





# FIRE IN SUBSTATION -CASE STUDY

TSM TheSafetyMaster Private Limited



#### **Initial Incident Report...**

Recently a 500MVA substation caught fire in Noida. According to TOI, it was a new additional facility energized in October last year. About 5 to 7 tenders were deployed and the cause of fire is yet to be ascertained. Initial observation indicate towards a technical fault, said officials Opting for our Electrical safety audit services helps in identifying the hazards & prevent incidents in the firest place.





# **Safety in Substations**

Safety procedures formulated to meet requirements outlined in Indian Standards and other international standards go a long way in making substations more secure against known hazards and triggers. Considering the fact that the entire premise is rife with potential electrical and chemical hazards, even the slightest negligence can prove damaging.

Careful analysis of general and location-specific risks factors is a must to draft a comprehensive safety routine. That done, regular training and communication is crucial to ensure that the safety norms are followed without any slip-ups

## **Securing Perimeter Area**



Minimising safety threats from the outside environment is a key concern that needs attention. Installing metallic or non-metallic fences along the perimeter is bound to prevent incidents of trespassing, deliberate scaling, stray animals foraying into the premises, and more importantly, children gaining entry into the area. Washouts and structural damage to enclosures require prompt attention. Use of appropriate warning signs on the fencing is recommended.

### **Restricting or Prohibiting Visitor Access**



Substations are not intended to support visitor traffic. It is possible to prevent or reduce the possibility of accidents by either restricting or totally prohibiting visitors from entering the place. In unavoidable circumstances, visitors accompanied by experienced personnel can be allowed access, but with the necessary safety precautions and PPE.

## Monitoring/ Guiding Vehicular Traffic



It is important to monitor and guide vehicles entering a substation to ensure that there is sufficient clearance between objects on the roof of the vehicle and the overhead lines and elevated equipment within the substation. Vehicle drivers must proactively ensure safe navigation as well.Similarly, the operations of mobile hoisting equipment and cranes also need to be supervised and controlled by substation personnel.

## **Prohibiting Equipment Storage**



Substations also tend to double up as storage for equipment and other material that find use in the environment, leading to at least a couple of unwarranted risks. It not only increases footfall in the area as materials get shifted in and out of the facility, but also lures thieves on the lookout for expensive electrical components/ equipment. Not everyone entering the substation in such cases are fully aware of the dangers they are exposed to and accidents that they can accidentally trigger. Prohibiting equipment storage in substations can prevent undue accidents.

# **Securing Battery Stores**



Battery storage rooms are also known to be the sources of chemical hazards, and are best secured with authorised access. While it is important to ensure the storage areas are well-ventilated, regular maintenance helps detect units that need replacements, recharging or address gas, caustic or acid leaks common in batteries.



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