

DESIGN SYSTEMS, INC.

Manufacturing Engineering & Consulting

Manufacturing IT Solutions

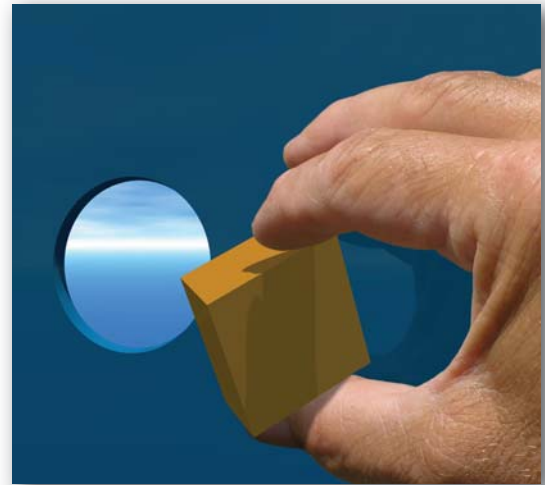
Error Proofing Solution Factsheet

Overview

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Error Proofing (or Poka-Yoke) is a remedy for one of the '7 wastes of lean manufacturing,' specifically defects. Quality errors that cause defects require rework or replacement and utilize additional resources and materials that ultimately lead to additional costs and potential loss in customers.

Early on in the development of lean manufacturing processes it was identified that defects, amongst all the types of waste, are the most challenging to control with process design alone. Instead, many tools and techniques have been developed over time to help eliminate this source of waste from the manufacturing process.



Breakdown

Manufacturing IT offers many ways to implement Error Proofing tools within the manufacturing process. From instructional information and to worker guidance through conformity checks, these tools are designed to integrate into the existing process.

The effects of Error Proofing can be measured in real terms by reduction in the occurrence of defects and reduction in rework activities and the disturbance this brings to the manufacturing line. These outcomes boost efficiency and ultimately increase profitability.

Reduced production disturbance as a result of rework leads to a shorter manufacturing process time overall and can therefore help with the adherence to delivery schedules.

Our Solution

Error Proofing is part of our new line of Manufacturing IT Solutions. Built on proven, world class technology, these solutions offer off-the-shelf functionality designed to target the typical challenges encountered in manufacturing.

The technologies are highly scalable, cost effective and can be seamlessly integrated into new or existing processes with great ease.

Our Error Proofing tools can help reduce waste in the form of defects and increase productivity in the modern manufacturing facility.

"BOTTOM-LINE" RESULTS

- Reduced waste due to defects
- Increased quality
- Increased first-time-correct ratio
- Reduced rework activities

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ERROR PROOFING



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Work Instruction Screens

Providing process guidance through graphics and video

The Work Instruction Screen can show any mixture of text, graphics or even videos in a user defined matrix. The content will automatically reflect the operations to be carried out on the current work piece.



eChecklist Screens

Text based work instruction list with operator feedback

The eChecklist displays a list of operations (work steps) to be carried out for the current work-piece. Instructions can be configured to be automatically acknowledged, require a simple confirmation, require input of process data, barcode scan etc. The data collected is stored with the work piece for the life of the record.

Material Checks

Confirm material compliance or record serial numbers

Work steps configured to collect process data such as material codes or serial numbers, can be set up to test results instantly. These results can help prevent the completion of operations, forcing inline corrective action in order to prevent mistakes from leaving the work station.



Pick-to-Light

Providing a high level of process security

For rapid retrieval of target parts and optimal process security, the pick-to-light solution can be deployed. This feature can be configured to provide light only, light and acknowledge button or light and pick detection (for example, light curtain).

Kitting

Electronic delivery of picking and kitting instructions

By delivering ready-made kits of parts to the production line operations, on an operation-by-operation basis, manufacturers can avoid the possibility of mistakes being made under the time critical environment of the assembly shop.



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