

DIVISION 09 – FINISHES
Section 09 96 00 – High Performance Coatings

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

The work includes furnishing all materials, labor, equipment, and accessories for preparing and providing the required finished painting and protective coatings on the steel fender panels and mounting brackets.

1.02 REFERENCE STANDARDS

- A. Society for Protective Coatings (SSPC), SSPC Painting Manual, Volume I, 4th Edition, "Good Painting Practice".
- B. SSPC Painting Manual, Volume II, 2008 Edition, "Systems and Specifications".
- C. SSPC, "The Fundamentals of Cleaning and Coating Concrete".
- D. SSPC, "Procedure for Determining Conformance to Dry Coating Thickness Requirements", SSPC-PA2.

1.03 QUALITY ASSURANCE

- A. Coating application shall be by qualified and experienced personnel having demonstrated at least ten (10) years of experience in coating applications for marine structures.
- B. Conform to all manufacturers' specifications and recommendations for achieving published results with each product, application, and condition. If manufacturers' specifications or recommendations differ from those in these specifications, report the discrepancy to the Engineer and obtain further direction before proceeding.
- C. The Engineer may inspect coating preparation, application, or touchup at its discretion. Provide access to the Engineer for these inspections at no additional cost to the Port.

1.04 SUBMITTALS

- A. A complete list of products and product descriptions proposed for use as coating systems.
 - 1. Provide manufacturer product data and accessories, including specifications, physical characteristics, and performance data.

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2. Manufacturer instructions and directions for application of the coating systems.
 3. Manufacturer instructions and procedures for use in performing field repairs and touch-ups to the coating systems.
 4. Use the same manufacturer's products for all coats unless otherwise approved by the Engineer.
- B. Documentation that key personnel of the coating applicator have at least the minimum experience and certifications. Demonstrate consistent experience applying the proposed coating systems under similar conditions. List information by individual and include the following.
1. Position or responsibility
 2. Employer (if other than the contractor)
 3. Name of facility owner
 4. Mailing address and telephone number of facility owner
 5. Name of contact reference in facility owner's organization
 6. Location, size, and description of structure
 7. Dates work was performed
 8. Description of work performed on structure
- C. Samples of all paints and finishes proposed for use.
- D. Schedule of coating operations with dates and items listed.
- E. Measurement reports and certifications of dry film thickness on metal surfaces according to SSPC-PA2.

1.05 PRODUCT HANDLING

- A. Deliver paint and associated materials in undamaged and unopened containers bearing labels of the manufacturer, which indicate the contents and directions for use, storage, and handling. Store materials in a location where the ambient temperature and humidity is not outside the ranges recommended by the manufacturer.
- B. Prevent fire. Open containers of inflammable materials only as needed. Keep rubbing cloths, oily rags, etc., in tightly closed metal containers, or remove from the job site daily. Benzene, gasoline, or distillates shall not be stored on the job site.
- C. Do not damage the coating materials before, during, or after installation and prevent damage to the installed work and materials of other trades.

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- D. In the event of damage, immediately make all repairs and replacements as directed by the Engineer according to the manufacturer's recommendations and procedures at no additional cost to the Port.

PART 2 – PRODUCTS

2.01 COATING SYSTEMS

- A. Manufacturers who have provided acceptable coating systems for past projects include the following. This does not imply that products from any manufacturer listed below will be acceptable.
 - 1. Carboline Protective Coatings (1-206-243-6494)
 - 2. International Marine Coatings of AkzoNobel (1-206-763-8003),
 - 3. Sherwin Williams Co Industrial and Marine Coatings (1-360-931-4645)
 - 4. Tnemec Company (1-206-762-5755)
 - 5. Wasser High-Tech Coatings (1-253-218-2222)
 - 6. Fields Company LLC (1-253-627-4098)
- B. Coating systems selected for each type of finish surface shall be products of a single manufacturer. Coating materials shall be suitable for corrosion protection in an aggressive marine environment.
- C. Materials not specifically noted but required for the work, such as thinners, or other materials, shall be products of the approved paint manufacturer or compatible products accepted by the coating manufacturer.
- D. Paint products for coating systems shall be mixed according to the manufacturer's directions. Do not deviate except with written approval of the Engineer.

2.02 SUBSTITUTIONS

- A. Manufacturer-specific coating systems are referenced in this specification. The manufacturer's product identification numbers indicate the product type, quality, and performance required for a specific application. Bids shall be based upon the manufacturer-specific coating systems referenced herein.

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- B. Submit in writing a request to the Engineer for review and approval prior to material procurement. Substantiating technical data and documentation are required.
- C. Proposed coating system substitutions will be reviewed and evaluated, subject to the approval of the Engineer, based on equivalency to the coating systems referenced in this herein. Substitute coating system data and documentation that does not demonstrate equivalency will not be approved.
- D. Approved substitutions shall be at no additional cost to the Port.

2.03 COLOR SCHEDULE

- A. Black: fender panels and mounting brackets

2.04 COATING SCHEDULE

- A. Fender panels and mounting brackets shall be coated with, or approved equal:
 - 1. Surfaces shall be “white metal blast cleaned,” conforming to SSPC-SP5 and in accordance with manufacturer recommendations.
 - 2. Primer: Interzone Interzinc 52, zink-rich epoxy primer by International Marine Coatings, applied to a minimum dry film thickness of 3 mils on all surfaces.
 - 3. 1st Top Coat: Interzone 954 epoxy barrier coat by International Marine Coatings, applied to a minimum dry film thickness of 15 mils on all surfaces.
 - 4. 2nd Top Coat: Interthane 990 polyurethane top coat by International Marine Coatings, applied to a minimum dry film thickness of 3 mils on all surfaces.

PART 3 – EXECUTION

3.01 GENERAL

- A. Apply paints and coatings in accordance with the manufacturer’s recommendations for each application. Adhere to the manufacturer’s provisions, directions, and procedures for the following.

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1. Surface preparation
 2. Ambient temperature and humidity monitoring
 3. Mixing techniques
 4. Minimum and maximum thickness per coat to achieve total thickness
 5. Minimum time between coats
- B. Use clean equipment and brushes. Spread materials evenly without runs, drips, sags, laps, brush marks, variations in color, texture, or sheen, and without “holidays”.
- C. Vary color or sheens between coats and apply all coats to uniform thicknesses. Refinish any work determined defective or damaged and repair all defective or damaged work at no additional cost to the Port. Leave finished surfaces clean, completely covered, and uniform in appearance.

3.02 APPLICATION

- A. The location, lettering size, and style of the surface regulatory markings shall be as indicated on the drawings and in the specifications.
- B. Number of coats as specified herein.
- C. Thickness of coats: use ample undiluted materials; apply in uniform thickness over entire areas; do not exceed manufacturer’s recommended spreading rate per gallon.
- D. Tint prime coats if necessary to obtain uniform finish coats.
- E. Painting shall be free of sags, voids and orange peel and shall be resistant to impact and abrasion. Minimum acceptable rated adhesion strength of the coating system, tested in accordance with ASTM D 4541, is 800 psi.

3.03 TOUCHUP PAINTING

- A. Paint film damaged due to field welding or other Contractor activities shall be immediately restored to its original thickness after thorough cleaning and necessary surface preparation according to the written manufacturer’s recommendations.
- B. Touchup painting shall be at the Contractor’s expense.

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3.04 INSPECTION

- A. The Contractor shall perform measurements of dry paint thickness on all metal surfaces by means of magnetic gages as described in SSPC-PA2.
- B. Copies of the measurement reports shall be provided to the Engineer.
- C. The Port or its designee will also perform verification testing/inspection at its own expense, following fender assemblies arrive to Project Site.

END OF SECTION