procedures to correct faults within the limits of your authority, requesting specialist assistance
9. **Appropriate action:** move them to the designated isolation area, report to the appropriate person
10. **Emergency:** accident, fire, loss of power, equipment breakdown, hazardous spillage
11. **Supply:** manual, mechanical
12. **Quality assurance:** programmed checks, spot checks
13. **Faults** to include both of the following; specified tolerances, outside specified tolerances
14. Types of **Materials:** Identify type of material being processed and their properties. Locate and interpret information relating to materials being processed including any significant hazards or special arrangements

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from the material safety data sheet. Identify correct melt temperatures

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