

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- .1 ASME
 - .1 ASME Boiler and Pressure Vessel Code (BPVC), Section VII- (Latest Edition).
- .2 ASTM International
 - .1 ASTM A 47/A 47M- (Latest Edition), Standard Specification for Ferritic Malleable Iron Castings.
 - .2 ASTM A 278/A 278M- (Latest Edition), Standard Specification for Grey Iron Castings for Pressure-Containing Parts for Temperatures up to 650 degrees F (350 degrees C).
 - .3 ASTM A 516/A 516M- (Latest Edition), Standard Specification for Pressure Vessel Plates, Carbon Steel, for Moderate - and Lower - Temperature Service.
 - .4 ASTM A 536- (Latest Edition), Standard Specification for Ductile Iron Castings.
 - .5 ASTM B 62- (Latest Edition), Standard Specification for Composition Bronze or Ounce Metal Castings.
- .3 CSA Group
 - .1 CSA B51- (Latest Edition), Boiler, Pressure Vessel, and Pressure Piping Code.
- .4 Provincial Boiler, Pressure Vessel and Compressed Gas Regulations.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for expansion tanks, air vents, separators, valves, and strainers and include product characteristics, performance criteria, physical size, finish and limitations.

1.3 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for hydronic specialties for incorporation into manual.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory

packaging, labelled with manufacturer's name and address.

- .3 Storage and Handling Requirements:
 - .1 Store materials off ground indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect hydronic specialties from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 AUTOMATIC AIR VENT

- .1 Standard float vent: brass body and NPS 1/8 connection and rated at 690 kPa working pressure.
- .2 Industrial float vent: cast iron body and NPS 1/2 connection and rated at 860 kPa working pressure.
- .3 Float: solid material suitable for 115 degrees C working temperature.

2.2 PIPE LINE STRAINER

- .1 NPS 1/2 to 2: bronze body to ASTM B 62, screwed connections, Y pattern.
- .2 NPS 2 1/2 to 12: cast steel body to ASTM A 278/A 278M, Class 30 or cast iron body to ASTM A 278/A 278M, Class 30 flanged connections.
- .3 NPS 2 to 12: T type with ductile iron body to ASTM A 536 or malleable iron body to ASTM A 47M, grooved ends.
- .4 Blowdown connection: NPS 1.
- .5 Screen: stainless steel brass with 1.19 mm perforations.
- .6 Working pressure: 860 kPa.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for hydronic specialties installation in accordance with manufacturer's written instructions.
- .2 Visually inspect substrate in presence of Departmental Representative.

- .3 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
- .4 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and data sheets.

3.3 GENERAL

- .1 Run drain lines and blow off connections to terminate above nearest drain.
- .2 Maintain adequate clearance to permit service and maintenance.
- .3 Should deviations beyond allowable clearances arise, request and follow Departmental Representative's directive.
- .4 Check shop drawings for conformance of tappings for ancillaries and for equipment operating weights.

3.4 STRAINERS

- .1 Install in horizontal or down flow lines.
- .2 Ensure clearance for removal of basket.
- .3 Install ahead of each pump.
- .4 Install ahead of each automatic control valve and radiation and as indicated.

3.5 AIR VENTS

- .1 Install at high points of systems.
- .2 Install gate valve on automatic air vent inlet. Run discharge to nearest drain or service sink.

3.6 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment

in accordance with Section 01 74 11 - Cleaning.

END OF SECTION