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UFC CRITERIA FOR ITM OF FIRE SUPPRESSIN SYSTEMS
UFC 3-601-02

Table-3.3.1: **Wet** Pipe Sprinkler Systems ITM Tasks

Frequency	Component	Tasks
Annual	1. Control Valves (sealed, locked, or electrically supervised)	1. Verify valve position.
Annual	2. Water-flow Alarm Devices	1. Operate to verify initiation and receipt of alarm. 2. Verify alarm test valve alignment and tamper switch (if sealed or electrically supervised).
	3. Alarm Valve and Trim	1. Visually check the exterior of valves, gauges, trim alignment. 2. Verify valve pressure and legibility of the hydraulic nameplate.
	4. Main Drain	1. Conduct a main drain test to verify supply (valve position). 2. Document static and residual pressure readings on a 3- by 5-inch (3x5) tag and secure it to the system pressure gauge. 3. Compare results with results from previous main drain tests and original acceptance test. 4. Verify that the results are within acceptable limits or identify corrective measures.

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Table-3.3.2: **Wet** Pipe Sprinkler Systems ITM Tasks

Frequency	Component	Tasks
Annual	5. Fire Department Connection	1. Verify accessibility and condition. 2. If caps are removed or missing, check for obstructions.
2 Years	1. Control Valves	1. Operate valve through entire travel to verify function. 2. Lubricate valves and stems to ensure operability.

5 Years	1. Alarm Valve	1. Clean and inspect internally to verify condition.
	2. Anti-freeze Loops	1. Confirm correct solution mixture.
10 Years	1. Gauges	1. Replace gauges.
20 Years	1. Fast Response Sprinklers and Extra High Temperature Sprinklers	1. Test sample sprinklers to verify response characteristics.
50 Years	1. Standard Sprinklers	1. Replace or test a sample of sprinklers to verify response characteristics.
Following System Modification or Repair	1. Main Drain (following maintenance or repair action requiring the water supply to be shut off)	1. Conduct main drain test to verify supply (valve position).
As Part of Building Inspection	Entire System	Visually check: 1. Pipe hangers. 2. Sprinklers for obstruction. 3. Piping for leaks. 4. Riser condition.

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Table-3.4.1: **Dry** Pipe Automatic Sprinkler Systems ITM Tasks

Frequency	Component	Tasks
Annual	1. Control Valves (sealed, locked, or electrically supervised)	1. Verify valve position.
	2. Water flow Alarm Devices	1. Operate to verify initiation and receipt of alarm. 2. Verify alarm test valve alignment and tamper switch (if sealed or electrically supervised).
	3. Dry Pipe Alarm Valve and Trim	1. Visually inspect the exterior of valves, gauges, trim alignment. 2. Verify valve pressure and legibility of the hydraulic nameplate.

	4. Main Drain	1. Conduct main drain test to verify supply (valve position). 2. Document static and residual pressure readings on a 3x5 tag and secure it to the system pressure gauge. 3. Compare results with results from previous main drain tests and original acceptance test. 4. Verify that the results are within acceptable limits or identify corrective measures.
	5. Fire Department Connection	1. Verify accessibility and condition. 2. If caps are removed or missing, check for obstructions.
	6. Dry Pipe Alarm Valve Enclosure Heating	1. Verify operability at the beginning of the heating season (annually for constant cold areas).
	7. Low Temperature Alarm	1. Verify initiation and receipt of alarm at the beginning of the heating season.

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Table-3.7.1: Standpipe Systems ITM Tasks

Frequency	Component	Tasks
Semi-Annual	1. Hose Connection and Pressure Reducing Valves	1. Inspect for damage, leaking, missing caps, and obstruction.
2 Years	1. Piping	1. Inspect for damage and pipe supports.
	2. Control Valve	1. Operate valve through entire travel to verify function. 2. Lubricate stem.
5 Years	1. Standpipe	1. Conduct flow test to verify flow capacity and minimum discharge pressure. (Test must confirm only flow/pressure—not duration—of supply). 2. Hydrostatic test to ensure integrity (dry standpipe systems only).
As Part of Building Inspection	Entire System	1. Visually check: a. Pipe hangers. b. Connections for obstruction. c. Piping for leaks. d. Riser condition.

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Table-3.8.1: Fire Pumps ITM Tasks

Frequency	Component	Tasks
Monthly	1. Pump House	1. Inspect for proper condition, ventilation, and heating.
	2. Control Valve and Isolation Valve	1. Verify proper valve position.
	3. Pressure Gauges	1. Check reading and verify gauge operability.
	4. Controllers	1. Verify that automatic controllers are in the automatic (AUTO) setting. 2. Inspect electric connections. 3. Operate manual and automatic stations.
	5. Batteries	1. Verify proper charge.
	6. Pumps	1. Start and churn to verify operability. (Where equipment permits, allow water to flow back to the source.) [Electric pumps shall operate for 10 minutes and engine-driven pumps shall operate for 30 minutes.] 2. Verify operation of relief valves. 3. Verify full level (for engine-driven pumps). 4. Inspect exhaust system for leaks (for engine- driven pumps). 5. For engine driven pumps, start again using second battery set and churn to verify operability. (Where equipment permits, allow water to flow back to the source.)

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Table-3.8.2: Fire Pumps ITM Tasks

Frequency	Component	Tasks
2 Years	1. Control Valve	1. Operate and lubricate valves to ensure operability.

	2. Controllers	1. Calibrate pressure switches. 2. Exercise circuit breakers and switches to verify operability.
	3. Pumps	1. Check coupling alignment to ensure that the shaft is aligned. 2. Check pump shaft end play. 3. Lubricate bearings. 4. Lubricate couplings. 5. Lubricate right-angle drives.
	4. Fuel (engine-driven pumps)	1. Sample fuel to verify quality.
	5. Relief Valves	1. Calibrate valves.
	6. Emergency Power Supply	1. Test to verify availability and capacity for pump motor.
5 Years	1. Pump	1. Conduct flow test to verify pump output. Test may be through a flow meter returning the water to a storage reservoir or through the test header. Recirculation of water to the suction piping is not permitted. In a multi-pump installation, each pump may be tested separately at not less than 100 percent design capacity for 30 minutes.

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3.9: **Clean Agent Systems**

Detection devices for actuation are addressed in paragraph 2-2.2. Technical guidance on the tasks is contained in NFPA 2001.

Table-3.9.1: Clean Agent Systems ITM Tasks

Frequency	Component	Tasks
Annual	1. Piping	1. Inspect piping and nozzles for condition and orientation.
	2. Flexible Hoses	1. Inspect for damage.
	3. Storage Vessels	1. Inspect the exterior of storage containers (tanks, spheres, cylinders).
	4. Agent and Propellant	1. Verify adequate quantity of agent. 2. Verify adequate pressure of agent/propellant and pressure gauge within operating range.
	5. Actuators	1. Inspect manual actuators for accessibility. 2. Test actuation without agent release.
	6. Auxiliary Equipment	1. Test to verify that interfaces (equipment shutdown, dampers, and door closures) operate properly and are activated by the system actuation.
	7. Valves	1. Verify that the valves are in proper alignment.
2 Years	1. Protected Enclosure or Room	1. Inspect the enclosure to verify integrity and ability to maintain agent concentration.

WARNING

To prevent accidental release of extinguishing agents to the environment, do not disconnect and weigh cylinders to accomplish the annual agent quantity verification. Disconnecting cylinders to verify agent quantity damages seals and O-rings. Only liquid level methods should be used to determine agent quantity.

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Table-3.9.2: Clean Agent Systems ITM Tasks

Frequency	Component	Tasks
5 Years	1. Cylinders	1. Perform complete external inspection of non-discharged cylinders to ensure suitability for use.
	2. Flexible Hoses	1. Pressure test hoses to ensure suitability for use.
As Required	1. Protected Enclosure/Room	1. Inspect the enclosure to verify integrity and ability to maintain agent concentration.
	2. After Modification to Compartment/Protected Enclosure	1. If uncertainty exists, follow the enclosure procedures in NFPA 2001.
As Part of Building Inspection	Entire System	1. Visually check: • Pipe hangers. • Nozzle for obstruction. • Piping for leaks. • Riser condition. 2. Ensure: • Detectors unblocked/uncovered. • Panels secured and indicator lamps functional. • Notification appliances in place. • Manual stations in place and unobstructed. • Nozzle covers in place. • Pressure gauge within operating range.

WARNING

To prevent accidental release of extinguishing agents to the environment, do not disconnect and weigh cylinders to accomplish the annual agent quantity verification. Disconnecting cylinders to verify agent quantity damages seals and O-rings. Only liquid level methods should be used to determine agent quantity.