

SECTION 025
INDUSTRIAL PAINTING

Industrial painting, including all necessary preparation and application, except as modified in this Section, shall conform to the recommendations of the manufacturer of the chosen products specified below. For the Contractor's convenience, the recommendations of the product manufacturers have been provided within the appendices of these Specifications in the forms of either a product data sheet or a product information sheet, respectively; however, if a more recent version of these documents are available from the manufacturers, the more recent versions shall govern. When conflicting with the manufacturers recommendations, the specifications within this Section shall govern.

1.0 General

1.1 Summary

This section includes specifications for the preparation of surfaces and field painting of existing equipment.

1.2 References

A. Codes and standards referred to in this Section are:

- | | | |
|----|------------------------|---------------------------------|
| 1. | SSPC | Society of Protective Coatings; |
| 2. | SSPC-SP5 (NACE No. 1) | White Blast Cleaning; |
| 3. | SSPC-SP10 (NACE No. 2) | Near-White Blast Cleaning. |

1.3 Submittals

A. Provide all submittals, including the following as specified in Section 021 of these Specifications:

1. Submit manufacturer's standard color chart for color selection;
2. Furnish affidavits from the manufacturer certifying that materials furnished conform to the requirements specified and that paint products have been checked for compatibility;
3. Submit a supplementary schedule of paint products with mil thickness, and solids by volume, including all paint applied in the shop and in the field. Provide a schedule that is in accordance with the recommendations of the paint manufacturer;
4. Furnish affidavits from the manufacturer certifying that coatings in immersion service contain no water soluble solvents or corrosion inhibitive pigments with slight water solubility.

1.4 Painting Requirements

A. Field prime, finish or coat; this work includes, but is not limited to, the following:

1. Both raw screw pumps at the GPSD Wastewater Treatment Plant that has an

address of 2322 S. Darst St. in Peoria, IL.

1.5 Delivery, Storage and Handling

Deliver, store and handle all products and materials as specified in Section 021 of these Specifications and as follows:

- A. Delivery and Storage: At the site, deliver and store paint from the approved manufacturer only;
- B. Packaging and Labeling: Prepare, pack and label paints, stains, varnish or ingredients of paints to be used on the job. Deliver all material to the site in original, unbroken containers;
- C. Storage: Store the painting materials at the site in accordance with applicable codes and regulations and in accordance with manufacturer's instructions. Keep the storage space clean at all times. Take every precaution to eliminate fire hazards.

2.0 Products

2.1 Manufacturers

- A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted for approval prior to the receipt of proposals. Submittals must be received by the Owner no later than seven (7) calendar days prior to the receipt of proposals.
 1. Paint - General:
 - a. Tnemec Co., Inc.;
 - b. The Sherwin-Williams Company.

2.2 Materials

- A. General: Furnish paint and other materials of the type and quality of the manufacturer on which the painting schedule specified herein is based:
 1. Provide compatible shop and field coats;
 2. For any particular surface, and from the same manufacturer, provide all coats of paint and primers;
 3. Provide paint of approved color as selected from the manufacturer's standard range of colors.
- B. Paint Schedule: Provide all painting in accordance with the following schedule with the number of coats not less than the number shown on the schedule:

MATERIAL PAINTING SCHEDULE

Class of Work	Primer	Finish Coat
Steel and Iron: Exterior; Screw Pumps/ Immersion	A	B

- C. Schedule of Paints: Alphabetical designations in the following list are given solely for the purpose of indicating the type and quality of materials desired. Components from one manufacturer's product listed shall not be used interchangeably with components from any other product; for the completion of the Project, provided product components shall be uniformly from both the same manufacturer and the same manufacturer's product. Equivalent materials from other approved manufacturers may be submitted for approval as outlined in 2.1.A.

Symbol	Product Name and Number	Manufacturer, Product	Volume Solids %	Dry Film Thickness Mils Per Coat
A	Tnemec Series 435 Perma-Glaze 5023 Beige		100	25.0 – 35.0
A	Sherwin-Williams SherGlass FF Black		76	15.0 - 20.0
A	Tnemec Series 22-1255 Epoxoline Off-White		100	15.0 – 20.0
B	Tnemec Series 435 Perma-Glaze 5020 Gray		100	25.0 – 35.0
B	Sherwin-Williams SherGlass FF Gray		76	15.0 - 20.0
B	Tnemec Series 22-1218 Epoxoline Beige		100	15.0 – 20.0

3.0 Execution

3.1 Preparation

- A. Inspections: Prior to surface preparation perform the following:
1. Verify that surface substrate conditions are ready to receive work as instructed and recommended by the product manufacturer;
 2. Examine specifications for all work and become thoroughly familiar with all provisions regarding painting.
- B. Surface Preparation: After inspection and prior to painting, perform the following:
1. Inspect all work prior to application of any paint or finishing material;
 2. Do not begin field painting prior to approval of the surface preparation;
 3. Protect lower bearings from contamination by sandblasting operations. Submit lower bearing protection plan to Owner for approval prior to starting sandblasting operations;

4. Prior to painting steel, grind smooth all blisters or protuberances, other than identification markings and remove other imperfections, including weld splatter and sharp edges. Remove all rust, mill scale, oil, grease and dirt by sandblasting in accordance with White Blast Cleaning, SSPC – SP5 (NACE No. 1) to a roughness profile of 3.0 mils unless otherwise indicated. Surface preparation in accordance with SSPC-SP10 (NACE No. 2) shall not be sufficient or allowed;
5. Verify all surfaces are dry before any paint is applied;
6. Prime cleaned metal the same day immediately after sand blasting to prevent rusting.

3.2 Installation

- A. General: Install all painting and coatings in accordance with the manufacturer's recommendations and approved shop drawings:
 1. Apply products in accordance with the latest edition of the manufacturer's instructions and recommendations;
 2. Apply primer and finish coats only when surface temperature is between 65 degrees Fahrenheit and 80 degrees Fahrenheit;
 3. Apply paint that is at a minimum temperature of 70 degrees Fahrenheit and a maximum temperature of 80 degrees Fahrenheit 48-hours prior to use;
 4. Paint or finish all surfaces that are left unfinished by the requirements of other specifications and specified herein to be painted or finished;
 5. Paint surfaces in accordance with the material painting schedule included in this Section;
 6. Completely cover all surfaces to be painted. Cover by additional coats when color on undercoats shows through the final coat of paint, until paint is of uniform color and appearance and coverage is complete;
 7. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer;
 8. Provide sufficient temporary ventilation during painting operations in enclosed areas to remove moisture and solvents, and to keep the atmosphere safe from harmful or dangerous fumes and dust levels for personnel.
- B. Field Painting: Perform field painting at the job site as follows:
 1. Mix all paints and similar materials in galvanized iron pans or pails or other approved containers of adequate capacity;

2. Mix all paints thoroughly before being taken from the containers. Keep mixed while painting. Apply all ready-mixed paint exactly as received from the manufacturer without addition of any kind of drier or thinner, except as specified, to mix colors to conform to approved color schedule. Tint successive coats of paint to make various coats easily distinguishable. Tint undercoats of paint to the approximate shade of the final coat of paint;
3. Use only skilled painters on the work, and employ specialists where required. Apply paint by brush, roller or sprayer in accordance with the manufacturer's recommendation;
4. Perform painting as a continuous and orderly operation to facilitate adequate inspection. Prime coat and paint materials subject to weathering or corrosion before erection. Perform all paint application methods in accordance with the instructions of the paint manufacturer and as approved. Do not field paint equipment, such as electrical control cabinets, motors, unit heaters and similar items which are shipped with a final baked enamel finish and having received prior approval unless the finish is damaged in transit or installation. Paint access panels, pipe, pipe covering, ducts and other building appurtenances built into adjoining walls the same color as adjacent walls, unless color coding applies. Remove or protect hardware and accessories, fixtures and similar items placed prior to painting during painting and replace them upon completion of painting;
5. Repair, refinish and repaint any adjacent surfaces that have been damaged or discolored by overspray;
6. Do not paint when either air or prepared surface temperatures are not within the ranges specified above or when the relative humidity is above that recommended by the coating manufacturer. Do not paint when the atmospheric dew point is undesirable relative to the relative humidity, as defined by the coating manufacturer. Do not paint when either the air is dust-laden or when moisture on the surface has failed to completely disappear. If necessary, provide sufficient heating and ventilation to keep the atmosphere and all surfaces to be painted dry and warm until each coat of paint has hardened;
7. Remove any painting found defective. Touch-up and provide remedial painting as directed and as required until completion and acceptance of final work.

3.3 Cleanup

- A. Touch up and restore any finish damaged. Remove paint or other finishes spilled, splashed or splattered from all surfaces taking care not to mar any surface or item being cleaned;
- B. Remove sandblasting debris from the work area.

3.4 Testing High Voltage Discontinuity (spark) testing shall not be required.

END OF SECTION