

**PART 1 - GENERAL****1.1 RELATED SECTIONS**

- .1 Section 21 05 01 - Common Work Results for Mechanical.

**1.2 REFERENCE**

- .1 Furthermore, the works will be done in accordance with any other code or norm having jurisdiction, as per the latest edition, notably including, but not limited to:
  - .1 Canadian General Standards Board (CGSB).
    - .1 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.

**1.3 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

**1.4 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.

**PART 2 - PRODUCTS**

- .1 Not Used.

**PART 3 - EXECUTION****3.1 CONNECTIONS TO EQUIPMENT**

- .1 In accordance with manufacturer's instructions unless otherwise indicated.
- .2 Use valves and either unions or flanges for isolation and ease of maintenance and assembly.

**3.2 CLEARANCES**

- .1 Provide clearance around systems, equipment and components for observation of operation, inspection, servicing, and maintenance, and as recommended by manufacturer.

## INSTALLATION OF PIPEWORK

- .2 Provide space for disassembly, removal of equipment and components (whichever is greater) without interrupting operation of other system, equipment, and components of network. Fitted out space has to be of dimensions as indicated on drawings or as recommended by manufacturer, the most raised value must be retained.

**3.3 PIPEWORK INSTALLATION**

- .1 Installed oil piping as recommended in CSA B139-09 Standard.
- .2 Installed gas piping as recommended in CSA B149.1-10 Standard.
- .3 Screwed fittings jointed with Teflon tape.
- .4 Protect openings against entry of foreign material.
- .5 Assemble piping using fittings manufactured to ANSI Standards.
- .6 Install exposed piping, equipment, rectangular cleanouts, and similar items parallel or perpendicular to building lines.
- .7 Slope piping, except where indicated, in direction of flow for positive drainage and venting.
- .8 Group piping wherever possible or as indicated.
- .9 Ream pipes, remove scale, and other foreign material inside out before assembly. Clean also when Work is completed.
- .10 Use eccentric reducers at pipe size changes to ensure positive drainage and venting.
- .11 Provide for thermal expansion as indicated.

**3.4 SLEEVES**

- .1 Sealing.
  - .1 Foundation walls and below grade floors: Fire retardant, waterproof non-hardening mastic.
  - .2 Ensure no contact between copper pipe or tube and sleeve.

**3.5 FLUSHING OUT OF PIPING SYSTEMS**

- .1 Preparatory to acceptance, clean and refurbish equipment and leave in operating condition.

**3.6 PRESSURE TESTING OF EQUIPMENT AND PIPEWORK**

- .1 Advise Departmental Representative 48 hours minimum prior to performance of pressure tests.
- .2 Pipework: test as specified in relevant of 23 Division.
- .3 Maintain specified test pressure without loss for 4 hours minimum unless specified for longer period of time in relevant of 23 Division.
- .4 Prior to tests, isolate equipment and other parts which are not designed to withstand test pressure or media.
- .5 Conduct tests in presence of Departmental Representative.
- .6 Pay costs for repairs or replacement, retesting, and making good. Departmental Representative to determine whether repair or replacement is appropriate.

**3.7 EXISTING SYSTEMS**

- .1 Connect into existing piping systems at times approved by Departmental Representative.
- .2 Request written approval 10 days minimum prior to commencement of Work.
- .3 Be responsible for damage to existing plant by this Work.
- .4 Ensure daily clean-up of existing areas.

**3.8 CLEANING**

- .1 Clean in accordance with Section 01 74 11 - Cleaning.

**END OF SECTION**