

SECTION 11202

EFFLUENT (COLLECTION) TROUGHS (LAUNDERS)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Effluent (Collection) Troughs (Launders).

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 08342 - Fiberglass Doors and Frames.
- C. Section 11201 - Wash Troughs.
- D. Section 11203 - Finger Weir Pans.
- E. Section 11204 - Weir Plates, Scum Baffles, and Brackets.
- F. Section 11205 - Density Current Baffle System.
- G. Section 11206 - Palmer-Bowlus Flumes.
- H. Section 11207 - Parshall Flumes.
- I. Section 11208 - Metering Manholes.
- J. Section 11286 - Slide Gates and Guides.
- K. Section 11305 - Odor Control System.
- L. Section 13122 - Pre-Engineered Fiberglass Buildings.
- M. Section 13411 - Instrument Consoles.

1.3 REFERENCES

- A. ANSI/AWWA F101 - Contact Molded, Fiberglass-Reinforced Plastic Wash Water Troughs and Launderers; American Water Works Association.
- B. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.

- C. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Test results of fiberglass reinforced plastic laminate.
- C. Shop Drawings: Show:
 - 1. Critical dimensions, jointing and connections, fasteners and anchors.
 - 2. Materials of construction.
 - 3. Sizes, spacing, and locations of structural members, connections, attachments, openings, fasteners, and loads.
- D. Samples: 8-inch square sample of fiberglass reinforced plastic laminate.
- E. Manufacturer's installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products indoors and protect from construction traffic and damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Provide products manufactured by Warminster Fiberglass Company; P.O Box 188, Southampton PA 18966-0188; ASD. Tel. (215) 953-1260, Fax. (215) 357-7893.
- B. Requests for substitution will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.

2.2 EFFLUENT (COLLECTION) TROUGHS (LAUNDERS)

- A. Material: Fiberglass reinforced polyester resin, 1/4 inch thick, average; inside surface of smooth gel coat finish; outside surface resin sealed with no exposed glass fibers; molded-in color with ultraviolet inhibitor.

1. Random chopped-strand type glass reinforcement; minimum strand length, 1 inch.
2. Provide adequate contact molding pressure to ensure complete wet-out of glass fibers.
3. Nominal 30 percent by weight fiberglass fibers.
4. Tensile strength (ASTM D 638): 14,000 psi.
5. Flexural strength (ASTM D 790): 25,000 psi.
6. Flexural modulus (ASTM D 790): 1,000,000 psi.
7. Color: Turquoise.
8. Chemical resistance: Comply with ANSI/AWWA F101, Type II classification.

B. Construction:

1. Designed to support applied water loadings at each location.
2. Designed to resist deflection under full buoyant and gravity water loads with maximum upward and downward deflection less than or equal to $L/1000$ where L equals the unsupported trough length; maximum deflection at midpoint not greater than $3/16$ inch.
3. Design support system to allow adjustment of the trough, horizontally and vertically.
4. Provide stabilizers (cable sets) where necessary to restrict lateral movement.
5. Round bottom, vertical sides.
6. Flat bottom, vertical sides.
7. Curved trough, flat bottom, vertical sides.
8. Top edges straight with not more than $1/8$ inch deviation from true plane.
9. Longitudinal steel stiffening ribs integrally molded on the outside of troughs to ensure rigidity.
10. Plastic spacer rods to maintain uniform width over the length of trough.
11. Weir plates: V-notch design.
12. Weir plates: Straight edge design.
13. Fasteners and anchors: Type 304 stainless steel.
14. Fasteners and anchors: Type 316 stainless steel.
15. Adjustable weir plates preassembled to troughs.
16. Saddle at blind end.
17. Stainless steel spacer rods, in lieu of plastic spacer rods.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that dimensions are correct and project conditions are suitable for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Ensure that products are installed plumb and true, free of warp or twist, within tolerances specified by the manufacturer and as indicated in the contract documents.
- C. Install troughs to the elevations indicated, true and level.
- D. Adjust weir plates after installation of troughs to bring weir plates to correct crest elevation.

3.3 ADJUST AND CLEAN

- A. Clean surfaces in accordance with manufacturer's instructions.
- B. Remove trash and debris, and leave the site in a clean condition.

END OF SECTION