USask Master Specification Directions: The master specifications are intended to be incorporated into the Consultant's final, project specific specification package. The project specific specifications are expected to include any and all sections or portions of sections (Part 1, Part 2, Part 3) that are required to create a fully executable project specification. USask Master Specs only provide information that USask **requires** be a part of the final specification package. Components or sections not included in the Master USask Specifications may still be required for a complete, well-designed project. **It is the consultant's responsibility to ensure all specifications match USask requirements. Any deviations or revisions to any section included in the master specifications requires written consent from the USask Engineering department. The consultant is liable for any omissions, errors, or incorrect equipment or components supplied to site.**
The Master Specifications shall be used in conjunction with USask's Design Guidelines. Any conflicts shall be brought to the attention of USask Engineering staff for clarification.

Part 1 General

Part 2 Products

2.1 MATERIALS

.1 Cast steel: to ASTM A216/A216M.

.2 Cast iron: to ASTM A278, Class 300.

.3 Bronze: to ASTM B62.

.4 Stainless steel: to ASTM A351/A351M.

2.2 FLOAT AND THERMOSTATIC STEAM TRAPS 0-110 KPA

.1 Materials: body - cast iron; valve - chrome with stainless steel seat; float and mechanisms - stainless steel; air vent - stainless steel thermostatic type.

.2 Acceptable Manufacturers: Armstrong or approved equal.

2.3 INVERTED BUCKET STEAM TRAP 0-1380 KPA

.1 Application: for high pressure, non-modulating steam services as indicated.

.2 Materials: body - cast iron; valve - stainless steel; bucket-stainless steel, with bimetal air vent.

.3 Acceptable manufacturers: Armstrong or approved equal.

2.4 VACUUM BREAKERS 0.85-68 KPA

.1 Application: on inlets to steam coils, heat exchangers, and as indicated.

.2 Materials: body and cap - lead-free, stainless steel; spring - stainless steel; stem and seat - lead-free stainless steel.

.3 Capacity: as indicated.

.4 Approved manufacturers: B&G, Spirax Sarco, Kitz.

2.5 PRESSURE REDUCING VALVE -EXTERNAL PILOT OPERATED

.1 Location: as indicated.

.2 Self operating, external pilot, single seat, diaphragm operated, dead end shutoff, enclosed spring chamber main and pilot valve.

.3 Connections:

.1 Under NPS 2: screwed ends.

.2 NPS 2-1/2 and over: flanged ends.

.4 Main valve:

.1 Body: cast iron to ASTM A126, Class B.

.2 Diaphragm: stainless steel.

.3 Seat rings: stainless steel to ASTM A276.

.4 Disc: stainless steel.

.5 Stem: stainless steel to ASTM A276.

.6 Spring: carbon steel.

.7 Bolting: carbon steel.

.5 Pilot valve:

.1 Body: cast iron to ASTM A126, Class B.

.2 Diaphragm: stainless steel.

.6 Capacity:

.1 As indicated.

.7 Acceptable manufacturers: Armstrong, Spirax Sarco.

2.6 SAFETY AND RELIEF VALVES

.1 Spring loaded type of cast iron with high capacity and semi-nozzle and to ASME code.

.2 Material: body- cast iron; valve - housing cast bronze; spring - steel, cadmium plated; bronze/brass trim.

.3 Capacity: as indicated.

.4 Acceptable manufacturers: Spence, Apollo.

2.7 PIPE LINE STRAINERS UP TO NPS 2

.1 Application: ahead of condensate pumps, steam traps, control valves and elsewhere as indicated.

.2 Working pressure: 1724 kPa.

.3 Body: cast iron.

.4 Connections: screwed.

.5 Screen: stainless steel with 0.8 mm perforations.

.6 Acceptable manufacturers: Armstrong, Victaulic, Spirax Sarco, Colton.

2.8 PIPE LINE STRAINERS NPS 2-1/2 AND OVER

.1 Application: ahead of condensate pumps, steam traps, control valves as indicated.

.2 Working pressure: 862 kPa.

.3 Body: cast iron.

.4 Connections: flanged.

.5 Blowdown connection: NPS 1-1/4 complete with gate valve and cap.

.6 Screen: stainless steel with 3.2 mm perforations.

.7 Acceptable manufacturers: Armstrong, Victaulic, Spirax Sarco, Colton.

Part 3 Execution

3.1 APPLICATION

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

.2 Maintain proper clearance around equipment to permit maintenance.

3.2 STRAINERS

.1 Install as indicated.

.2 Ensure clearance for removal of basket.

.3 Install valved blow-down as indicated.

3.3 SAFETY RELIEF VALVE

.1 Pipe to atmosphere independent of other vents and in accordance with applicable code.

.2 Support discharge pipe against reaction forces and to take up thermal movement.

.3 Drain pipe from drip pan elbow to terminate over floor drain.

3.4 STEAM TRAPS

.1 Install unions on inlet and outlet.

3.5 PRESSURE REDUCING VALVES

.1 Install on 3-valve bypass with strainer on inlet.

.2 Pipe as indicated. Follow manufacturer's installation instructions.

3.6 FLASH TANKS

.1 Pipe arrangement as indicated.

3.7 PERFORMANCE VERIFICATION

.1 In accordance with Section 23 08 01- Performance Verification of Mechanical Piping Systems.

END OF SECTION