

Automatic fire sprinkler system

Technology



Automatic Fire Sprinkler System

Introduction

A fire sprinkler system is a protective measure against fire that contains water supply and the required pressure and a distribution system. They are mostly used in commercial buildings and factories although nowadays even residential buildings use automatic fire sprinkler systems. Fire sprinkler systems contain Isolating valves used to stop water supply. It has a distinct red color and is usually locked to allow free water flow. The valve monitor is used to monitor the state of the isolating valve. The alarm valve used to control flow of water in the fire sprinkler system. The automatic fire sprinkler system also contains the sprinkler head, alarm tests and a bell (Corinne, 2009).

Inspection

Inspection, testing and maintenance of fire sprinkler systems are critical exercises that should always be done on regular basis to ensure that in case of a fire emergency the sprinkler actually works

Inspection Form

Automatic Fire Sprinkler Systems

Monthly

Quarterly

Semi-annual

Annual

Other

Reason

Parts

Gauges - Dry, Pre-Action & Deluge

√

They should be inspected once every week to make sure that the correct levels of air and pressure is maintained always

Gauges - Wet Pipe Systems

√

Inspection should be done monthly to ensure correct water supply pressure just incase there is a fire emergency

Alarm Devices

√

Verification should be done quarterly to ensure there is no damage to the devices.

Hydraulic Nameplate

√

This need to be inspected quarterly

Buildings

√

Inspection should be done annually especially prior to winter to ensure that all openings are working correctly

Hangers/Bracing

√

Sprinkler pipe hangers and seismic braces shall be inspected annually.

Pipe & Fittings

<https://assignbuster.com/automatic-fire-sprinkler-system/>

√

Pipes and fittings should be inspected annually.

Sprinkler Heads

√

Annually

Spare Sprinkler Heads

√

Annually

Alarm Devices

√

Waterflow alarm devices including, but not limited to, mechanical water motor gongs, vane-type water flow devices, and pressure switches that provide audible or visual signals shall be tested quarterly.

Antifreeze Solution

√

The freezing point of solutions in antifreeze shall be tested annually by measuring the specific gravity with a hydrometer or refractometer and adjusting the solutions if necessary.

Gauges

√

Gauges shall be replaced every 5 years or tested every 5 years by comparison with a calibrated gauge. Gauges not accurate to within 3 percent of the full scale shall be recalibrated or replaced.

Sprinkler Heads

√

Sprinklers that have been in service for a long time mostly more than fifty years should be replaced. Samples should also be taken to testing laboratories to ensure that the sprinkler heads are of desired quality.

Sprinkler Heads - Extra High Temp

√

Temperature is a key parameter that should always be kept constant. The right temperature should therefore be continuously tested.

Sprinkler Heads - Fast Response

√

They should be tested at ten year intervals to ensure they are working properly.

Maintenance

Valves (All Types)

√

√

(See " Valves" below)

Obstruction Investigation

√

Systems shall be examined internally for obstructions where conditions exist that could cause obstructed piping. If the condition has not been corrected or the condition is one that could result in obstruction of piping despite any previous flushing procedures.

Control Valves

√

Inspection of valves should be done on a weekly basis.

Alarm Valves

<https://assignbuster.com/automatic-fire-sprinkler-system/>

Inspection for alarms should be on a monthly basis.

Check Valves

√

Inspection is usually after every five years to ensure proper operation free movement and to ensure that the valves are in good condition.

Preaction/Deluge Valves

√

Inspection of pre-action valves is done annually

Dry Pipe Valves/Quick Opening Devices

√

<https://assignbuster.com/automatic-fire-sprinkler-system/>

Inspection of dry valves should be done annually to ensure proper functioning.

Backflow Prevention Assemblies

√

Backflow preventers should be inspected annually

Conclusion

It is very critical to have properties to have an efficient sprinkler system. Developers and property owners currently adopt the sprinklers systems because of the following reasons. Building regulations in many local authorities recommend installation of sprinkler system as a precautionary measure in cases of fire emergencies. Insurers also recommend installation of sprinkler systems (Firewize, 2013). They go extra measures by refusing to insure properties that lack sprinkler systems therefore property owners are forced to install these systems as property protection measures. In cases of business continuity in cases of fire emergencies, it is critical to install sprinkler systems.

References

Corinne, W. (2009). Automatic Fire Sprinkler Systems, A good practice guide. Retrieved on 19 May 2013 from: <http://www.cieh.org/assets/0/72/758/112684/4a293ad6-6b73-4fc7-bdd9-707e20250fc9.pdf>

Firewize, (2013). Automatic Fire Sprinkler System - Flow Test. Retrieved on <https://assignbuster.com/automatic-fire-sprinkler-system/>

19 May 2013 from: <http://firewize.com/page/general/automatic-fire-sprinkler-system-flow-test>