

PROCESS SAFETY IN MONSOON

"When Thunder Roars, Go Indoors"

June 20 marks the beginning of monsoon season which is one of the most exciting seasons of the year, when you feel maximum attachment to Nature, witnessing the raindrops kissing the surface of the mother earth. However, this happiness comes at a cost, when a combination of high winds, moisture and temperatures results in a remarkable changes in the implication with respect to process safety.

We have endeavoured to share some useful information aiming to process safety in this season. Hope this would be helpful in reducing the number of injuries, property damage, health problems, no. of deaths etc., caused by weather related hazards that occur during the monsoon.



PRE-MONSOON EXAMINATION

Following key points to be examined properly:

Leakages: Check the roof, floors, walls etc for any leakage and cracks.

Grit Floorings: Years old floorings should be checked for corrosion, repair/maintenance etc.

Electric connections: Check all electrical connections and outside electric switches to see if they are exposed to rain, damage switches, bare wires, etc.

Process Points: Working of Online Sensors, Pneumatic system, Utility sections etc should be checked regularly. In monsoon, due to cold climate, humidity in air, etc can lead to a disturbance in the working of these systems.

Drainage: Make sure that the drainage systems are checked at regular intervals to avoid any blocks or over flows. Prepare a detailed checklist for the problems likely to arise during monsoon, and shall be followed before the arrival of monsoon.

SAFETY MEASURES DURING MONSOON:

- High pressure jet cleaning of all drains.
- Water logging areas to be checked, to ensure there are no blockages.
- Spill containment or spill soaking system shall be practiced to avoid spreading of spill.
- Basements if any, to be checked if water outlets are sufficient and are not clogged.
- To install lightning arrestor/thunder controller.
- Avoid renovation work during monsoon. Particularly painting and polishing jobs.
- For night shift the security personnel should be informed to check the premises and report immediately.
- Sufficient mopping at required places to be carried out as per the requirement.
- To carry out maintenance of dewatering pump sets of pumping stations and keep them in operating condition.
- Also, all areas like corners, curves etc. where there is a greater chance for dust to accumulate and cause water to condense must be thoroughly cleaned.

ELECTRICAL SAFETY FEATURES TO BE IMPLEMENTED DURING MONSOON:

A majority of the electrical panel problems in rainy season are caused by accumulation of water due to leakage or condensation inside the control panel. While leakage can be easily stopped by sealing the gaps, preventing condensation is tricky. Check for possibility of water accumulation near control panels, meters, DG and other electrical installations.

- Cable entry should be sealed properly.
- Check if there is any water leakage inside walls and take measures to protect electrical installations near the wet walls.
- Ensure continuity in earthing loop for all distribution boards.
- Ensure all distribution boards are properly covered and protected from water.
- Check foundation of electrical poles to avoid their fall in case of wet or loose earth.
- The area near bus-bar insulators shall be cleaned thoroughly. Accumulation of dust is very common in these areas. Given the short distance between two bus-bars accumulation of dust or water can cause the current to flow leading to a short circuit.
- Cabinets, cutouts boxes, fittings, and panel boards shall be weatherproof.
- Cobwebs formed between bus couplers to main Bus-bar can be extremely dangerous as they make it easier for water to condense in a atmosphere of heavy rains and humidity. Thus, it should be cleaned regularly.
- To carry out maintenance of all HT / LT breakers, transformers & other electrical equipments and keep them in operating condition.
- Marshalling box of transformer should be closed properly.
- Electrical panels in open area should have proper monsoon design sheds.

Wish you a safe monsoon....!

Bringing to you the "Act-Now" solutions of process safety...

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