

Part 1 General

1.1 SUMMARY

.1 Content of this Section

- .1 Materials, equipments and installation methods associated with piping network and hose connection.
- .2 Materials, equipments and installation methods associated with wet pipe sprinkler system serving heated areas
- .3 Materials, equipments and installation methods associated with dry pipe sprinkler system

1.2 REFERENCE STANDARDS

- .1 Unless otherwise specified, execute work as per the following standards and regulations:
 - .1 Provincial, Municipal and Federal regulations, related to construction and fire, and as approved by the Provincial Fire Marshall and the Fire Commissioner of Canada.
 - .2 Factory Mutual System Homologation Guide
 - .3 National Fire Protection Association Standards:
 - .4 NFPA 13, 2010 Edition - Installation of Sprinkler Systems;
 - .5 ASTM A 153A/153M, Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.

1.3 SHOP DRAWINGS

- .1 Before beginning work, submit shop drawings for inspection, in accordance with General Requirements of volume I specifications and of IAO (Owners' Insurers) and the Authority having jurisdiction.

1.4 CERTIFICATION

- .1 Submit a written certificate, stating that the foreseen quantities of automatic sprinkler heads are in compliance with the indications and requirements of the authority having jurisdiction.

1.5 LOCATION OF SPRINKLER HEAD

- .1 Respect symmetry regarding the sprinkler head positioning relative to ceiling tiles and accessories.

Part 2 PRODUCTS

2.1 PIPING AND FITTINGS

- .1 Piping
 - .1 Wet System: black steel according to ASTM A53, for a minimum operating pressure of 1200 kPa (175 PSI) and maximum of 2070 kPa (300 PSI).
 - .2 To weld (not permitted for galvanized steels pipe) or to groove by rolling
 - Up to NPS 50 mm (2"); schedule 40;
 - NPS 65 mm (2½") and greater; schedule 10.
 - .3 To be threaded or to groove by cutting
 - All sizes, schedule 40.
 - .4 Pipes with a corrosion resistance ratio (CCR) below 1 must not be used.
- .2 Fittings:
 - .1 Fittings for pressure 1200 kPa (175 PSI)
 - Wet systems
 - Threaded cast iron: class 125, ANSI B16.4;
 - Flanged cast iron: class 125, ANSI B16.1;
 - Threaded malleable iron: class 150, ANSI B16.3;
 - Steel to be welded: ASTM-A-234;
 - Flanged, for class 300 piping and fittings ANSI B16.5;
 - Couplings and fittings for grooved piping:
 - Acceptable products: Grinnel, Victaulic, Gruvlock or approved equivalent.
 - .3 Flange bolts: square or hexagonal head bolts, heavy-duty hexagonal nuts, ASTM A307.
 - .4 Flange gaskets: 1.6 mm (1/16") regular or red rubber woven reinforced; ANSI B16.20 and ANSI B16.21.
 - .5 Gaskets for grooved piping.
 - .6 Pipe hangers and supports
 - .1 Support from structural members. Where structural support does not exist suspend hangers from steel channels or angles. Provide and install supplementary structural members. Obtain approval before using vertical expansion shields. Do not suspend from metal deck. Conform to equipment manufacturer recommendations.
 - .2 Acceptable products: Anvil 260 and 261, UL and FM.

2.2 AUTOMATIC SPRINKLER HEADS

- .1 Standard pendant sprinkler head as per the existing installation.

Part 3 EXECUTION

3.1 INSPECTION

- .1 It is prohibited to recess, paint or conceal piping, accessories or work prior to their inspection or approval by the authority having jurisdiction or by an authorized representative.

3.2 INSTALLATION

- .1 Install systems in accordance with prescriptions.
- .2 Allow for expansion and contraction when installing pipe hangers.
- .3 When a sprinkler head is installed above an obstruction larger than 1.2 m (48") in width, install a sprinkler head under the obstruction.
- .4 When shown on drawings as "relocated", install new sprinkler heads.

END OF SECTION