FIRE HOSE SYSTEMS

Fire Hose Systems Shall Never be Used on Electrically Energized Equipment

A fire hose is a high-pressure hose used to carry water to a fire to extinguish it. Outdoors, it is attached either to a fire engine or a fire hydrant. Indoors, it can be permanently attached to a building’s standpipe or plumbing system. The usual working pressure of a fire-hose can vary between 4.5 and 6.9 bar, while its bursting pressure can be up to 40 bar.

Standpipe and hose systems provide a means for manual application of water to fires in buildings. They do not take the place of automatic extinguishing systems, which are an important form of protection in large buildings.

The National Fire Protection Association defines Standpipe Fire Hose Station as an arrangement of piping, valves, hose connections, and allied equipment installed in a building or structure, with the hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hose and nozzles, for the purpose of extinguishing a fire, thereby protecting a building or structure and its contents in addition to protecting the occupants.

Fire hose systems shall be installed as specified by standard requirements that guarantee the flow and pressure requirements required for fire extinguishment. The operation of any hose - consequently with the operation of a fire pump assembly shall activate alarms in the building; to alert/notify the occupants of a fire condition and proper evacuation/response.

The benefit that makes fire hose stations a clear choice for fire protection is quick suppression.

Standpipe hose systems can be effectively used in the incipient stage (after everyone is safe and the fire department has been called), often extinguishing the fire before automatic systems activate.

Another benefit of standpipe fire hose stations is that they require only one person for operation. Standpipe hose systems are activated and operated by one person, and they do not depend on heat, smoke, or flame to spread before water is applied to the fire. This manual equipment provides total reliability in the hands of trained personnel.

Similar to other fire protection equipment, fire hoses also require routine inspection and maintenance. Due to the nature of the equipment – humid condition, it is common that some parts of the assemblies or the cabinet enclosure depreciate in time.

It is required that all depreciated materials be immediately replaced, defects corrected and readiness guaranteed at all times.

American standard (NFPA 14) fire hose systems fall under NFPA 14 requirements.

The occupant use approved size is the 1.5” diameter, flat synthetic or fiber hose with rubber lining, usually supplied in a hose rack assembly which has to be completely unfolded for use.

The European standard fire hose assembly shall comply with EN-671 standard requirement; in sizes of ¾” or 1” diameter rubber hose – readily usable at any condition (no need for complete laying of the hose).
While the American system requires the complete unfolding (laying of the hose) and the European System does not, the European system seems to provide a more practical use of the fire hose assembly – where a close proximity fire will require only a few meters of hose laying.

However, installing fire hose assemblies as per the American standard guarantees that the installed fire hose system be used for fire purposes only, rather than used for other casual activities; such as housekeeping/cleaning and car washing as well.

Systems and Equipment cannot be reliable unless properly maintained by professionals on a yearly basis.