

COGPOLY33

Evaluate and adjust manual operations



Overview

This unit is about evaluating and adjusting manual operations to optimise production. It covers non-routine adjustments made to manual operations to improve quality of output and/or rate of production. It is suitable for process industries' personnel who work within an organisational context which requires them to achieve clearly defined specifications.

This unit deals with the following:

1. Monitor and evaluate manual operations
2. Adjust manual operations to optimise production

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 D5 of Polymer Processing and Related Operations NOS – version November 2004.

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Performance criteria

You must be able to:

- P1 monitor manual operations using appropriate sources of information
- P2 identify variances over a period of time sufficient to identify patterns and levels of variance
- P3 analyse output patterns against specifications to clarify the nature of the problem
- P4 investigate the problem thoroughly to identify the likely cause of the problem
- P5 promptly report any equipment malfunction or failure to the appropriate person
- P6 carry out prescribed quality checks to assess deviations from the product specification
- P7 seek advice from others when you are uncertain about the cause of deviations or the appropriate corrective actions
- P8 record all test results and assessments in sufficient detail to enable decisions to be made by interested parties
- P9 identify the cause and effects of deviations from specification
- P10 adjust the operations in the correct sequence and at the appropriate stage in the process to achieve the required specifications
- P11 adjust the operation as necessary, to optimise the efficiency and effectiveness of the production process
- P12 record any changes made to the operations and take appropriate action to amend the processing specification
- P13 record information about the nature and effects of deviations, and the remedial actions taken, in the required format
- P14 pass information to the appropriate people within the specified timescale in accordance with organisational procedures

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Knowledge and understanding

You need to know and understand:

- K1 what processing operations are required to produce the product
- K2 the sequence of processing operations required
- K3 the importance of monitoring operations to identify variances and how and when this should be done
- K4 how to collect and collate data from different sources
- K5 the importance of monitoring operations over a period of time and the implications of reaching conclusions on data collected on a single occasion
- K6 what length of monitoring time is appropriate for the process operations
- K7 how to analyse output against specifications
- K8 how to differentiate between variances caused by equipment malfunction or failure, those caused by non-conforming materials and those caused by processing problems
- K9 what quality checks should be carried out and what the results will tell you about the cause and effects of deviations from the product specification
- K10 who to consult when you are uncertain of the cause and effects of deviations from specification
- K11 how to present test results and assessments to facilitate decision making about the appropriate corrective actions to take
- K12 the importance of adjusting operations to achieve the required specifications and how to do this
- K13 the safety limits that apply to different processing operations and the risks associated with making adjustments outside of these limits
- K14 the importance of following the prescribed sequence for adjusting operations and the implications of making adjustments out of sequence
- K15 the circumstances when processing specifications need to be amended to show changes made to processing operations and the organisational procedures for doing this
- K16 what working practices and authorisations apply
- K17 what lines of communication and command should be followed in a given situation
- K18 why it is important to work within the 'rules' of the organisation
- K19 what sorts of records are kept and how to complete them
- K20 the purpose of different records and the implications of not maintaining them effectively
- K21 what agreed workplace health and safety procedures relate to controlling risks to Health and Safety in the process environment
- K22 the specific organisational Health and Safety procedures for evaluating and adjusting manual operations
- K23 what safe working practices apply to your own job role in evaluating and

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- adjusting manual processing operations
- K24 what safe operating procedures apply to the different processing equipment used in manual operations

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Additional Information

Glossary

Monitor

Equipment performance, materials performance, quality of output, quantity of output

Sources

Visual inspections of products, equipment monitoring devices, test outcomes

Variance

Quality of output, production rate

Causes of variances

equipment malfunction or failure, non- conforming materials, processing problems

Others

Co-workers, supervisor/line manager, technical specialists
Specification
Product, production

Actions

Reporting changes to the person responsible for maintaining specifications,
making changes to specifications within the limits of your authority

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