ChecklistGuro

Predictive Maintenance (PdM) Checklist

Asset Identification & Prioritization

Ensuring accurate asset identification, classification, and prioritization based on criticality and risk.

Asset ID

Enter a number...

Asset Name/Description

Write something...

Asset Category

- [ ] Motor
- [ ] Pump
- [ ] Gearbox
- [ ] Compressor
- [ ] Bearing
- [ ] Other

Criticality Score (1-5, 1=Lowest, 5=Highest)

Enter a number...

Justification for Criticality Score

Write something...

Maintenance Strategy (Initial)

- [ ] Run-to-Failure
- [ ] Preventative
- [ ] Predictive
- [ ] Reliability-Centered

Date of Last Inspection/Assessment

Enter date...

Estimated Replacement Cost

Enter a number...

Associated Hazards (if any)

- [ ] Environmental
- [ ] Safety
- [ ] Production Downtime
- [ ] Financial
- [ ] None

Data Acquisition & Integration

Collecting relevant data from various sources (sensors, CMMS, historical records) and integrating it for analysis.

Data Sources Identified?

- [ ] Yes
- [ ] No
- [ ] In Progress

Which data sources are currently integrated?

- [ ] Vibration Sensors
- [ ] Temperature Sensors
- [ ] Pressure Sensors
- [ ] Oil Analysis Reports
- [ ] Ultrasonic Testing Data
- [ ] PLC Data (SCADA)
- [ ] CMMS/EAM System
- [ ] Historical Maintenance Records

Number of connected sensors

Enter a number...

Last Data Integration Validation Date

Enter date...

Data Integration Challenges

Write something...

Data Flow Diagram

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Data Transmission Protocol

- [ ] Modbus
- [ ] OPC UA
- [ ] MQTT
- [ ] Ethernet/IP
- [ ] Other

Data Security Measures in Place

Write something...

Condition Monitoring Techniques

Implementation and verification of appropriate condition monitoring techniques (vibration analysis, thermography, oil analysis, ultrasonic testing, etc.).

Selected Condition Monitoring Techniques

- [ ] Vibration Analysis
- [ ] Thermography
- [ ] Oil Analysis
- [ ] Ultrasonic Testing
- [ ] Motor Current Signature Analysis (MCSA)
- [ ] Infrared Inspection
- [ ] Acoustic Emission Testing

Vibration Analysis - Frequency Range (Hz)

Enter a number...

Thermography - Camera Resolution (MP)

Enter a number...

Oil Analysis - Sample Volume (mL)

Enter a number...

Last Oil Analysis Date

Enter date...

Time of Ultrasonic Measurement

Enter time...

Notes on Condition Monitoring Results

Write something...

Upload Thermography Image

Upload File

Data Analysis & Modeling

Analyzing collected data to identify trends, anomalies, and predict potential failures. Includes model validation and refinement.

Vibration Analysis - RMS Amplitude (mm/s)

Enter a number...

Oil Analysis - Viscosity Index

Enter a number...

Thermography - Max Surface Temperature (°C)

Enter a number...

Anomaly Detected (Vibration)?

- [ ] Yes
- [ ] No
- [ ] Unsure

Description of Observed Anomalies

Write something...

Date of Anomaly Detection

Enter date...

Model Performance Confidence Level

- [ ] High
- [ ] Medium
- [ ] Low

Remaining Useful Life (RUL) Estimate (Units of Operation)

Enter a number...

Upload Spectral Analysis Graph (Vibration)

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Maintenance Planning & Scheduling

Developing and executing maintenance plans based on predictive insights, optimizing maintenance intervals and resource allocation.

Predicted Remaining Useful Life (RUL) - Component X (in days)

Enter a number...

Scheduled Maintenance Start Date - Component Y

Enter date...

Estimated Maintenance Duration - Component Z

Enter time...

Maintenance Type (Based on PdM Prediction)

- [ ] Routine Inspection
- [ ] Lubrication
- [ ] Parts Replacement
- [ ] Repair
- [ ] Other (Specify)

Detailed Maintenance Procedure Notes

Write something...

Required Skills/Personnel

- [ ] Mechanical
- [ ] Electrical
- [ ] Instrumentation
- [ ] Lubrication Specialist
- [ ] Welding

Supporting Documents (e.g., parts list, diagrams)

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Work Order Priority (Based on PdM)

- [ ] Critical
- [ ] High
- [ ] Medium
- [ ] Low

Reporting & Communication

Establishing clear reporting channels to communicate predictive maintenance findings to relevant stakeholders and track program effectiveness.

Number of PdM Reports Generated Per Month

Enter a number...

Report Distribution Method

- [ ] Email
- [ ] CMMS System
- [ ] Shared Drive
- [ ] Printed Report

Date of Last Report Review with Stakeholders

Enter date...

Summary of Stakeholder Feedback on Last Report

Write something...

Which stakeholders receive the PdM Reports?

- [ ] Production Manager
- [ ] Maintenance Supervisor
- [ ] Engineering Team
- [ ] Plant Manager

Communication Frequency for Critical Findings

- [ ] Immediately
- [ ] Daily
- [ ] Weekly

Example of a Typical PdM Report

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Program Review & Continuous Improvement

Regularly reviewing the PdM program's performance, identifying areas for improvement, and adapting strategies based on evolving needs.

Number of Assets Covered by PdM

Enter a number...

Number of Predicted Failures Avoided (estimated)

Enter a number...

Overall PdM Program Cost Savings (estimated)

Enter a number...

Summary of PdM Program Performance Trends (past review period)

Write something...

Areas for Improvement Identified

- [ ] Data Quality
- [ ] Sensor Coverage
- [ ] Algorithm Accuracy
- [ ] Maintenance Team Training
- [ ] Integration with CMMS
- [ ] Other

Action Items & Assigned Owners (for addressing identified areas for improvement)

Write something...

Date of Next Program Review

Enter date...

Overall PdM Program Effectiveness (Rating Scale)

- [ ] Very Poor
- [ ] Poor
- [ ] Fair
- [ ] Good
- [ ] Excellent

Recommendations for future PdM expansion or refinement

Write something...

Safety & Compliance

Ensuring all PdM activities adhere to safety regulations, environmental standards, and relevant compliance requirements.

Safety Training Completion (PdM Personnel)

- [ ] Completed
- [ ] In Progress
- [ ] Not Started

Permit to Work Compliance Score (Scale 1-10)

Enter a number...

PPE Usage Verification (Routine Inspection)

- [ ] Compliant
- [ ] Minor Deviation
- [ ] Significant Deviation

Last Safety Audit Date

Enter date...

Record of Near Misses/Safety Incidents related to PdM activities

Write something...

Compliance with Environmental Regulations (e.g., waste disposal)

- [ ] Compliant
- [ ] Minor Deviation
- [ ] Significant Deviation

Documentation of Hazardous Material Handling Procedures (if applicable)

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Name of designated Safety Officer for PdM

Write something...