

A&T Iron Works / ORSOGRIL Specifications - Sterope

ORSOGRIL, is a high quality steel fence system comprised of a hybrid grating specifically designed to be used vertically. Our proprietary manufacturing processes ensure extremely flat and square panels. Complete “**fusion electro-forge**” welds of bearing bars and crossbar materials provide maximum strength. Our 12-step finishing processes provide years of “**maintenance-free**” corrosion resistance. The end result is an unusually beautiful and extremely durable architectural fencing material. **ORSOGRIL** is a worldwide leader in this technology.

Part I – General

1.01 Work Included

- A. Steel Fence with ORSOGRIL design panel infill
- B. Steel Gate with ORSOGRIL design panel infill
- C. Steel Mechanical Enclosure with ORSOGRIL design panel infill
- D. Steel Railings with ORSOGRIL design panel infill

1.02 Related Work

- A. Section includes:
 - 1. Concrete Work
 - 2. Electrical Work for Gates
 - 3. Finished Hardware for Gates

1.03 References

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM A36 – Std. for Carbon Structural Steel
 - 2. ASTM A500 – Std. for Cold-Formed Welded & Seamless Carbon Steel Tubing
 - 3. ASTM A123 – Std. for Hot-Dip Galvanized Coatings
 - 4. ASTM B117 – Std. for Slat Spray Resistance for Powder Coatings
 - 5. ASTM D822 – Std. for Weatherability of Powder Coatings
- B. American Welding Society (AWS)
 - 1. AWS A5.8 – Specifications for Filler Metals for Brazing and Braze Welding
 - 2. AWS D1.1 – Specifications for Structural Welding Code
- C. Society for Protective Coatings (SSPC)
 - 1. SSPC-SP2 - Hand Tool Cleaning
 - 2. SSPC-SP7 – Commercial Blasting

1.04 Submittals

- A. Shop Drawings
 - 1. Show all locations, markings, quantities, materials, shapes and sizes
 - 2. Indicate all methods of connecting, anchoring, fastening, bracing and/or attaching work of other trades
 - 3. Fabrication will commence upon approval of shop drawings
 - 4. Indicate materials and component finishes
- B. Samples
 - 1. Submit 8” x 8” ORSOGRIL infill panel for approval

1.05 Quality Assurance

A. Manufacturer

A & T Iron Works, Inc.

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Part II - Products

2.01 Materials

A. Characteristics

1. Type: Electro-Forge welded steel
2. Design: **ORSOGRIL STEROPE**

B. System

1. spacing of vertical sections = $27\frac{1}{16}$ "
2. spacing of horizontal sections = $5\frac{3}{16}$ "
3. vertical section measurements = $3\frac{1}{32}$ " x $\frac{1}{8}$ "
4. horizontal tie = $\frac{3}{16}$ "
5. framing bar = $3\frac{1}{32}$ " x $\frac{5}{32}$ "
6. hole = $\frac{7}{16}$ "

2.02 Accessories

- A. Connection bolts and anchor studs shall be stainless steel AISI 304
- B. Provide gate hardware required for a secure complete system

2.03 Fabrication

- A. Perform all work in accordance with standard manufacturing specifications as described in section 1.03

2.04 Finishing

A. Hot-Dip Galvanized Base Coat

1. Galvanize steel members and components to ensure product encapsulation to ASTM 123

B. Commercial Brush Blast

1. Brush Blast all steel members and components to ensure inter-coat adhesion to SSPC-SP7

C. Electro-Static Powder Top Coat

1. Apply Thermo-Set Polyester Powder at 3-5 mils (DFT) at 400 Degree Fahrenheit for 20-25 minutes to ASTM B117 and ASTM D822

D. Color to be specified.

Part III – Execution

3.01 Examination

- A. Administrative Requirements – Verification of existing field conditions prior to start of contracted work

3.02 Preparation

- A. Field layout and mark component location prior to fabrication.

3.03 Installation

- A. Install fabricated materials and components in accordance with manufacturer's data.
- B. Erect components in holes that have been formed in concrete or core-drilled or as specified in the drawings.
- C. Set and plumb posts vertically. Rails shall be parallel to the grade. Panels shall be curved or pitched as required.
- D. After posts have been set in place and properly supported to hold them in line and on grade, fill the annular space to the depth shown on plan with non-slip grout.
- E. Apply Permangel epoxy sealer after grout has hardened. Trowel to fill and seal hole to form a ¼" wash.
- F. Exercise care when installing components so as not to damage finished surface.
- G. Touch-up finished surfaces, where applicable to match factory applied coating.

Part IV – Warranty

A & T Iron Works, Inc. certifies that our products are free from defects in materials and workmanship.

Our Limited Warranty guarantees our advanced galvanized and powder coated finish to be free from cracks, peels or blisters. Accidental damages, defects resulting from improper installation and damages from vandalism or abuse are not included.

Polyester Powder Coating. Electro statically applied colored polyester powder coating, heat cured to chemically bond finish to metal substrate. Salt spray resistance tested in accordance with ASTM B117: No undercutting, rusting or blistering after 500 hours in 5% salt spray at 95 degrees F and 95% relative humidity and after 1000 hours less than 3/16" [5mm] undercutting. Weather ability tested in accordance with ASTM D822: No film failure and 88% gloss retention after 1 year exposure in South Florida with test panels tilted at 45 degrees.

Warranty is limited to a pro-rated value of the coating, not to exceed the original value of the finishing.