…..IDEATION….

DEFINE YOUR PROBLEM STATEMENT:

The thermal power plant consist several risk and hazard in their various part of plant and its operational processes. This may cause harm to people, property and environment. Those hazards are for example “coal dust explosion” in the coal storage area and coal mill where fine particles of the coal present may occur when concentration of coal dust particles are within the explosive range. That can also occur in the plants where coal dust collectors are present due to the failure or low efficiency of the collector system.

Another most hazardous area of the thermal power plant is boiler room which includes furnace, boiler tank, water & steam tubes and exists for byproduct of coal combustion operation like fly ash, suspended ash and flue gases. The boiler room has risk of fire and explosion may caused Due to improper ignition of fuel, lack of air.

supply in combustion chamber, improper pulverized coal lack of water, over pressure & over temperature ,cracks & metal fatigue in boiler body. The periodical inspection of the boiler is done as per “the Indian boiler act” but due to some sudden occurrence of hazardous event it may occur.

Flue gas the byproduct of combustion in furnace content high pollutant like SOx , NOx , CO2 and fumes of heavy metals like arsenic (Ar), Mercury (Hg), Boron (B). When they emits in excess amount from the permissible limit can cause hazard to flora and fauna.

There are several other hazards which can be listed to analyze for reduction are electrocution, Thermal Exposure, physical hazard, chemical exposure hazard, noise in turbine room, chronic and acute health hazard.