

VIKING SYSTEM SPECIFICATIONS

DELUGE SYSTEM

Hydraulically Operated Deluge System

The fire sprinkler system shall be a hydraulically operated deluge system. The system shall be installed in conformance with the current Edition of N.F.P.A. 13, Standard for Installation of Sprinkler Systems. All materials installed shall adhere to the manufacturer's installation guidelines.

SYSTEM DEVICES

System Control Valve

The system control valve shall be a listed indicating type valve. The control valve shall be UL Listed and Factory Mutual Approved for fire protection installations. System control valve shall be rated for normal system pressure but in no case less than 175 PSI.

Control Valve Supervision

The system control valve shall be secured in the open position by means of a chain and lock or a valve supervisory switch connected to a constantly attended central station.

System Drain

The system main drain shall be sized according to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The system main drain shall be piped to an adequately sized drain or out an exterior wall. Drains that terminate out an exterior wall shall be equipped with a galvanized 45° elbow pointed towards an adequately sized splash-block.

Water Control Valve

The deluge systems shall utilize a 90° pattern or straight-through pattern type of deluge valve. The deluge valve shall be externally resettable by hydraulic means. The deluge valve shall employ a positive vent on the priming line to ensure that the deluge valve will not prematurely reset. The inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved, grooved by grooved or thread by thread, respectively. The deluge valve shall be capable of installation in the vertical or horizontal position. The deluge valve shall be UL Listed and Factory Mutual Approved. The deluge valve shall have a working pressure of 250 PSI. The valve trim shall be compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Viking Model E-1 or F-1.

Water Control Valve Trim

The deluge valve trim shall incorporate a pressure operated relief valve (PORV) of the same manufacturer as the deluge valve, to provide a hydraulic means to positively vent the priming water chamber. All deluge valve trim piping and devices shall be listed for use on a deluge system. The deluge valve trim shall be rated for 250 PSI working pressure. The deluge valve trim shall be galvanized. The deluge valve trim shall be equipped with an emergency manual release enclosed in a steel box with appropriate labeling. The deluge valve trim shall be equipped with alarm connections for the electrical or mechanical activation of water flow alarms. The Deluge Valve Trim shall be compatible with a Viking Model E-1 or F-1 Deluge Valve.

Water Control Valve Hydraulic Release System

The deluge valve shall utilize a hydraulic release. One of the following methods shall be incorporated in the release system:

- A. Deluge systems utilizing hydraulic release of the deluge valve prime water pressure shall employ a rate-of-rise release detector. The rate-of-rise detector shall activate release when a rise of temperature of 15°F over the period of one minute is experienced. The rate-of-rise release shall have a means of installing a 155°F fixed temperature release on the device. Rate-of-rise release shall be automatically resetting. The device shall be UL Listed and Factory Mutual Approved. Systems utilizing nitrogen as an air supply shall be factory tested for such application. The Rate-of-Rise Release manufacturer to be The Viking Corporation. Rate-of-Rise Release to be Viking Model C-1.
- B. Deluge systems utilizing hydraulic pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed

temperature releases shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Release manufacturer to be The Viking Corporation. Fixed Temperature Release to be Viking Model M.

- C. Deluge systems utilizing pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature sprinklers shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Sprinkler manufacturer to be The Viking Corporation. Fixed Temperature Sprinkler to be Viking Model M.

Water Flow Annunciation

Water flow through the system be announced audibly by one or both of the following methods:

- A. Water flow will activate a hydraulic powered water motor alarm by way of integral valve alarm line trim piping. The water motor alarm shall be connected to a water pressure retarding chamber to limit the propensity of unnecessary alarms. The water motor alarm shall be equipped with a rear closure plate to limit the access of foreign materials or accumulation of debris. The water motor alarm shall be UL Listed and Factory Mutual Approved for the application in which it is used. The Water Motor Alarm manufacturer to be The Viking Corporation. Water Motor Alarm to be Viking Model F-2 or G-2 (G-2 not UL/FM).
- B. Water flow will activate an alarm by way of an alarm pressure switch. The alarm pressure switch shall be compatible with system devices. The alarm pressure enclosure shall be UL Listed and Factory Mutual Approved for the application in which it is used. The alarm pressure switch shall have the ability to be wired for Class A or Class B service. Alarm Pressure Switch shall be Potter, model number PS101A or PS102A.

Release System Test Location

An auxiliary test device shall be provided if system release devices are located inaccessibly. The auxiliary test device shall be of the same type as utilized in the deluge valves release system.

Trimpac™ Pneumatically Operated Deluge System

The fire sprinkler system shall be a Viking TRIMPAC pneumatically operated deluge system. The system shall be installed in conformance with the current Edition of N.F.P.A. 13, Standard for Installation of Sprinkler Systems. All materials installed shall adhere to the manufacturer's installation guidelines.

SYSTEM DEVICES

Viking TRIMPAC™ Deluge Pneumatic Release

The deluge valve trim shall be a trim package for a deluge valve with a specific release device and release module for the desired application manufactured and tested in a metal enclosure. The metal enclosure shall be 16-gauge steel painted with a red epoxy powder coat. The standard trim normally required on a deluge valve will be enclosed in this single cabinet. The TRIMPAC shall provide access doors for the emergency release and alarm test valve for manual operation of these trim valves. The TRIMPAC shall be equipped with priming water pressure and water supply gauge view-ports for easy monitoring of water pressures. The enclosure shall be designed to protect the trim valves from inadvertent operation. The system shall be piped (or use the stainless steel hose package) from the valve body to the enclosure assembly. The TRIMPAC Model B-2 can be utilized for pneumatic release deluge systems with the Viking Model E-1 or F-1 Deluge valves in all sizes. The unit shall be rated for 250 PSI (1724 kPa). The Deluge Valve Trim shall be Viking TRIMPAC Deluge Pneumatic Release Model B-2 Part Number 13788B-2.

System Control Valve

The system control valve shall be a listed indicating type valve. The control valve shall be UL Listed and Factory Mutual Approved for fire protection installations. The system control valve shall be rated for normal system pressure but in no case less than 175 PSI.

Control Valve Supervision

The system control valve shall be secured in the open position by means of a chain and lock or a valve supervisory switch connected to a constantly attended central station.

System Drain

The system main drain shall be sized according to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The system main drain shall be piped to an adequately sized drain or out an exterior wall. Drains that terminate out an exterior wall shall be equipped with a galvanized 45° elbow pointed towards an adequately sized splash-block.

Water Control Valve

The deluge systems shall utilize a 90° pattern or straight-through pattern type of deluge valve. The deluge valve shall be externally resettable by hydraulic means. The deluge valve shall employ a positive vent on the priming line to ensure that the deluge valve will not prematurely reset. The inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved, grooved by grooved or thread by thread, respectively. The deluge valve shall be capable of installation in the vertical or horizontal position. The deluge valve shall be UL Listed and Factory Mutual Approved. The deluge valve shall have a working pressure of 250 PSI. The valve trim shall be compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Viking Model E-1 or F-1.

Pneumatic Actuator

Preaction or deluge systems utilizing a pneumatic release system shall employ a pneumatically actuated device between the detection and the operating systems. The pressure in the pneumatic release system shall be set at 30 PSI. This device shall actuate a release of water pressure in the deluge valve priming chamber upon release of the detection system. The actuator of the pneumatic release system shall be UL Listed and Factory Mutual Approved for use with the deluge valve installed. Pneumatic Actuator manufacturer to be The Viking Corporation. Pneumatic Actuator to be Viking Model H-1.

Water Control Valve Pneumatic Release System

When the deluge valve utilizes a pneumatic release. One of the following methods shall be incorporated in the release system:

- A. Deluge systems utilizing pneumatic release of the deluge valve prime water pressure shall employ a rate-of-rise release detector. The rate-of-rise detector shall activate release when a rise of temperature of 15°F over the period of one minute is experienced. The rate-of-rise release shall have a means of installing a 155°F fixed temperature release on the device. The rate-of-rise release shall be

- automatically resetting. The device shall be UL Listed and Factory Mutual Approved. Systems utilizing nitrogen as an air supply shall be factory tested for such application. The Rate-of-Rise Release manufacturer to be The Viking Corporation. Rate-of-Rise Release to be Viking Model C-1.
- B. Deluge systems utilizing pneumatic pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature releases shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Release manufacturer to be The Viking Corporation. Fixed Temperature Release Model to be Viking Model M.
 - C. Deluge systems utilizing pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature sprinklers shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Sprinkler manufacturer to be The Viking Corporation. Fixed Temperature Sprinkler to be Viking Model M.

Water Flow Annunciation

Water flow through the system shall be announced audibly by one or both of the following methods:

- A. Water flow will activate a pneumatic powered water motor alarm by way of integral valve alarm line trim piping. The water motor gong shall be connected to a water pressure retarding chamber to limit the propensity of unnecessary alarms. The water motor alarm shall be equipped with a rear closure plate to limit the access of foreign materials or accumulation of debris. The water motor alarm shall be UL Listed and Factory Mutual Approved for the application in which it is used. Water Motor Alarm manufacturer to be The Viking Corporation. Water Motor Alarm to be Viking Model F-2 or G-2. (G-2 not UL/FM)
- B. Water flow will activate an alarm by way of an alarm pressure switch. The alarm pressure switch shall be compatible with system devices. The alarm pressure enclosure shall be UL Listed and Factory Mutual Approved for the application in which it is used. The alarm pressure switch shall have the ability to be wired for Class A or Class B service. Alarm Pressure Switch shall be Potter, model number PS101A or PS102A.

Release System Test Location

An auxiliary test device shall be provided if system release devices are located inaccessibly. The auxiliary test device shall be of the same type as utilized in the deluge valves release system.

Pneumatically Operated Deluge System

The fire sprinkler system shall be a pneumatically operated deluge system. The system shall be installed in conformance with the current Edition of N.F.P.A. 13, Standard for Installation of Sprinkler Systems. All materials installed shall adhere to the manufacturer's installation guidelines.

SYSTEM DEVICES

System Control Valve

The system control valve shall be a listed indicating type valve. The control valve shall be UL Listed and Factory Mutual Approved for fire protection installations. The system control valve shall be rated for normal system pressure but in no case less than 175 PSI.

Control Valve Supervision

The system control valve shall be secured in the open position by means of a chain and lock or a valve supervisory switch connected to a constantly attended central station.

System Drain

The system main drain shall be sized according to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The system main drain shall be piped to an adequately sized drain or out an exterior wall. Drains that terminate out an exterior wall shall be equipped with a galvanized 45° elbow pointed towards an adequately sized splash-block.

Water Control Valve

The deluge systems shall utilize a 90° pattern or straight-through pattern type of deluge valve. The deluge valve shall be externally resettable by hydraulic means. The deluge valve shall employ a positive vent on the priming line to ensure that the deluge valve will not prematurely reset. The inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved, grooved by grooved or thread by thread, respectively. The deluge valve shall be capable of installation in the vertical or horizontal position. The deluge valve shall be UL Listed and Factory Mutual Approved. The deluge valve shall have a working pressure of 250 PSI. The valve trim shall be compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Viking Model E-1 or F-1.

Water Control Valve Trim

The deluge valve trim shall incorporate a pressure operated relief valve (PORV) of the same manufacturer as the deluge valve, to provide a hydraulic means to positively vent the priming water chamber. All deluge valve trim piping and devices shall be listed for use on a deluge system. The deluge valve trim shall be rated for 250 PSI working pressure. The deluge valve trim shall be galvanized. The deluge valve trim shall be equipped with an emergency manual release enclosed in a steel box with appropriate labeling. The deluge valve trim shall be equipped with alarm connections for the electrical or mechanical activation of water flow alarms. The Deluge Valve Trim shall be compatible with a Viking Model E-1 or F-1 Deluge Valve.

Pneumatic Actuator

Preaction or deluge systems utilizing a pneumatic release system shall employ a pneumatically actuated device between the detection and the operating systems. The pressure in the pneumatic release system shall be set at 30 PSI. This device shall actuate a release of water pressure in the deluge valve priming chamber upon release of the detection system. The actuator of the pneumatic release system shall be UL Listed and Factory Mutual Approved for use with the deluge valve installed. Pneumatic Actuator manufacturer to be The Viking Corporation. Pneumatic Actuator to be Viking Model H-1.

Water Control Valve Pneumatic Release System

When the deluge valve utilizes a pneumatic release, one of the following methods shall be incorporated in the release system:

- A. Deluge systems utilizing pneumatic release of the deluge valve prime water pressure shall employ a rate-of-rise release detector. The rate-of-rise detector shall activate release when a rise of temperature of 15°F over the period of one minute is experienced. The rate-of-rise release shall have a means of installing a 155°F fixed temperature release on the device. The rate-of-rise release shall be automatically resetting. The device shall be UL Listed and Factory Mutual Approved. Systems utilizing nitrogen as an air supply shall be factory tested for such application. The Rate-of-Rise Release manufacturer to be The Viking Corporation. Rate-of-Rise Release to be Viking Model C-1.

- B. Deluge systems utilizing pneumatic pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature releases shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Release manufacturer to be The Viking Corporation. Fixed Temperature Release to be Viking Model M.
- C. Deluge systems utilizing pilot line release systems shall incorporate a fixed temperature release device as part of the zone detection. If rate-of-rise detectors are utilized in the pilot line, a fixed temperature release shall be installed in the auxiliary release port of the rate-of-rise release detector. If the pilot line release is to utilize non-variable temperature detection, listed and approved fixed temperature sprinklers shall be installed according to the manufacturer's specifications and installation guidelines. The Fixed Temperature Sprinkler manufacturer to be The Viking Corporation. Fixed Temperature Sprinkler to be Viking Model M.

Water Flow Annunciation

Water flow through the system shall be announced audibly by one or both of the following methods:

- A. Water flow will activate a pneumatic powered water motor alarm by way of integral valve alarm line trim piping. The water motor gong shall be connected to a water pressure retarding chamber to limit the propensity of unnecessary alarms. The water motor alarm shall be equipped with a rear closure plate to limit the access of foreign materials and accumulation of debris. The water motor alarm shall be UL Listed and Factory Mutual Approved for the application in which it is used. Water Motor Alarm manufacturer to be The Viking Corporation. Water Motor Alarm to be Viking Model F-2 or G-2. (G-2 not UL/FM)
- B. Water flow will activate an alarm by way of an alarm pressure switch. The alarm pressure switch shall be compatible with system devices. The alarm pressure enclosure shall be UL Listed and Factory Mutual Approved for the application in which it is used. The alarm pressure switch shall have the ability to be wired for Class A or Class B service. Alarm Pressure Switch shall be Potter, model number PS101A or PS102A.

Release System Test Location

An auxiliary test device shall be provided if system release devices are located inaccessibly. The auxiliary test device shall be of the same type as utilized in the Deluge valves release system.

TRIMPAC™ Electrically Operated Deluge System

The fire sprinkler system shall be a Viking TRIMPAC electrically operated deluge system. The system shall be installed in conformance with the current Edition of N.F.P.A. 13, Standard for Installation of Sprinkler Systems. All materials installed shall adhere to the manufacturer's installation guidelines.

SYSTEM DEVICES

Viking TRIMPAC™ Deluge Electric Release

The deluge valve trim shall be a trim package for a deluge valve with a specific release device and release module for the desired application manufactured and tested in a metal enclosure. The metal enclosure shall be 16-gauge steel painted with a red epoxy powder coat. The standard trim normally required on a deluge valve will be enclosed in this single cabinet. The TRIMPAC shall provide access doors for the emergency release and alarm test valve for manual operation of these trim valves. The TRIMPAC shall be equipped with priming water pressure and water supply gauge view-ports for easy monitoring of water pressures. The enclosure shall be designed to protect the trim valves from inadvertent operation. The system shall be piped (or use the stainless steel hose package) from the valve body to the enclosure assembly. The TRIMPAC Model B-6 can be utilized for electric release deluge systems with the Viking Model E-1 or F-1 Deluge Valves in all sizes. The unit shall be rated for 250 PSI (1724 kPa). The Deluge Valve Trim shall be Viking TRIMPAC Deluge Electric Release Model B-1, part number 13787B-1.

System Control Valve

The system control valve shall be a listed indicating type valve. The control valve shall be UL Listed and Factory Mutual Approved for fire protection installations. The system control valve shall be rated for normal system pressure but in no case less than 175 PSI.

Water Control Valve

The deluge systems shall utilize a 90° pattern or straight-through pattern type of deluge valve. The deluge valve shall be externally resettable by hydraulic means. The deluge valve shall employ a positive vent on the priming line to ensure that the deluge valve will not prematurely reset. The inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved or grooved by grooved, respectively. The deluge valve shall be capable of installation in the vertical or horizontal position. The deluge valve shall be UL Listed and Factory Mutual Approved. The deluge valve shall have a working pressure of 250 PSI. The valve trim shall be compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Viking Model E-1 or F-1.

Water Control Valve Release Control Panel

The deluge valve release control panel shall be 120 VAC or 220 VAC powered with a 24 hour D/C backup power supply. The deluge valve release panel shall be capable of accepting cross-zoned detection as the means of system release. The deluge valve release control panel shall conform to N.F.P.A. 70, N.F.P.A. 72 and all other applicable codes. The deluge valve release control panel shall be listed for use with a Viking Model E-1 or F-1 deluge valve. The Deluge Panel shall be a Viking Model VFR-400 Release Control Panel.

Solenoid Valve

An electric solenoid valve shall be utilized to release the priming chamber water pressure. The solenoid valve shall be 24 VAC and conform to N.F.P.A. 70. The Solenoid shall be listed for use with a Viking Model E or F Deluge Valve.

Discharge Devices

(Insert applicable product specification.)

Supplemental Detection System

Electrical devices utilized in the supplemental detection system shall be compatible with the release control panel. Installation of electrical supplemental detection system shall be in accordance with N.F.P.A. 70, N.F.P.A. 72 and local installation requirements. The detection system shall be inspected, tested and maintained in accordance with all applicable standards and codes. (Insert applicable product specification.)

System Piping

System piping shall conform to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. System piping shall be listed for the maximum system pressure it is to be exposed to. All system piping shall be metallic and shall be protected against corrosion if corrosive conditions exist.

Hangers

Deluge sprinkler system hangers shall conform to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The system piping shall be substantially supported to prevent sway or thrust. The hanging of non-system components from the sprinkler piping shall be strictly prohibited. The use of non-metallic hanger materials shall be prohibited unless expressed otherwise.

Fittings

Pipe fittings installed on the deluge sprinkler system shall be in conformance with N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The fittings shall be listed for use at the system pressures to be encountered. Fittings shall be corrosion resistant if they are to be installed in a corrosive atmosphere.

Electrically Operated Deluge System

The fire sprinkler system shall be an electrically operated deluge system. The system shall be installed in conformance with the current Edition of N.F.P.A. 13, Standard for Installation of Sprinkler Systems. All materials installed shall adhere to the manufacturer's installation guidelines.

SYSTEM DEVICES

System Control Valve

The system control valve shall be a listed indicating type valve. The control valve shall be UL Listed and Factory Mutual Approved for fire protection installations. The system control valve shall be rated for normal system pressure but in no case less than 175 PSI.

Water Control Valve

The deluge systems shall utilize a 90° pattern or straight-through pattern type of deluge valve. The deluge valve shall be externally resettable by hydraulic means. The deluge valve shall employ a positive vent on the priming line to ensure that the deluge valve will not prematurely reset. The inlet and outlet connections of deluge valve can be flanged by flanged, flanged by grooved or grooved by grooved, respectively. The Deluge valve shall be capable of installation in the vertical or horizontal position. The deluge valve shall be UL Listed and Factory Mutual Approved. The deluge valve shall have a working pressure of 250 PSI. The valve trim shall be compatible and shall be installed following the manufacturer's specifications. The Deluge Valve manufacturer to be The Viking Corporation. Deluge Valve to be Viking Model E-1 or F-1.

Water Control Valve Trim

The deluge valve trim shall incorporate a pressure operated relief valve (PORV) of the same manufacturer as the deluge valve, to provide a hydraulic means to positively vent the priming water chamber. All deluge valve trim piping and devices shall be listed for use as deluge system. The deluge valve trim shall be galvanized and rated for 250 PSI working pressure. The Deluge Valve Trim shall be compatible with a Viking Model E-1 or F-1 Deluge Valve.

Water Control Valve Release Control Panel

The deluge valve release control panel shall be 120 VAC or 220 VAC powered with a 24 hour D/C backup power supply. The deluge valve release panel shall be capable of accepting cross-zoned detection as the means of system release. The deluge valve release control panel shall conform to N.F.P.A. 70, N.F.P.A. 72 and all other applicable codes. The deluge valve release control panel shall be listed for use with a Viking Model E-1 or F-1 deluge valve. The Deluge Panel shall be a Viking Model VFR-400 Release Control Panel.

Solenoid Valve

An electric solenoid valve shall be utilized to release the priming chamber water pressure. The solenoid valve shall be 24 VAC and conform to N.F.P.A. 70. The Solenoid shall be listed for use with a Viking Model E-1 or F-1 Deluge Valve.

Discharge Devices

(Insert applicable product specification.)

Supplemental Detection System

Electrical devices utilized in the supplemental detection system shall be compatible with the release control panel. Installation of electrical supplemental detection system shall be in accordance with N.F.P.A. 70, N.F.P.A. 72 and local installation requirements. The detection system shall be inspected, tested and maintained in accordance with all applicable standards and codes. (Insert applicable product specification.)

System Piping

System piping shall conform to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. System piping shall be listed for the maximum system pressure it is to be exposed to. All system piping shall be metallic and shall be protected against corrosion if corrosive conditions exist.

Hangers

Deluge sprinkler system hangers shall conform to N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The system piping shall be substantially supported to prevent sway or thrust. The hanging of non-system components from the sprinkler piping shall be strictly prohibited. The use of non-metallic hanger materials shall be prohibited

unless expressed otherwise.

Fittings

Pipe fittings installed on the deluge sprinkler system shall be in conformance with N.F.P.A. 13, Standard for Installation of Sprinkler Systems. The fittings shall be listed for use at the system pressures to be encountered. Fittings shall be corrosion resistant if they are to be installed in a corrosive atmosphere.