

5.b Define pre-emptive maintenance protocols and early diagnostic maintenance protocols

Functional Area: QA

Assessment criteria

- LO5b.2: Diagnoses the condition of the machine elements, applying the techniques of monitoring, measurement and analysis described in the pre-emptive and / or early diagnostic procedure
- Uses the diagnostic techniques corresponding to the different elements of the mechatronic system.

Knowledge

- Techniques for identifying the damaged part.
- Analysis of typical defects in mechatronic systems.
- Symptoms of malfunctioning.
- Causes of malfunctioning.
- Measurement and diagnostic equipment.
- Program monitoring
- Intelligent sensor for data acquisition (IIOT)

Skills

- Selects the technical documentation related to the item being analysed.
- Identifies normal and abnormal wear.
- Performs the measurement of the characteristic parameters of the element.
- Compare the actual measurements with the originals on the map, user manual or technical data sheets.
- Uses appropriate measuring elements.
- Provides solutions to prevent or minimize breakdowns.

Transferable skills

- Understand descriptions, specifications, manuals and other info typical of the profession in English and prepare them for the next phase of project/Customer in understandable manner.
- Ability to communicate effectively, orally and in writing with "engineering" community and with

“society”, extrapolating concepts for “non-experts) through an abstraction approach.

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Functional Area: QA

Assessment criteria

LO5b.3: Diagnose breakdowns and malfunctions in mechatronic systems, linking the malfunction to the cause.

- Troubleshoot malfunctions, develop action plans and hypotheses on possible causes.
- Prepares breakdown records.

Knowledge

- Interpretation of technical documentation of the installation.
- Identification of the symptoms of the breakdown.
- Intervention procedures.
- Measurement of characteristic parameters.
- Techniques for troubleshooting.
- Diagnostic methods.

Skills

- Obtain information from the system technical documentation.
- Relates the symptoms of dysfunction to their effects.
- Develop an intervention procedure for the localization of the dysfunction.
- Performs measurements of the characteristic parameters of the installation.
- Hypotheses of the possible causes of the dysfunction or malfunction.
- Isolates the section of the system that causes the malfunction or malfunction.
- Identifies the element that causes the malfunction or the dysfunction.
- Recognizes points that could be at fault.
- Document the process followed in the location of malfunctions and malfunctions.

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