Operational excellence

Poka-Yoke and Error-Proofing

One day to design error-proofing devices that prevent the mistake instead of relying on the operator's attention. Participants analyse the human errors behind defects at your site, choose the right type of device, from a jig to a sensor, and organise its regular verification. The workshop takes place on a real workstation and produces simple solutions that your maintenance team can build.

Duration : 1 day

Objectives

1. Explain the difference between an error and a defect, and why human inspection is not enough to stop defects
2. Identify the recurring errors of a workstation: omission, inversion, wrong part, wrong setting, skipped step
3. Choose a contact, fixed-value or motion-step device, with a shutdown or alert function
4. Design simple solutions with the operators, methods and maintenance
5. Set up periodic verification of the devices and the reaction in case of failure

Programme

Day 1 — morning

• Human error and defect: origins, typology, limits of visual inspection

• Principles of poka-yoke: preventing the error, or detecting it before it becomes a defect

• Detection methods: contact, fixed value, motion step; shutdown, blocking or alert functions

• Examples in assembly, packing, labelling and machine loading

Day 1 — afternoon (workshop)

• Choosing workstations: complaints, scrap, process FMEA, special characteristics

• Workshop: on a real workstation at your site, analysis of possible errors and sketching of devices

• Verifying devices: good and bad reference parts, frequency, recording, reaction

• Integration into the workstation standard and the control plan

• Knowledge test and presentation of the solutions to supervisors

Teaching methods

• Observation of a real workstation with the operators who work there

• Group search for solutions with production, maintenance and methods

• A bank of examples of mechanical, optical and software devices

• Quick mock-ups of solutions in cardboard, jig or visual marker

• Presentation of the selected solutions to supervisors at the end of the day

Assessment and documents

Knowledge test and end-of-course evaluation at D+1; the solutions proposed for the workstation studied are presented and discussed at the end of the workshop. Numbered certificate, verifiable online, for each participant; training report and device sheets handed to the company.

Bilingual materials for every participant; each classroom course comes with its digital twin on OmniLearn.

Good to know

Devices are often chosen from a process FMEA: see « Product and Process FMEA ». To fix the right method at the workstation, the course « Standardisation and Work Instructions » complements this day.

Practical information

Duration	1 day
Audience	Methods, maintenance, quality, production engineering, team leaders and operators
Prerequisites	No prerequisites
Group size	Groups of 6 to 12 participants, in-company
Format	In-company, face to face on your site
Language	French, Darija or English; bilingual materials
Funding	OFPPT special training contracts (TFP), GIAC, Maroc PME: we prepare the applications with you, at no extra cost.
Programme customisation	Programme adapted to your procedures, your equipment and your audience

Frequently asked questions

Does an error-proofing device require a large investment?

Rarely. Many effective devices are jig shapes, stops or markers. Sensors and automatic checks come later, when the risk justifies them. The workshop looks for simple solutions first.

How do we know a device still works?

By a periodic verification with a bad reference part, which must be rejected. The result is recorded, and a reaction is defined if the device does not respond. This verification is part of the control plan.

Does poka-yoke apply in agri-food?

Yes: checking the right packaging or label by barcode reading to prevent an allergen error, checking the presence of the cap, locking a recipe. The principles are the same as in assembly.

Who should attend?

Methods, maintenance, quality and operators or team leaders from the workstations concerned. The best ideas for devices often come from the people who perform the task every day.