PART 1 GENERAL

1.1 REFERENCES

.1 American National Standards Institute (ANSI).

.1 ANSI B31.1, Power Piping.

.2 Canadian General Standards Board (CGSB).

.1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer

1.2 GENERAL REQUIREMENTS

.1 Pipe supports in accordance with requirements of ANSI B31.1.

.2 Provide hangers and supports to secure equipment in place, prevent vibration, maintain grade, provide for expansion and contraction and to accommodate insulation; provide insulation protection saddles.

.3 Install supports of strength and rigidity to suit loading without unduly stressing building. Locate adjacent to equipment to prevent undue stresses in equipment.

.4 Select hangers and supports for the service and in accordance with the manufacturer's recommended maximum loading. Hangers safety factor of 5 to 1.

.5 Fasten hangers and supports to building steel or inserts in concrete construction.

.6 Provide and set sleeves required for equipment, including openings required for placing equipment.

1.3 APPROVALS

.1 Obtain approval from the Departmental Representative prior to drilling for supports for piping systems.

.2 Use of equipment for hanger supports is not permitted.

.3 Use of perforated band iron, wire or chain as hangers is not permitted.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Supports are to be used in the meter vault.

PART 2 PRODUCTS

2.1 INSERTS

.1 Inserts: malleable iron case or galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, and lugs for attaching to forms.

.2 Size inserts to suit threaded hanger rods.

2.2 PIPE HANGERS AND SUPPORTS

.1 Hangers: Pipe sizes 15 mm to 40 mm: Adjustable wrought steel ring.

.2 Hangers: Pipe sizes 50 mm to 100 mm and Cold Pipe Sizes 150 mm Over: Adjustable wrought steel clevis.

.3 Design hangers so they cannot become disengaged by movements of supported pipe.

2.3 HANGER RODS

.1 Provide steel hanger rods, threaded both ends, threaded one end, or continuous threaded.

2.4 FLASHING

.1 Steel Flashing: 0.55 mm galvanized steel.

2.5 SLEEVES

.1 Round Ducts: Form sleeves with galvanized steel.

2.6 FINISHES ON HANGER RODS, HANGERS, AND SUPPORTS

.1 All steel hanger rods, hangers and supports to be galvanized or factory primed with alkyd red oxide primer to CAN/CGSB-1.40-97.

PART 3 EXECUTION

3.1 INSERTS

.1 Use inserts for suspending hangers from reinforced concrete.

.2 Set inserts in position in advance of concrete work. Provide reinforcement rod in concrete as required.

.3 Where concrete slabs form finished ceiling, finish inserts flush with slab surface.

3.2 PIPE HANGERS AND SUPPORTS

.1 Support horizontal steel and copper piping as follows:

Nominal Pipe Size	Distance Between Supports	Hanger Rod Diameter
15 mm	1.8 m	10 mm
20 mm to 40 mm	1.8 m	10 mm
50 mm & 65 mm	3.0 m	10 mm
80 mm & 100 mm	3.6 m	16 mm
150 mm to 300 mm	4.3 m	22 mm
350 mm to 450 mm	6.1 m	25 mm

.2 Install hangers to provide minimum 12 mm clear space between finished covering and adjacent work.

.3 Place a hanger within 300 mm of each horizontal elbow.

.4 Use hangers that are vertically adjustable 40 mm minimum after piping is erected.

.5 Where practical, support riser piping independently of connected horizontal piping.

3.3 SLEEVES

.1 Set sleeves in position in advance of concrete work. Provide suitable reinforcing around sleeves.

END OF SECTION