

# **SNS COLLEGE OF TECHNOLOGY**

(An Autonomous Institution)

COIMBATORE-35.



- Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

## **DEPARTMENT OF AUTOMOBILE ENGINEERING**

### **COURSE NAME : 19AUZ405 – LEAN MANUFACTURING**

**IV YEAR / VII SEMESTER**

**Topic – Pillars TPM**



## DEFINITION OF TOTAL PRODUCTION MAINTENANCE & TYPES

- Total productive maintenance is a system of maintaining and improving the integrity of production and quality systems through the machines, equipment, processes, and employees that add business value to an organization

### TYPES OF TOTAL PRODUCTIVE MAINTENANCE

- Breakdown maintenance
- Preventive maintenance
- Periodic maintenance
- Predictive maintenance
- Corrective maintenance



# WHY WE NEED & GOALS TOTAL PRODUCTIVE MAINTENANCE

- The major objective of the TPM are listed as under
- Avoid wastage
- Reduce cost of manufacturing
- Produce low batch quantity at the earliest possible time
- Goods send to customer must be “NON –DEFECTIVE “

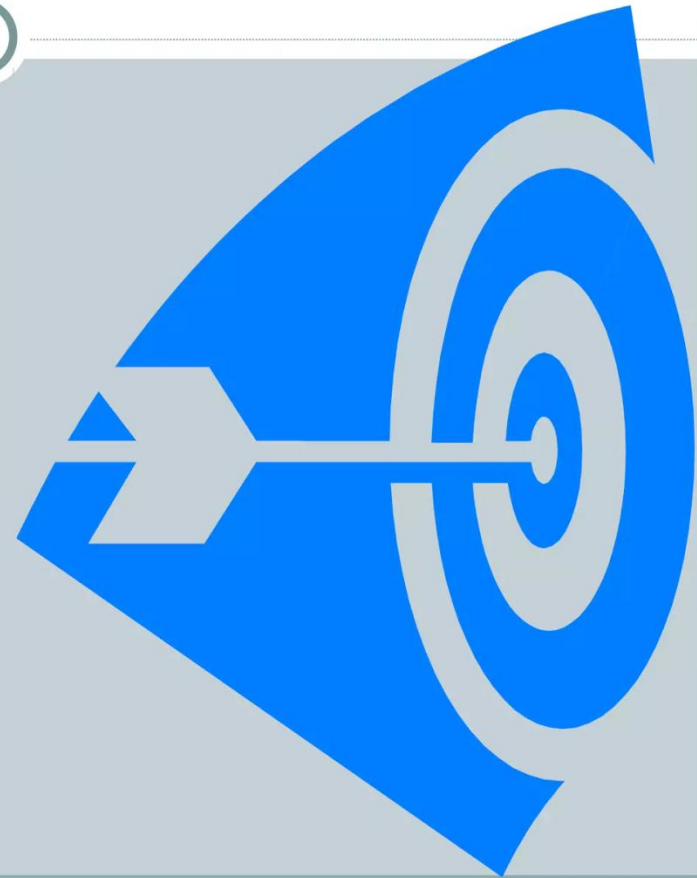
## GOALS

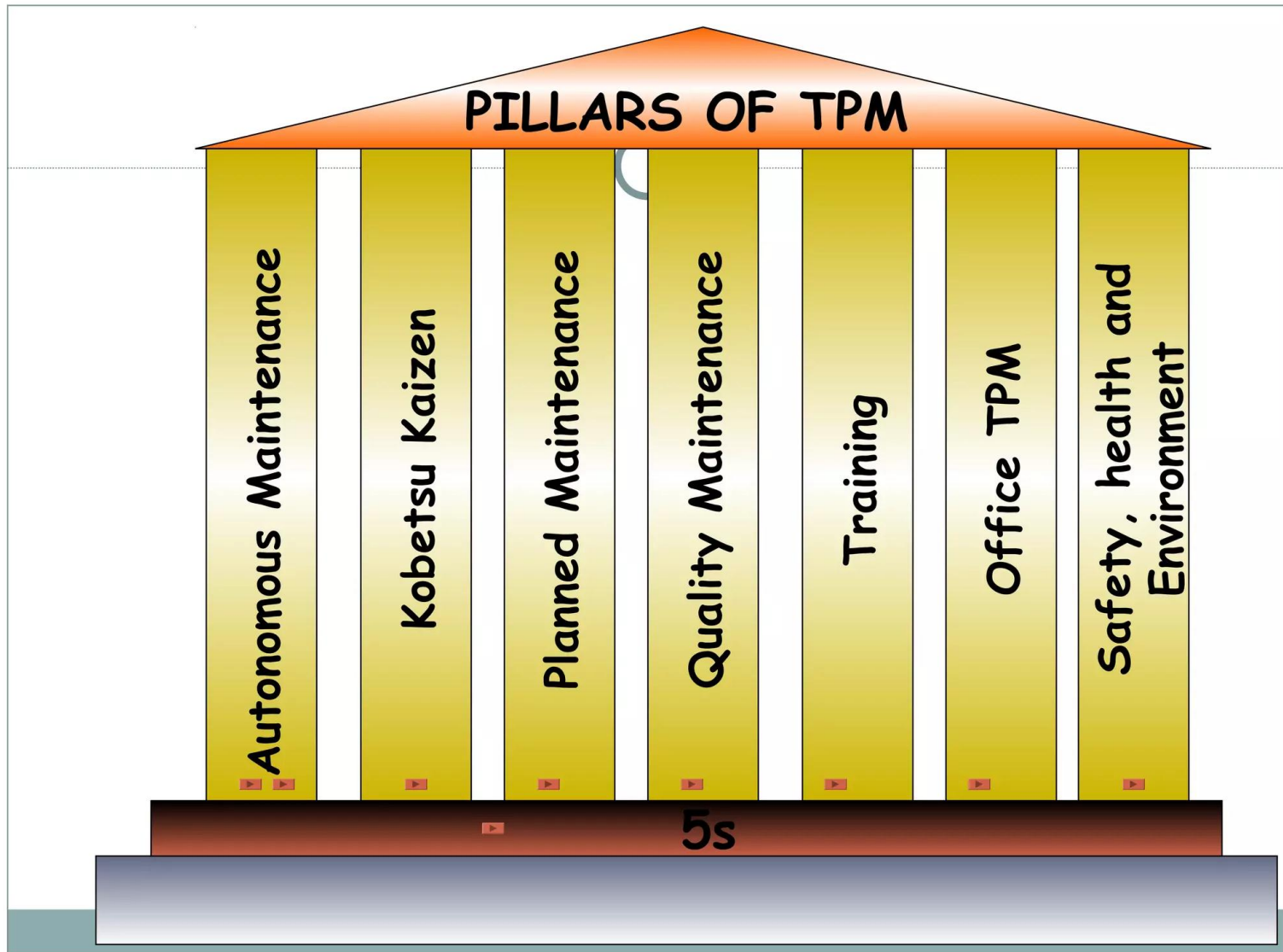
- Increase production while ,at same time ,increasing employee morale and job satisfaction
- Hold emergency & unscheduled maintenance to a minimum



## TPM TARGETS

- Production
- Quality
- Cost
- Delivery
- Safety
- Morale







# TPM PILLAR 1: 5's METHOD

- TPM starts with 5s problem can not be clearly seen when the workplace is unorganized
- Cleaning and organizing the workplace helps to uncover problems
- Making problems visible is the first step of improvement
- SEIRI – Sort out
- SEITON – Organize
- SEISO – Shine the workplace
- SEIKETSU – Standardization
- SHITSUKE – Self - Discipline







## TPM PILLAR 2 : AUTONOMOUS MAINTENANCE

- This pillar is geared towards developing operators to be able to take care of small maintenance tasks, thus freeing up skilled maintenance people to spend time on more value added activity and technical repairs
- The operators are responsible for up keep of their equipment to prevent it from deteriorating





## TPM PILLAR 3: KAIZEN



- Kaizen policy practice concepts of zero losses in every sphere of activities
- Relentless pursuit to achieve cost reduction targets in all sources
- Relentless pursuit to improve overall plant equipment effectiveness
- Focus on easy handling operators
- Extensive use of productive maintenance analysis as tool to eliminate losses







## TPM PILLAR 4 : PLANNED MAINTENANCE



- With planned maintenance , we evolve an effort from a reactive to proactive method and use trained maintenance staff or help train the operators to better maintain their equipment.
- Improve reliability and maintenance of machines by 50%
- Reduce spares of inventory
- Zero equipment failure and breakdown
- Reduce maintenance cost by 20%



## TPM PILLAR 5 : QUALITY MAINTENANCE

- Its aimed towards customer delight through highest quality defect free manufacturing focus is on eliminating non conformances in a systematic manner
- Focus on fool proof ( poka yoke ) system
- Quality management activities to support quality assurances
- In line detection and segregation of defects
- Quality defects are classified as “ CUSTOMER END DEFECTS “ and IN HOUSE DEFECTS “
- Reduce cost of quality by 50%



## TPM PILLAR 6: EDUCATION & TRAINING

- Skills Development For Uniformity Of Work Practices On Machines
- Multi Skilled Employees In All Departments

### **Steps in Educating and training activities :**

- Setting policies and priorities and checking present status of education and Training.
- Establish of training system for operation and maintenance skill up gradation.
- Training the employees for upgrading the operation and maintenance skills.
- Preparation of training calendar.
- Evaluation of activities and study of future approach.
- A clear understanding of the criteria for judging normal and abnormal conditions.
- The ability to quickly respond to any and all abnormalities.



## TPM PILLAR 7: OFFICE TPM



- Office TPM must be followed to improve productivity, efficiency in the administrative functions & identify and eliminate losses. This includes analyzing processes & procedures towards increased office automation

### Plans & Guidelines:

- ❖ Providing awareness about office TPM to all support departments
- ❖ Helping them to identify P, Q, C, D, S, M in each function in relation to plant performance
- ❖ Identify the scope for improvement in each function
- ❖ Collect relevant data
- ❖ Help them to solve problems in their circles



## Pillar 8 – SAFETY, HEALTH & ENVIRONMENT

- Target
  - Zero accident
  - Zero Health damage
  - Zero fires
- It helps to create a safe workplace and a surrounding area that is not damaged by our process or procedures.
- It plays an active role in each of the other pillars on a regular basis.
- To create awareness among employees various competitions like safety slogans, quiz, drama, posters etc can be organized at regular intervals.





*Thank You !*