



Total Productive Maintenance (TPM)

- **Enhancing Equipment Efficiency & Workplace Productivity**

Introduction to TPM

- Definition of TPM

TPM is a company-wide maintenance approach that increases productivity by involving all employees in maintaining equipment and improving processes.

- Origin of TPM – Japan (Nippon Denso)
- Objective: Zero Breakdowns, Zero Defects, Zero Accidents



Why TPM is Important?

- Increased Equipment Reliability
- Higher Productivity
- Employee Involvement
- Reduction in Maintenance Costs



TPM Pillars

1. Autonomous Maintenance
2. Planned Maintenance
3. Quality Maintenance
4. Focused Improvement (Kaizen)
5. Early Equipment Management
6. Training & Education
7. Safety, Health, Environment
8. Office TPM



Pillar 1 - Autonomous Maintenance

- Operator responsibility
- Daily checks and cleaning
- Benefits: Early detection of issues



Pillar 2 - Planned Maintenance



- Scheduled repairs
- Based on equipment history
- Reduces emergency downtime

Pillar 3 - Quality Maintenance

- Preventing defects
- Root cause analysis (RCA)
- Use of tools like Poka

Yoke



TOTAL PRODUCTIVE
MAINTENANCE

Pillar 4 - Focused Improvement

- Small group improvement activities
- Continuous improvement (Kaizen)
- Involving cross-functional teams



Pillar 5 - Early Equipment Management

TOTAL PRODUCTIVE MAINTENANCE



- Design for reliability
- Feedback from operators
- FMEA integration

Pillar 6 - Training and Education

- Skill development
- Multi-skilling of operators
- TPM awareness sessions



Pillar 7 - Safety, Health & Environment

- Zero accidents
- Compliance with EHS standards
- Safe working procedures



Pillar 8 - Office TPM

- Process improvement in admin functions
- Time & cost reduction
- Improving documentation flow

TOTAL PRODUCTIVE
MAINTENANCE



Key Metrics in TPM

- OEE (Overall Equipment Effectiveness):
 - Availability
 - Performance
 - Quality
- MTTR, MTBF



TPM Implementation Roadmap

- 1. Management Commitment**
- 2. Awareness Training**
- 3. Pilot Project**
- 4. Formation of TPM Teams**
- 5. Roll-out Plan**



Challenges & Solutions



- Resistance to change
- Lack of training
- Continuous monitoring and motivation

Summary

- TPM = People + Process +
Equipment
- Long-term reliability and
efficiency



Thank You

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