

SECTION 11204

WEIR PLATES, SCUM BAFFLES, AND BRACKETS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Weir plates, scum baffles, and brackets.

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 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 F102 - Matched-Die-Molded, Fiberglass-Reinforced Plastic Weir Plates, Scum Baffles, and Mounting Brackets; 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 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C.
- G. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- H. 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, 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 WEIR PLATES, SCUM BAFFLES, AND BRACKETS

- A. Weir Plates, Scum Baffles, Brackets, and Plates:
Fiberglass reinforced polyester resin, compression molded in matched metal die molds; provide all required lap plates, cover plates, and support brackets.
 - 1. Plates fabricated from cut plate stock with cut edges, notches, etc., will not be accepted.
- B. Fiberglass Laminate Construction: Sheet Molding Compound (SMC) for use in water treatment systems.
 - 1. Glass content of laminate; 20 percent plus/minus 3 percent by weight. Resin fillers: 40 percent plus/minus 2 percent of resin mixture.
 - 2. Final laminate thickness: Plus/minus 10 percent of nominal specified thickness.
 - 3. Tensile strength (ASTM D 638): 14,000 psi.
 - 4. Flexural strength (ASTM D 790): 25,000 psi.
 - 5. Flexural modulus (ASTM D 790): 1,000,000 psi.
 - 6. Impact, notched, Izod (ASTM D 256): 15 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. Coefficient of thermal expansion, ave. (ASTM D 696): 0.0000105 in/in/degree F.
 - 10. Test coupons prepared in accordance with ASTM D 618.
 - 11. Chemical resistance: Comply with ANSI/AWWA F102, Type II classification.
- C. Weir Plates:
 - 1. 1/4 inch nominal thickness.
 - 2. Color: White.
 - 3. Color: Turquoise.
 - 4. Height: 9 inches.
 - 5. Height: 12 inches.
 - 6. Notches: 2-1/2 inches deep by 90 degrees on 6 inch centers.

7. Notches: 3 inches deep by 90 degrees on 6 inch centers.
 8. Length: Nominal 5 feet long.
 9. Length: Nominal 7 feet long.
 10. Mounting holes on round tanks: 2-1/2 inches square at 20 inches on center to provide a minimum 2 inches vertical or horizontal adjustment.
 11. Mounting holes on rectangular tanks: 4 each, 2-1/2 inches square at 12 inches on center to provide a minimum 2 inches vertical or horizontal adjustment.
 12. Mounting: 1/2 inch diameter stainless steel anchor bolts and 5 inch square fiberglass cover plates to prevent short circuiting of water.
 13. Ends secured with 6 by _____ inch high lap plates to allow for horizontal expansion.
 14. Provide stainless steel anchor bolts.
- D. Scum Baffle Plates:
1. 1/4 inch nominal thickness.
 2. Color: White.
 3. Color: Turquoise.
 4. Height: 12 inches.
 5. Mounting holes: As required to attach to support brackets.
 6. Lengths as required to suit project conditions, up to 12 feet maximum each.
- E. Lap Plates:
1. Size: 6 by 12 inches.
 2. Provide as required to secure ends of baffle plates.
 3. Provide stainless steel hardware to secure baffle plates to support brackets and to lap plates.
- F. Scum Baffle Support Brackets:
1. Provide at 40 inches on center for round tanks.
 2. Provide at 36 inches on center for rectangular tanks.
 3. Size: 3/16 inch thick, 4 inches wide, minimum.
 4. Slotted to allow at least 1-1/2 inches vertical and horizontal adjustment to compensate for inaccurate anchor bolt location.
- G. Assembly Hardware:
1. Stainless steel, Type 304.
 2. Stainless steel, Type 316.
 3. Provide hook anchors, 1/2 inch by 6 inches by 2 inches.
 4. Provide wedge anchors, 1/2 inch by 4-1/2 inches.

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, GENERAL

- 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. Adjust weir plate elevation for flow indicated or as directed by the Engineer.
- E. When necessary to adjust lengths of plates due to field conditions and when approved by the Engineer, seal cut or machined edges thus exposed with polyester resin. Excessive cutting will not be acceptable.

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