

SECTION 11205

DENSITY CURRENT BAFFLE SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Density current baffles.

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 11202 - Effluent (Collection) Troughs (Launders).

E. Section 11203 - Finger Weir Pans.

F. Section 11204 - Weir Plates, Scum Baffles, and Brackets.

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 256 - Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.

- C. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.
- D. ASTM D 618 - Standard Practice for Conditioning Plastics and Electrical Insulating Materials for Testing.
- E. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- F. ASTM D 648 - Standard Test Method for Deflection Temperature of Plastics under Flexural Load.
- G. ASTM D 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C.
- H. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- I. ASTM D 2583 - Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

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, and fasteners.
 - 4. Field measurements or plans.
- 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 DENSITY CURRENT BAFFLE SYSTEM

- A. Material: Fiberglass reinforced polyester resin composite laminate, having the following physical characteristics:
 - 1. Color: White.
 - 2. Color: Turquoise.
 - 3. Tensile strength (ASTM D 638): Minimum 9,000 psi.
 - 4. Flexural strength (ASTM D 790): 16,000 psi.
 - 5. Flexural modulus (ASTM D 790): 900,000 psi.
 - 6. Impact, notched, Izod (ASTM D 256): 10.0 ft-lb/in.
 - 7. Barcol hardness (resin-rich surface) (ASTM D 2583): 40 minimum, average.
 - 8. Water absorption, (ASTM D 570): 0.2 percent at 24 hrs.
 - 9. Heat distortion point, (ASTM D 648): 175 degrees F.
 - 10. Coefficient of thermal expansion, average (ASTM D 696): 0.0000105 in/in/degree F.
 - 11. Test coupons prepared in accordance with ASTM D 618.
 - 12. Chemical resistance: Comply with ANSI/AWWA F101, Type II classification.
- B. Baffle Segments:
 - 1. Molded of fiberglass-reinforced polyester resin composite laminate, minimum 3/16 inches wall thickness, with minimum 20 mil thick gel coat each surface.
 - 2. Mold integral mounting flange 1/4 inch thick along top edge, factory drilled for anchors.
 - 3. Mold face sloping inward and downward to resist solids build-up.
 - 4. Mold integral reinforcing flange 1/4 inch thick at bottom edge to resist sag and uplift.
 - 5. For rectangular tanks, mold baffle segments straight.

6. For round tanks, mold baffle segments curved for tank radius indicated on drawings.
 7. Factory-drill holes for end-to-end connection of baffle segments in field.
 8. Resin coat all cut edges and drilled holes.
- C. Mounting Brackets: Angle brackets fabricated of same composition as baffle segments.
1. Provide two support brackets for each baffle segment.
 2. Factory-drill holes for end-to-end connection of baffle segments in field.
 3. Resin coat all cut edges and drilled holes.
- D. Fasteners: 3/8 inch diameter wedge anchor bolts and fasteners of Type 316 stainless steel.

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 in accordance with approved shop drawings and in true and proper alignment.
- D. Mounting Brackets: Install two brackets per baffle segment, equally spaced; anchor to substrates using 3/8 inch diameter stainless steel wedge anchors.
- E. Baffle Segments: Install to full extent indicated on drawings; secure to brackets using stainless steel fasteners.

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