



Fire Protection Training

Procedures Handbook 4300

FIRE PROTECTION SYSTEMS

TOPIC: Inspection Procedures For Standpipe Systems

TIME FRAME: 2 Hours

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will identify the proper inspection procedures for standpipe systems.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Appropriate visual aids
- Audio visual equipment
- A building with standpipe system, if available

REFERENCES:

- IFSTA, Fire Inspection and Code Enforcement, 5th Edition, Chapter 7
- NFPA, National Fire Codes
- NFPA, Standard For The Care, Use and Maintenance of Fire Hose Including Connections and Nozzles, 1962

PREPARATION:

Standpipe systems provide a convenient means of applying water to fires in large buildings and in high rise structures. Though designed primarily for fire department use, standpipe systems are often used by building occupants to combat fires. To be effective these systems must be easily accessible and consequently are subject to tampering and vandalism. To ensure the integrity of these systems frequent maintenance and inspection is required.



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INSPECTION PROCEDURES FOR
STANDPIPE SYSTEMS

PRESENTATION	APPLICATION
<p>I. PURPOSE OF INSPECTION</p> <p>A. To ensure that standpipe systems will perform adequately for fire department use, all standpipe systems shall be inspected every six months by the owner or occupant.</p> <p>II. CLASSES OF STANDPIPE SYSTEMS</p> <p>A. Class I Standpipe System</p> <ol style="list-style-type: none">1. Intended for use by fire departments and individuals trained in using heavy fire streams (i.e., fire brigades)2. To be used on<ol style="list-style-type: none">a. Advanced stages of interior firesb. Exposure protection from nearby fires3. Hose not normally provided at standpipe <p>B. Class II Standpipe System</p> <ol style="list-style-type: none">1. Intended for use by building occupants until arrival of the fire department2. Supplied with 1" or 1 1/2" hose3. Must have continuous flow hose reel <p>C. Class III Standpipe System</p>	<p>Instructor Note: title 19 Sub-Chapter 5 regulation</p> <p>Who is the intended user of each class of Standpipe System?</p>



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<p>1. Combines features of Class I and Class II systems</p> <p>2. Intended for use by fire department and occupants</p> <p>3. 1" or 1 1/2" hose provided; 2 1/2" hose not provided</p> <p>III. TYPES OF INSPECTION</p> <p>A. Initial installation inspection</p> <ol style="list-style-type: none">1. All approved devices (valves, racks and cabinets) must be listed and labeled by a nationally recognized testing laboratory2. Hose stations must be within six feet of the floor and within easy reach when standing on the floor.3. Each hose cabinet or closet for Class II or Class III systems must be provided with a conspicuous sign that reads "Fire Hose" and/or "Fire Hose For Use By Occupants Of Building".4. Fire department connections must have the proper fire department hose threads or connection and be labeled "Standpipe".5. Dry standpipes must be labeled "Dry Standpipe For Fire Department Use Only".6. Piping, feed mains and connections must be flushed to remove all debris7. The system must be tested at 200 psi for two hours by the installer <p>B. Periodic Fire Department Inspection</p>	<p>When should the first inspection take place?</p>



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<p>1. Ensure that</p> <ul style="list-style-type: none">a. Water supply tank (if so designed) is properly maintained<ul style="list-style-type: none">(1) Proper water level(2) Pressurized tank - 75 psi minimum(3) Precautions taken against freezing as necessaryb. Fire pumps start and operate (if so designed)c. Maintenance log is current<ul style="list-style-type: none">(1) Fire pumps run 30 minutes each week(2) By owner or a designated agentd. Electric driven pumps switch from the primary to the secondary power supply source in timely fashione. Fuel supplies for engine driven pumps are able to provide 8 hours of servicef. Fire hose cabinets and closets are used for the storage of fire fighting equipment only	<p>Where a pressurized water tank is used, what should the minimum pressure be?</p> <p>How often should the fire pumps be started and operated?</p>



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<ul style="list-style-type: none">g. Water control valves are open and supervisedh. Individual discharge valves operate properly, gaskets are in good condition, and there is no corrosion or evidence of leaks.i. Discharge outlet threads are compatible with fire department threads and are not damagedj. Fire department connection is inspected for:<ul style="list-style-type: none">(1) Access(2) Protective caps in place(3) Compatibility with fire department threads or connections(4) Serviceability of threads or connections(5) Proper operation of check valve(6) Debris in the connectionk. Drains are free of dirt and/or sediment	<p>Instructor Note: Wet standpipe systems will have to be shut down and drained prior to inspection to determine if the valves operate properly.</p> <p>The fire department connection should be inspected for what items?</p>



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<ul style="list-style-type: none"> I. Hose is in good condition, dry and properly racked m. The swingout rack operates smoothly n. Threads on the nozzles and hose couplings are not damaged and that the gaskets are in good condition o. Nozzles are not obstructed and the shut off valve, if there is one, is working properly. <ul style="list-style-type: none"> 2. All standpipe system deficiencies or repairs are the owner's responsibility 3. Inspection and/or enforcement may not be Fire Department responsibility. 	<p>Instructor Note: Dry standpipe systems should be hydrostatically tested every five years (SFM Service TAG attached)</p> <p>What is local policy?</p>
<p>IV. MAINTENANCE CHECKLISTS FOR STANDPIPE SYSTEMS</p> <ul style="list-style-type: none"> A. Class I standpipes B. Class II standpipes C. Class III standpipes 	<p>Information sheet #1</p> <p>Information sheet #2</p> <p>Information sheet #3</p>



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SUMMARY:

To ensure the serviceability of standpipe systems during emergency operations regular inspections of those systems are required. Since these systems are readily accessible tampering and vandalism must be expected and guarded against.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).