

DIVISION 40 – PROCESS INTEGRATION
40 41 00 PROCESS PIPING AND EQUIPMENT HEAT TRACING

PART 1 - GENERAL

1.01 DESIGN CONSIDERATION

- A. Heater selection shall be based on maintaining the pipe at 40 degrees F with fiberglass insulation at minimum ambient conditions with a 20MPH wind.
- B. Breaker sizing shall be based on a heater start up temperature of 32 degrees F.
- C. Heater cable shall be powered at designated voltage without use of transformers.

PART 2 - PRODUCTS

2.01 HEATERS

- A. Heaters shall be parallel self regulating with a radiation cross-linked heating core extruded continuously over two parallel bus wires. The heating cable shall vary power output inversely with temperature such that power output decreases as pipe temperature increases.
- B. Heater construction shall include a primary jacket thermally bonded to the heating core, a flame retarded polyolefin dielectric jacket, a tinned-copper braid for ground path, and a waterproof modified polyolefin outer jacket.
- C. Heaters shall be Nelson CLT or approved equivalent.

2.02 CONTROLS & MONITORING

- A. The heat tracing system shall be controlled by an ambient sensing thermostat in a NEMA-rated enclosure, with appropriate contactors set to energize the heat tracing system when ambient temperature decreases to 40 degrees F.
- B. Thermostat shall be Nelson TF4X40 (fixed set point) or TA4X140 (15-140 degrees F adjustable) or equivalent.
- C. Provide current proof on heat trace branch circuits. Use Veris Industries Hawkeye series.

PART 3 - EXECUTION

3.01 EXECUTION

- A. Cable shall be installed in a straight run(s) and without heat transfer aids
- B. All circuits shall be protected with 30mA ground fault interruption devices.

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C. Electric traced signs are to be installed at intervals of 15 feet.

END OF SECTION