Method Statement for Testing & Commissioning of Fire Fighting Sprinkler System

Please arrange following instruments & tools for testing & commissioning of firefighting sprinkler system.

1. Valve operating keys.
2. Calibrated Pressure Gauges
3. Heat gun
4. Torque tester
5. Flexible Hose
6. Drums 300 litre to 500 litre

Testing & Commissioning Sequence

Pre-Commissioning Phase

- Before commissioning the system the following shall be ensured.
- The Installation and pressure testing of the pipes are completed.
- The installations of Zone Control Valves, main line Isolation Valve and other accessories are completed.
- Cabling and interface connection to Zone Control Valve and main fire alarm panel is completed.
- Termination of Zone Control Valves and main fire alarm panel is completed.
- Confirm that Alarm check valve and all the accessories are ready for putting the system in service.
- Ensure that all the sprinklers are properly installed and free from obstructions.
- Ensure that all System equipment and devices are properly identified by tags / labels.
- Flushing has been done.

Fire Fighting System Testing & Commissioning Phase

- Complete installation of sprinklers as per the approved drawings & method statement of installation.
- Complete pressure testing for all the floors & the risers as per method statement for testing, and hand over all pressure testing to consultant & contractor.

- Commission the fire pump set as per pump commissioning method statement.
- Fill the system with water and pressurize the system to match the souk pressure cut off using a manual and electric pump to avoid triggering any alarm fault at the souk when opening the main valve.
- Coordination with the Facility management of the Souk where the Fire Pump is located for the sprinkler has to be established prior to opening of the Main Valve.
- PRV Settings for the PRV station to be agreed prior to commissioning.
- Close all the zone control valves in all the zones in the building.
- Gradually Open the Main gate valve
- Check visually for any leak for a period of 2 hours.
- Start opening the zone control valves floor by floor and check each floor visually for any leak for a period of 2hours (This includes the tenant/retail area).
- Check Status of Flow switch in the Fire Alarm Control Panel of each Zone Control Valve Assembly during opening of the Zone Control Valve.
- After pressurizing the whole system, keep it for 24 hours under observation.
- Record the pressure indicated in each zone control valve.
- Open gradually / slowly the drain valve of the zone control valves floor by floor. Alarm system should indicate fire signal in the building.
- Record the pressure indicated in each zone control valve.
- For Retail/Tenant area repeat step “n” but make sure a flexible hose is connected and directed to a drum or nearest floor drain.
- Close the zone control valves floor by floor and Alarm system should give fault signal. Same will be done with tenant/retail.

Setting of PRV at the PRV Station

1. Check if the Main Valve is Fully Open.
2. Check the Pressure Gauge indicated in the Inlet of PRV Station and record the reading at the test sheet provided.
3. Open the PRV and check the Pressure gauge installed in the outlet of the PRV.

4. If the pressure is not as per the required pressure adjust the PRV to satisfy the requirement and record the reading in the test sheet provided.
5. Repeat steps a-d to other remaining PRV station.

Inspection & Test Plan during Commissioning

- The Commissioning Engineer should verify that the CxT who is responsible for Testing & Commissioning is familiar with this Method Statement and is issued with copies of the inspection checklists and test plans.
- The CxT Engineer should satisfy the procedures provided by Commissioning Engineer inspections to ensure the Commissioning of the Fire Fighting System testing meets the specified Engineering requirements and approved drawings.
- As part of the assessment, the CxT Inspection Procedures must ensure a quantitative or qualitative acceptance criteria for determining the prescribed activities have been accomplished satisfactorily.
- The CxT should verify any as-built record of Fire Fighting System testing and confirm that the information meets the project requirements.
- Request for Work Inspection Request (WIR) shall be submitted by Commissioning Engineer to QA/QC Department for verification and inspections.
- Commissioning Engineer will forward WIR for inspection and approval in accordance with Commissioning Plan.
- Readable stamped approved Method of Statement to be available during installation and inspection.
- All the instruments engaged for testing shall have valid calibration and certificate should be furnished.