



Total Productive Maintenance

Asadullah Khan

email: asad@asadkhan.com

<http://www.asadkhan.com>



Mind Set

- ✍ Preventive Maintenance
- ✍ Productive Maintenance
- ✍ Total Productive Maintenance



Productive Maintenance

- ✍ Preventive Maintenance
- ✍ Corrective Maintenance
- ✍ Maintenance Prevention
- ✍ Break Down Maintenance



Features and Aims

- ✍ Autonomous maintenance activity
- ✍ Bring efficiency to equipment
- ✍ Improvement
 - ✍ In equipment structure
 - ✍ The way employees work
 - ✍ Company constitution



8 steps promoting TPM

- ✍ Improvement activities to bring efficiency to equipment
- ✍ Establish operator's autonomous maintenance system
- ✍ Establish planned maintenance system
- ✍ Establish Technical education



8 steps

- ✍ Deploy Maintenance prevention
- ✍ Establish quality maintenance system
- ✍ Make system to make indirect administrative division more efficient
- ✍ Create safe and hygienic environment

7 major losses and their remedies

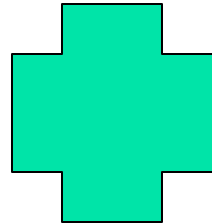


- ✍ Loss due to failure
- ✍ Loss due to setup/adjustment
- ✍ Loss related to cutter
- ✍ Loss in start-up
- ✍ Loss due to minor stoppage
- ✍ Loss due to slow down in speed
- ✍ Loss due to reworks

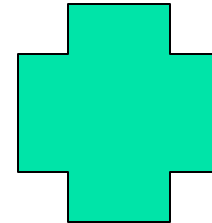


Overall Efficiency

**Time Ratio
of Operation**



**Performance
ratio
of Operation**



**Non-Defect
Ratio**

7 Steps for Autonomous Maintenance



- ✍ Early Cleaning
- ✍ Eliminate root causes of dirtiness and make places cleanable
- ✍ Prepare and Implement standards
- ✍ Thorough inspection
- ✍ Voluntary inspection
- ✍ Operation and Maintenance
- ✍ Thorough voluntary control