



# Maintenance


APART FROM SAFETY,  
MAINTENANCE IS NEEDED TO KEEP  
PLANT IN AN ACCEPTABLE  
CONDITION. MAINTENANCE OF THIS  
KIND MUST BE REVIEWED ON AN  
ECONOMIC AND ENERGY EFFICIENCY  
BASIS.

# Define Electrical Maintenance

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 **Electrical Maintenance involves the fault diagnosis, routine servicing, and repair of electrical components of a machine.**

 An electrical maintenance Engineer is responsible for planning the maintenance to ensure the smooth running of production lines in a company.

 The engineer service, repair and maintain the electrical components of a plant.

## Electrical Maintenance

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graph TD; A[Electrical Maintenance] --> B[Preventive]; A --> C[Operational]; A --> D[Corrective]
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Preventive

Operational

Corrective

Q. Which one is the best for the Electrical Maintenance ?

Q. Which one is dangerous for Organization point of view?

R. Which one is mostly preferable?

- Why a day reserved for Maintenance purpose ?

# Preventive Maintenance

- ✓ The effectiveness of a preventive maintenance schedule depends on the RCM anylysis which it was based on, and the ground rules used for cost-effectivity.
- ✓ Preventive maintenance is maintenance performed in an attempt to avoid failures, unnecessary production loss and safety violations.
- ✓ **Reliability Centered Maintenance (RCM)** is a process to ensure that assets continue to do what their users require in their present operating context.



# Electrical Preventive Maintenance

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What is the definition of  
Electrical Preventive Maintenance?

The scheduled  
inspection, testing and maintenance  
of critical electrical components!

# Electrical Operational Maintenance

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- ✓ where equipment is maintained in using.
- ✓ **Operational maintenance** is the care and minor maintenance of equipment using procedures that do not require detailed technical knowledge of equipment's or system's function and design.
- ✓ This category of operational maintenance normally consists of **inspecting, cleaning, servicing, preserving, lubricating, and adjusting**, as required.
- ✓ Such maintenance may also include minor parts replacement that does not require the person performing the work to have highly technical skills or to perform internal alignment.



# Electrical Corrective Maintenance

- ✓ where equipment is maintained after break down.
- ✓ This maintenance is often most expensive because worn equipment can damage other parts & cause multiple damages.
- ✓ Corrective maintenance is the program focused on the regular task that will maintain all the critical machinery and the system in optimum operating conditions.
  
- ✓ The major objectives of the program are to
  1. Eliminating breakdown
  2. Eliminating deviation
  3. Eliminating unnecessary repairs
  4. Optimize all the critical planned system

**When designing the Maintenance Plan should be taken into account two important considerations affecting some equipment in particular. Firstly, some equipment are subjected to legal rules that regulate their maintenance, forcing them to perform certain activities with an established frequency.**

**Secondly, some of the maintenance activities can not be performed with the regular maintenance equipment (either their own or hired) because it requires knowledge and / or specific resources that are only up to the manufacturer, distributor or a specialist team.**

**These two aspects should be assessed when trying to determine the maintenance model that we should apply to an equipment.**



**Some equipment are subjected to rules or regulations by the Administration. Above all, there are equipment that are hazardous to people or the environment. The Administration requires the completion of a series of tasks, tests and inspections, and some of them must be performed by companies duly authorized to carry them out. These tasks must necessarily be incorporated into the Maintenance Plan of the equipment, whatever model you decide to apply.**

**Some of the equipment subjected to this type of maintenance are:**

**Equipment and devices under pressure**

**Installation of High and Medium Voltage**

**Cooling Towers**

**Certain lifts: service or people**

**Vehicles**

**Fire Prevention Facilities**

**Storage tanks of certain chemicals**

Thankyou