



SAFE WORK METHOD STATEMENT

(INSTALLATION OF WET SPRINKLER SYSTEM)



METHOD STATEMENT FOR INSTALLATION OF WET SPRINKLER SYSTEM

**PROJECT: ST TELEMEDIA, DC-3 Chennai.
VENDOR: JOHNSON CONTROLS, Chennai.**

CONTENT

- SCOPE
- PURPOSE
- QUALITY CONTROL
- STORAGE AND HANDLING
- RESPONSIBILITIES/SUPERVISION
- TOOLS & EQUIPMENTS
- WORK SEQUENCE & METHODOLOGY
 - 1. WET SPRINKLER SYSTEM
 - 2. INSTALLATION & TEST PROCEDURE
- HEALTH AND SAFETY

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1. SCOPE:

This procedure covers inspection and installation of Wet sprinkler System.

2. PURPOSE:

Purpose of this procedure is to define the method of installation and inspection of the following wet sprinkler System.

3. QUALITY CONTROL:

Quality of installation and materials at site will be ensured by our project team consisting of a Project Manager, Project Engineer, QA / QC Engineer and the site Foreman. Quality of the work will be according to the NFPA standards and local civil defense authority requirements.

4. STORAGE & HANDLING:

- The sprinkler pipes will be stacked in the site store on a flat surface at a height not exceeding 1.7m from the bottom layer.
- Fittings will be separately packed and stored as per the sizes required for the project.
- All open ends of pipes will be covered to protect from foreign matter, dirt/debris.
- Sprinkler materials are stored in Site Office/Stores.

5. RESPONSIBILITIES/SUPERVISION:

- To ensure that all the preparation and application works are carried out according to the Contract Specification and Manufacturer's data sheet.
- To ensure that the progressing of works is carried out according to the planned program and as per the approved method statement.
- To ensure that all the equipment and material required executing the work are available according to the planned construction program.

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- To co-ordinate with the Main Contractor MEP Coordinator & Safety Officer for a safe and proper execution of the work.
- To provide all necessary information and to distribute responsibilities to his construction team.
- The Foreman will be responsible for the following, the foreman will carry out his duties by maintaining continuous coordination with the project engineer on daily basis, to ensure proper distribution of the work force in the required and planned locations
- To provide to the project engineer a daily progress report indicating the works achieved and discuss with him the planned activities for the next day.
- To ensure that the daily work is progressing as planned and to advise the project engineer of any requirement for additional resources.
- To be aware of test frequencies related to the pipe work and Hydrostatic.
- To control disposal of waste materials according to the instruction received for the project engineer.
- To ensure full coordination with the safety officers to maintain safe working and proper housekeeping of the site,
- Following the approved safety measures and further ensure that all his working team are aware of the same to prevent accident and losses.
- To inform the project engineer about the readiness of work for inspection and it's checking, if any.

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TOOLS AND SAFTEY EQUIPMENTS:

The following Tools and Equipment will be used for wet sprinkler installation.

- 1. SCAFFOLDING/SICSSOR LIFT**
- 2. WELDING MACHINE**
- 3. GRINDING MACHINE**
- 4. PIPE WRENCH**
- 5. ADJUSTABLE SCREW WRENCH**
- 6. RINGS and DOUBLE HAND SPANNER SET**
- 7. TEFLON TAPE**

The following Safety requirement tools will be used for Wet sprinkler installation.

- 1. SAFTEY SHOES**
- 2. SAFTEY HELMET**
- 3. SAFTEY BELT (DOUBLE HOOKED WITH SHOCK ABSORBER)**
- 4. FLUORESENT VEST**
- 5. SAFTEY GLOVES**
- 6. SAFTEY MASK etc.**

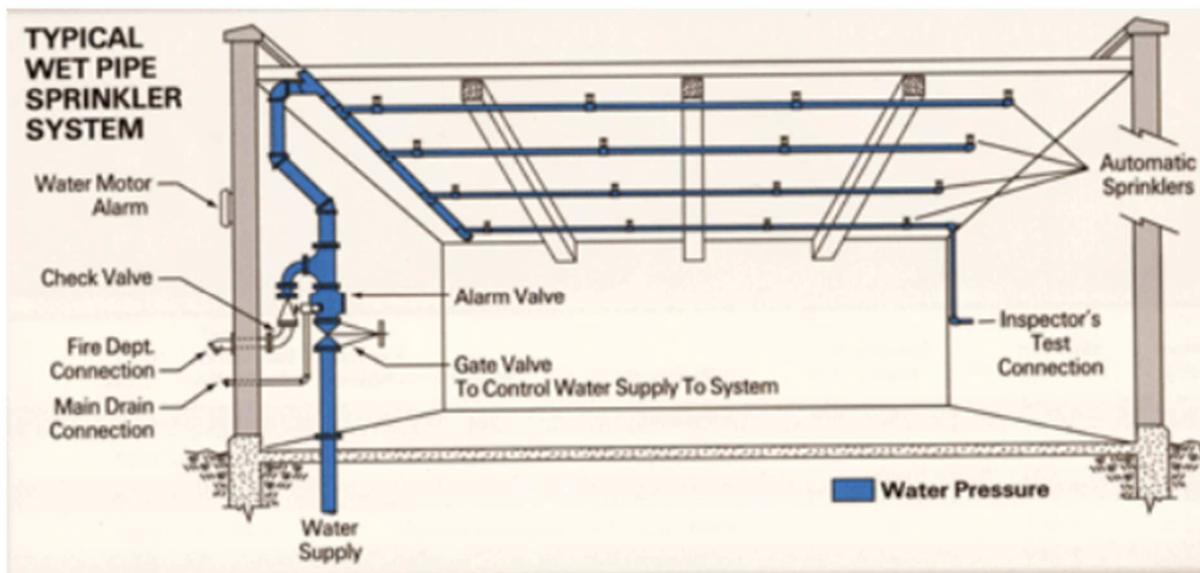
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WORK SEQUENCE AND METHODOLOGY:

1. WET SPRINKLER SYSTEM:

- A wet pipe sprinkler system is a sprinkler system employing automatic sprinkler heads attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.
- In a wet pipe fire sprinkler system, the pipes supplying fire sprinklers have water in them at all times.
- When a fire sprinkler activates, the water discharges immediately.
- Sprinkler heads in this type of fire sprinkler system do not all discharge simultaneously.
- Only the sprinklers exposed to the fire's rising temperatures activate.
- Wet-pipe fire sprinkler systems are reliable and relatively easy to install.
- Because they have fewer components than other automatic fire protection systems, wet pipe systems are easier to maintain.
- However, freezing temperatures can damage the water-filled pipe and other components in wet-pipe systems.
- As such, other systems—particularly, the dry-pipe fire sprinkler system—work better in facilities subjected to sub-zero weather.



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- Besides supplying water to fire sprinkler heads, these systems have two important functions:
- Preventing contamination of the water supply and sounding an alarm when fire sprinklers activate.
- Wet-pipe fire sprinkler systems accomplish this in three different ways:
 - 1) Using an alarm check valve
 - 2) With maintained excess pressure and an alarm check valve
 - 3) Using a straight pipe riser (and riser check valve)
- Some wet-pipe systems have an alarm check valve. These valves prevent water from flowing out of the sprinkler system and back into municipal water sources.
- They also feature an alarm port, which activates a fire alarm control panel, bell, or another device when water flows through sprinkler system piping.
- To stop false alarms, some alarm check valves include a slow-draining metal reservoir called a retard chamber.
- Maintained extra pressure fire sprinkler systems improve on this design by adding extra pressure above the check valve.
- This pressure keeps the valve closed during pressure surges in the sprinkler system's water supply, reducing the number of false alarms.
- The most common configuration of a wet pipe system is a straight pipe riser.
- Fire sprinkler systems with this design have a riser check valve.
- This valve performs the same basic function as an alarm check valve but uses a specialized water flow detector to send a signal to alarms during sprinkler activation.



FLOW SWITCH

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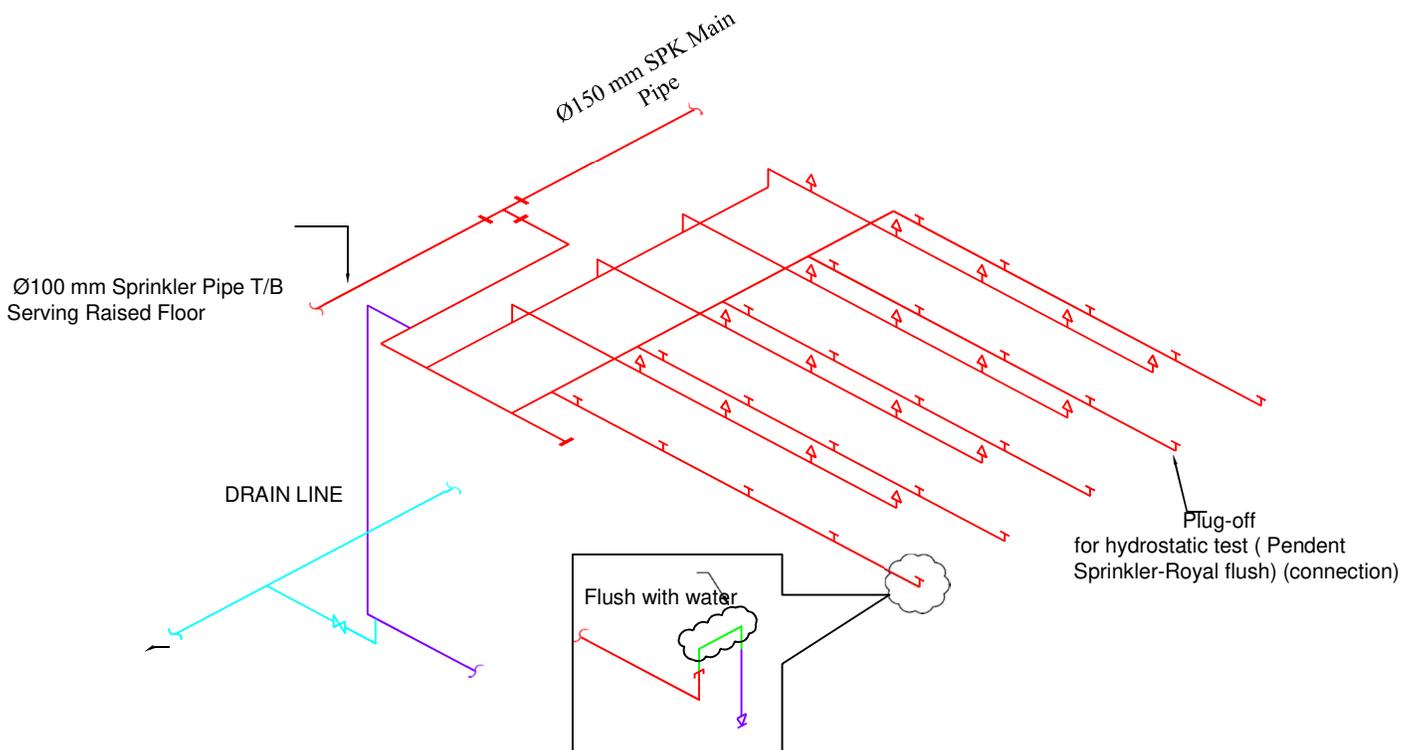
2.INSTALLATION & TESTING PROCEDURE:

- To check and ensure there is not physical damage or dent point on the sprinkler pipes and Sprinklers.
- To check and ensure there is no peeled paint on the sprinkler pipes.
- To check and ensure the systems are free from stain, dust and generally clean.
- To check and ensure all the sprinkler pipes are painted in RED color.
- To check and ensure there is sprinkler guard installed for High level and Raised floor.
- To check and ensure all sprinkler pipes support/bracket is adequate & securely installed.
- To check and ensure pipe routing installed correctly based on the approve drawing attached.
- To check and ensure level of pipe installed correctly based on the approve drawing attached.
- To check and ensure pipe size installed correctly based on the approve drawing attached.
- To check and ensure all sprinkler pipes are labelled according to approve labelling code.
- Prior to hydrostatic test commencement, check that the system is clean and free from debris.
- To ensure that all supports for pipe, connections and jointing parts of pipe are securely tightened and visible in order to identify any leakage during test.
- All parts of the water circuit shall be filled with water before hydrostatic pressure testing. Blank / plug or seal all open ends and close all valves at the limits of the test section of the pipework.
- Check ALL valves are open to ensure continuous water flow throughout the pipes. Note: Marking or tag the valve position during the hydrostatic test.
- Identify section/s of pipework to be tested and mark on drawing. Attach copy of drawing to the test record sheet. During water charging in of the pipes, visual inspection and supervision will be carried to ensure no water leakages in rooms with activated equipment

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- All pipework shall be tested to 1.5 times the working pressure of the system. Test pressure shall be maintained for a period of 24 hours.
- Connect a testing pipe (incorporated with a calibrated pressure gauge) to one end of the pipe work.
- Hose of the water testing pump will be connected to the testing pipe.
- The portable water testing pump shall be filled up with water and water shall be pump into the pipeline until the require pressure, 12 bar.
- The pressure inside the pipe work system will then be allowed to stay put for 24 hours and the max pressure drop should not be more than 5% of 12 bar.
- If the pressure drop is more than 5% after 24 hours, to check for pipe leaking and rectify immediately and repeat from item 3 to item 8 till the pressure drop less NOT more than 5% of 12 bar after 24 hours.
- End of testing if the pressure drop is NOT more than 5% of 12 bar after 24 hours.



**METHOD STATEMENT FOR INSTALLATION OF CABLE TRAY &
COPPER PIPE AT SHAFT**

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HEALTH AND SAFETY

- Work shall strictly follow as per the Manufacturer's/ Client's / Consultant's Health & Safety recommendations for handling and use of the materials. Ensure all involved personnel shall be aware of the same.
- Risk assessment will be prepared and submitted for Approval
- Workmen shall wear all appropriate safety PPEs Such as helmet, coverall clothing's, safety shoe, goggles & gloves whenever required.
- If work is in high level, only approved scaffolding and safety belts should be used.