

COGPPRO47

Unit 47: Rectify Process Problems within Polymer Processing and Related Operations



Overview

This unit is for those with responsibility for rectifying process quality problems to ensure that processes run in an optimum manner. It is suitable for process industries personnel who have responsibility for rectifying process quality problems. The unit demands effective problem solving abilities.

This unit deals with the following:

1. Determine the nature and significance of process quality problems
2. Decide on and take remedial actions to deal with process quality problems
3. Assess the effectiveness of chosen solutions
4. Having sound knowledge of materials for process operation

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 promptly when a **problem** has occurred
 - P3 Gather enough information to be able to identify the nature and sort of problem that has occurred
 - P4 Use the correct information to **decide** whether the problem needs immediate action or whether it can be allowed to continue until a more convenient time before dealing with it
 - P5 Use the correct information to **decide** on the potential cause of the problem
 - P6 Where to locate and interpret information relating to the type of material and any significant arrangements from the material safety data sheet
 - P7 Assess **materials** being processed and their basic characteristics
 - P8 Adjust material temperature settings to be within set parameters and melt specification in accordance with the manufacturer's recommendations
 - P9 Use the correct information to **decide** whether the assistance of others will be needed to deal with the problem
 - P10 Use all available information to help decide what **action** to take
 - P11 Make decisions and set them in motion without any unnecessary delay
 - P12 Choose a course of **action** which will safely limit unwanted effects on the system and process
 - P13 Modify the actions taken if the **problem** changes or they do not work as intended
 - P14 Provide those carrying out remedial **actions** with enough detail to ensure that the problem is dealt with fully and effectively
 - P15 Maintain safety standards at all times
 - P16 Gather sufficient information to allow you to accurately monitor how effective a **solution** is in dealing with the **problem**
 - P17 Carry out assessments within a sensible timescale according to how quickly the effects of the **solution** should be apparent
 - P18 Continue with assessments until the **problem** has been fully resolved
 - P19 Use the correct data in judging the effectiveness of the **solution**
 - P20 Keep accurate and complete records
 - P21 Identify and report any information arising during monitoring which may affect the diagnosis and response to similar **problems** in the future

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Knowledge and understanding

You need to know and understand:

- K1 The specific organisational health, safety and environmental policies and safe working practices or statutory legislation for your work area and the work you are carrying out and why they are important
- K2 What the main functions of process equipment and systems are
- K3 How the various parts of a system interact
- K4 What types of services are used by process equipment and systems
- K5 What **materials** are used in the processes
- K6 Why it is important to understand the type of **material** being processed and their characteristics and properties
- K7 What working practices and authorisations apply and where to find out about these
- K8 What lines of communication and command should be followed in a given situation
- K9 How to investigate the causes of a **problem**
- K10 What sorts of records are kept and how to complete them
- K11 What process control involves
- K12 What sorts of **problems** can arise with a process and what early warning signs there are
- K13 What interventions should be applied and when and by whom
- K14 What level of monitoring is required by your process
- K15 Why it is important to follow specified monitoring procedures
- K16 What safety standards apply to the process environment
- K17 What risks are present in a process environment
- K18 What risk control measures are in place and why it is important to comply with them
- K19 What personal protective equipment requirements are appropriate to the processing tasks

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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:** faults or malfunctioning of the process equipment or system, faults or malfunctioning of the control system for the process, faults in the materials supplied to the process, deviations from process quality specifications, departure of process parameters from expected norms
3. **Decide:** problems you can deal with directly, problems which require the assistance of others, problems which must be notified to a superior or specialist colleague
4. **Actions and Solutions:** making system adjustments and changes yourself, seeking the assistance of others with particular expertise, reporting the problem to a superior
5. **Materials:** Identify material being processed. Respond to problems associated with the process flow. Rectify and make adjustments to material temperatures in accordance with the manufactures specifications or recommendations

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