

# **PART E**

# **SPECIFICATIONS**

## **PART E - SPECIFICATIONS**

### **GENERAL**

#### **E1. GENERAL**

E1.1 These Specifications shall apply to the Work.

#### **E2. GOODS**

E2.1 The Contractor shall supply Rosemount Magnetic Flowmeter system comprising of a Rosemount Model 8705TSA180C1W0N0 Magnetic Flowmeter Flowtube coupled with a Rosemount Model 8712DR12N0M4 Magnetic Flowmeter transmitter in accordance with the requirements hereinafter specified.

E2.2 The magnetic flowmeter system shall be powered by 120V ac, 60 Hz, and not consume more than 30 watts.

E2.3 The magnetic flowmeter system shall include an 18" flowtube made of 304 Stainless Steel pipe and the liner material shall be Teflon.

E2.4 The magnetic flowmeter system shall be accurate to 0.5% of flow rate between 1 and 30ft/sec and be capable of reading flow rates as low as 0.04 ft/sec, and the accuracy includes the combined effects of linearity, hysteresis, repeatability, and calibration uncertainty.

E2.5 The flowtube shall be able to withstand IP 68 submergence protection and NEMA 4X environments.

E2.6 The flowtube shall be flanged and all welded flanged flow tube bodies must be a fully welded steel design, and must not rely on gaskets to fully protect the coils and electrode wiring.

E2.7 Flange material shall be Carbon Steel; ASME B16.5 (ANSI) Class 150 rated.

E2.8 The flowtube electrode material shall be 316L Stainless Steel.

E2.9 The transition between the flow tube and the junction box must be potted to prevent process fluids from reaching the electronics or conduit in the event of a lining or electrode failure.

E2.10 The field termination and electronics must be in separate, fully isolated compartments to prevent moisture or contamination to enter these compartments.

E2.11 The electronics must be temperature compensated to maintain system accuracy of 0.5% or better across the stated temperature range.

E2.12 All flow tubes must be hydrostatically tested to 1.5 times their rated pressure.

E2.13 All local operator interfaces must be accessible without opening covers.

E2.14 The remote mounted transmitter shall utilize readily available Beldon cables between the flow tube and the transmitter.

E2.15 The transmitter shall be able to withstand IP 65 submergence protection and NEMA 4X environments.

E2.16 The transmitter shall be a DC microprocessor based magnetic flowmeter transmitter with HART based digital communications capabilities, 4-20 mA o/p and independently scalable pulse/frequency output.

- E2.17 The transmitter shall be powered by 120vac, 60 Hz. and remote mounted (wall- mount or 2” pipe mounting configurations)
- E2.18 The transmitter shall have an illuminated LCD indicating meter for indicating flow rates, flow totalizer, etc., and display 2 lines of a minimum of 20 characters.
- E2.19 The transmitter and flowtube shall be certified for use in a hazardous area by a recognized authority (FM/CSA Class 1, Div. 2 Approval) and the enclosures shall be Nema 4X rated.
- E2.20 The transmitter shall have non-volatile memory for all data, including the totalizer.

**E3. DELIVERY**

- E3.1 Goods shall be delivered, F.O.B. 598 Pliquet, Winnipeg, MB; freight prepaid.
- E3.2 Goods shall be delivered between 8:30 a.m. and 4:30 p.m. on Business Days.