



Fire Protection Training

Procedures Handbook 4300

PUMPING

TOPIC: Pumping Standpipe Systems

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will describe the parts and operations associated with pumping standpipe systems.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Appropriate visual aids
- Audio visual equipment

REFERENCES:

- IFSTA, Essentials of Fire Fighting, 2nd Edition, Chapter 16
- IFSTA, Fire Department Pumping Apparatus, 7th Edition, Chapter 6

PREPARATION: Many properties have private fire protection equipment provided to protect lives and preserve property. Each year fire departments respond to thousands of alarms in properties having standpipe systems. If this private protection equipment is to do the job for which it is designed, it is essential that we use correct procedures when operating them.



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PUMPING STANDPIPE SYSTEMS

PRESENTATION	APPLICATION
<p>I. STANDPIPE SYSTEM</p> <p>A. Design Goals</p> <ol style="list-style-type: none">1. Contain or control small fires<ol style="list-style-type: none">a. Occupant useb. Fire brigade usec. Fire department use2. Provide pressurized water discharge on each floor of multi-story structure3. Provide multiple pressurized water discharges in single story structures with large floor areas4. Provide capability for auxiliary system support<ol style="list-style-type: none">a. Engine support via fire department connection5. Make control of fires easier by eliminating need to lay hose from ground floor to fire floor <p>B. Fire Department System Support</p> <ol style="list-style-type: none">1. Fire department standpipe connection on exterior of protected property<ol style="list-style-type: none">a. Do not confuse with fire department connectionsb. Should be clearly identified2. Siamese with two or more 2 1/2" female connections3. Standpipe system types<ol style="list-style-type: none">a. Wet system	

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">(1) Water supplied to fire floor discharge(2) Need to support and supplementb. Dry system<ul style="list-style-type: none">(1) Fire department supplies all necessary water(2) Task of first or second in engine4. Support guidelines<ul style="list-style-type: none">a. If wet system, obtain water supply from feeder main not connected to standpipe systemb. If wet system, check to determine its operational status and capabilityc. Determine number of 2 1/2" lines necessary to support system<ul style="list-style-type: none">(1) Good idea to lay 2 whether necessary or notd. Discharge support pressure is a function of:<ul style="list-style-type: none">(1) Elevation to floor or floors fire is on(2) Friction loss<ul style="list-style-type: none">(a) In standpipe system(b) In supply lines to fire department connection(3) Pressure being supplied by wet pipe system(4) Desired nozzle pressure	



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PRESENTATION	APPLICATION
<ul style="list-style-type: none">e. Unless preplan indicates otherwise, do not supply more than 150 PSI discharge pressure5. Shutdown guidelines<ul style="list-style-type: none">a. Wait for order from proper fire officerb. Disengage pump but leave hoses attached in the event of re-kindle	



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SUMMARY:

The key to proper standpipe system operations includes Standard Operating Procedures (S.O.P.s) for utilizing the proper pumper and hose lines to supply the system. All control valves should be open and the correct engine pressure provided.

It is easy to overtax the water system feeding the standpipe if other engines are allowed to tie into it. This can be avoided if the fire department personnel have knowledge of the water system and auxiliary water sources.

The standpipe system should not be shut down until the proper officer so indicates and the supplying pumper should not be disconnected until after overhaul.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).