
Overview

This unit covers the competences required for applying mistake/error proofing (Poka Yoke), which is a method of making an activity 'foolproof'. It involves applying the principles and procedures of mistake/error proofing to the chosen activity, to enable worksheets to be produced for the activity, that identify the problem, evaluate any actions to be taken, and indicate the benefits to be gained. Typically, worksheets would focus on the description of the mistake/error identified, the containment action taken, the root cause of the mistake/error and the permanent corrective action to be taken. You will be required to conduct trials on the suggested improvements, which will include determining their effectiveness, cost and complexity.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems with the activities that you cannot solve, or that are outside your responsibility, to the relevant authority. You need to ensure that all necessary job/task documentation and analysed data is completed accurately and legibly. You will be expected to take full responsibility for your own actions within the activity, and for the quality and accuracy of the work that you produce.

Your underpinning knowledge will provide a good understanding of mistake/error proofing, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and application of mistake/error proofing, in adequate depth to provide a sound basis for carrying out the activities to the required criteria.

Applying safe working practices will be a key issue throughout.

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Applying mistake/error proofing (Poka Yoke)

Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
- P2 use information and data to select and confirm a suitable process on which to carry out mistake/error proofing activity
- P3 apply the mistake/error proofing process to the chosen activity
- P4 use appropriate techniques to analyse the data received, and draw valid conclusions
- P5 evaluate recommendations and produce worksheets for the activity that identify the problem and actions to be taken
- P6 determine suitable solutions, and conduct agreed trials to measure the effectiveness of the solution
- P7 confirm and co-ordinate the implementation of the optimum solution
- P8 measure and document the results

Knowledge and understanding

You need to know and understand:

- K1 how to define a mistake/error proofing activity, and the benefits of carrying this out
- K2 the difference and benefits between mistake/error proofing and prevention and detection
- K3 the selection criteria used to determine a suitable product or process on which to carry out the mistake/error proofing activity
- K4 how mistake/error proofing can lead to zero defects
- K5 the relationship between errors and defects
- K6 the different types and range of mistakes
- K7 how defects originate in products or processes
- K8 how the role of source inspection contributes to the reduction of defects
- K9 the application of mistake/error proofing (Poka Yoke) tools (such as 'cause and effect', and the 5 'why's)
- K10 the type of mistake/error proofing documentation, and the information it should contain
- K11 the analysis and charting methodology used for mistake/error proofing
- K12 the financial implications of mistake/error proofing projects
- K13 the relationship between mistake/error proofing and other continuous improvement processes (such as workplace organisation 5S/5C, quick changeovers, cellular manufacturing, total productive maintenance, structured problem solving and visual management)
- K14 how to undertake trials and measure the effectiveness of mistake/error proofing projects
- K15 the different types and range of mistake proofing devices used
- K16 the roles and responsibilities of individuals within a mistake/error proofing team (including facilitator, timekeeper, scribe)
- K17 the extent of your own authority within the activity, and to whom you should report in the event of problems that you cannot resolve

Additional Information

Scope/range related to performance criteria

You must be able to:

1. identify the benefits of mistake/error proofing in terms of:
 - 1.1. improved quality/compliance (such as ISO9001)
 - 1.2. reduced costs
 - 1.3. delivery or service
2. create a worksheet of the mistake/error proofing activity, identifying:
 - 2.1. the description of the mistake/error identified
 - 2.2. the containment action taken
 - 2.3. the root cause of the mistake/error
 - 2.4. the permanent corrective action to be taken
3. identify suitable solutions and determine their:
 - 3.1. effectiveness
 - 3.2. cost
 - 3.3. complexity

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Applying mistake/error proofing (Poka Yoke)

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