

**SECTION 02230  
POLYETHYLENE PLASTIC TUBING (PE)**

**PART I: GENERAL**

**1.1 GENERAL REQUIREMENTS**

- A. Polyethylene (PE) tubing for water service lines.

**1.2 MEASUREMENT AND PAYMENT**

**A. Unit Prices:**

- 1. No separate payment shall be made for Polyethylene (PE) tubing under this Section. Include cost in the unit prices for work, as specified in following sections:
  - a. Section 02430 – Water Tap and Service Line Installation.
- 2. Refer to Section 01270 – Measurement and Payment for unit price procedures.

**B. Stipulated Price (Lump Sum):**

- 1. If Contract is Stipulated Price Contract, payment for work in this Section is included in Total Stipulated Price.

**1.3 REFERENCES**

**A. AWWA – American Water Works Association.**

- 1. AWWA C901 – Standard for Polyethylene (PE) Pressure Pipe and Tubing for Water Service.

**B. ASTM – American Society for Testing and Materials.**

- 1. ASTM D2737 – Standard Specification for Polyethylene (PE) Tubing.
- 2. ASTM D3350 – Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.

**C. CFTS – City of Friendswood Technical Specifications.**

**1.4 SUBMITTALS**

- A. Conform to requirements of Section 01330 – Submittal Procedures.
- B. Submit shop drawings showing design of pipe and fittings, laying dimensions, fabrication, fittings, flanges and special details.

**1.5 QUALITY CONTROL**

- A. Provide manufacturer's certificate of conformance to the Technical Specifications.
- B. Furnish pipe and fittings that are homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. Provide pipe as uniform as commercially practical in color, opacity, density and other physical properties.
- C. The Project Manager reserves the right to inspect pipes or witness pipe

manufacturing. Inspection shall in no way relieve manufacturer of responsibilities to provide products that comply with applicable standards and these Technical Specifications.

1. **Manufacturer's Notification:** Should the Project Manager wish to witness manufacture of specific pipes, manufacturer shall provide the Project Manager with minimum three weeks (3 Wks) notice of when and where production of those specific pipes shall take place.
2. **Failure to Inspect:** Approval of products or tests shall not be implied by the Project Manager's decision not to inspect manufacturing, testing or finished pipes.

#### 1.6 QUALIFICATIONS

- A. **Manufacturer:** Company specializing in manufacturing the products specified in this section with documented experience of a minimum five years (5 Yrs) of pipe installations that have been in successful, continuous service for same type of service as the proposed Work.

### PART II: PRODUCTS

#### 2.1 GENERAL

- A. All polyethylene (PE) tubing shall be high density, high molecular weight plastic tubing meeting.
- B. Polyethylene (PE) tubing for water services shall be pressure rated at two hundred pounds per square inch (200 psi) working pressure and must bear the National Sanitation Foundation seal of approval.
- C. Pipe manufacturers shall be listed on SPL WW-65.
- D. Polyethylene (PE) tubing shall be designated PE3408, denoting Grade 34 with hydrostatic design stress of eight hundred pounds per square inch (800 psi).

#### 2.2 MARKING

- A. Mark each standard and random length of pipe in compliance with these Technical Specifications with following information:
  1. Nominal tubing size.
  2. Standard PE code designation.
  3. Standard Dimension Ratio (SDR) and pressure rating.
  4. AWWA designation.
  5. Manufacturer Name or Trademark and testing agency name or seal.

### PART III: EXECUTION

#### 3.1 INSTALLATION

- A. Conform to requirements of following Sections:

**02230-2**

1. Section 02125 – Excavation and Backfill for Utilities.
  2. Section 02400 – Water Lines.
  3. Section 02430 – Water and Tap Service Line Installations.
  4. Section 02460 – Wet Connections.
  5. Section 02455 – Disinfection of Waterline.
- B. Install pipe in accordance with the manufacturers recommended installation procedures.
- C. Polyethylene (PE) tubing is not approved in applications requiring augering of pipe.
- D. Bedding and backfill: Conform to requirements of Section 02125 – Excavation and Backfill for Utilities.

**END OF SECTION**