

## **SECTION 224060**

### **HANGERS, SUPPORTS AND FIRE STOPPING**

#### **PART ONE – GENERAL:**

##### **1.01 PIPE SUPPORTS:**

- A. Perforated strap hangers, chains, or wire will not be permitted on the job.
- B. Support horizontal ferrous piping where run above ground with galvanized split ring hangers, turnbuckles and threaded rods, as manufactured by Grinnell Co., PHD Manufacturing, Michigan Hanger Co., or B-Line Systems. Hangers to be securely fastened to structure and spaced not over 5 feet apart for cast iron pipes and 8 feet apart for other ferrous pipes. Locate hangers as close to hubs or bands as possible. Hangers shall be equal to Michigan Hanger Co. #401.
- C. Support horizontal copper piping where run above ground and all insulated pipe by means of oversize hangers with integral factory installed insulation shields. Hangers shall be spaced not over 6 feet apart for 1-1/2" and smaller pipes, and not over 8 feet apart for 2" and larger pipes. Insulation shall be continuous through the hangers. Hangers shall be equal to M-Co. #403 or PHD #455.
- D. Support horizontal "plastic" acid waste piping by means of PHD #450 V clevis hanger and #450T support trough. Provide hangers on each side of trough joints, 10' length.
- E. Furnish and install intermediate or supplementary steel required for proper support of piping and installation of hangers. Group parallel runs of pipe and support by common angle hangers of adequate dimensions.
- F. Where pipe smaller than 1" is installed along the face of the wall, install Grinnell #153 hanger flange and CT-138R split-ring tubing hanger. Bolt to wall with lag screws, or toggle bolts. Contractor shall cut and seal pipe insulation around each hanger.
- G. Where indicated and detailed on plans, support all domestic water lines in corridors on galvanized angle iron frames. Frames shall be bolted to block walls or through bolted to metal studs with oversized fender washers. Detail indicates the maximum size required. Submit shop drawing from a Registered Seismic Engineer for each condition for any condition of lesser number of lines, smaller diameter pipes, smaller angle or thinner angle iron. Frames shall be welded, drilled, cleaned and then hot dipped galvanized.
- H. Provide seismic cable braces on drain, waste, vent, water, gas, and or specialty piping as noted on detail.
- I. See details for fireproofing of pipes and pipe sleeves in firewalls and floors. Extend insulation on all pipes through pipe sleeve in firewalls or floors. Contractor shall use an "UL" assembly without substitution. See hourly rating noted on each plan to identify firewalls. All pipe penetrations of fire rated walls or floors (except coredrilled floors) shall have a schedule 40 steel sleeve.

#### **END OF SECTION**