

SECTION 09900
PAINTING (SHORT)

PART 1 - GENERAL

1.01 SCOPE

- A. The Contractor shall furnish all labor, material, tools, ladders, scaffolding, appurtenances and equipment required to complete all painting for the entire project, including painting of aerial crossings and painting required during pump station construction.
- B. All painting shall be done by skilled workmen, in accordance with the best practice of the trade, who will be required to do a first class job in every respect. Wherever a "specialty paint" or other painter's material is mentioned herein by trade name or by manufacturer's name for a specific location, material, surface, or service condition, it is mentioned as a standard of comparison only and it is not intended that products by other manufacturers for like purposes may not be used if approved by the Department.
- C. Paint and finish interior and exterior exposed items, walls, below grade foundations, miscellaneous metal, posts, pipes, fittings, valves, equipment, and all other work obviously required to be painted unless otherwise specified herein or on the Drawings.
- D. "Paint" as used herein means all coating systems, materials, including primers, emulsions, enamels, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats. The Contractor shall use the coating protective system as defined herein, as is applicable to the particular surface. Some of the surfaces defined herein may not be used for this project.
- E. The following items will not be painted or painted over:
 - 1. Code-requiring labels, such as Underwriters' Laboratories and Factory Mutual, and equipment identification, performance rating, name or nomenclature plates.
 - 2. Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts, unless otherwise indicated.
 - 3. Traffic stripes on paving.
 - 4. Aluminum guardrails, walkways, windows, door, and gratings.
 - 5. Stainless steel angles, tube, pipe, etc.
 - 6. Products with polished chrome, aluminum, nickel or stainless steel finish.
 - 7. Flexible couplings, lubricated bearing surfaces, insulation and metal and plastic pipe interiors.

8. Plastic switch plates and receptacle plates.
9. Signs and nameplates.
10. Finish hardware.
11. Packing glands, unless otherwise indicated.
12. Top and inside concrete surfaces of the parapet.

1.02 QUALITY ASSURANCE

- A. All painting material brought on the job shall be in the original unopened containers bearing the manufacturer's label and shall be mixed or thinned and applied strictly in accordance with the manufacturer's directions. Any painting material brought to the job in opened containers shall be rejected.
- B. Provide the best quality grade of the various types of coatings as regularly manufactured by approved paint materials manufacturers. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable.
- C. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer, and use only within recommended limits.
- D. Undercoat and finish coat paints shall be compatible.
- E. Painting shall be accomplished by experienced painters specializing in industrial painting familiar with all aspects of surface preparations and applications required for this project.
- F. Regardless of any dry film thickness recommended by the manufacturer, all paint must completely cover the surface, to the satisfaction of the Department, in such form that the undersurface does not show through.

1.03 REGULATIONS, REFERENCES AND STANDARDS

- A. All painting work shall conform to the following (latest edition)
 1. South Florida Building Code (SFBC)
 2. Code of Federal Regulations (CRF):
 - a) 29 CFR Part 1910, Occupational Safety and Health Standards (OSHA).
 - b) 29 CFR Part 1926, Occupational Safety and Health Standards (OSHA),

Construction Industry Standards.

3. National Association of Corrosion Engineers (NACE).
4. Painting and Decorating Contractors of America (PDCA).

1.04 DELIVERY, HANDLING AND STORAGE

- A. Deliver all materials to the job site in original, unopened packages and containers bearing manufacturer's name and label.
 1. Provide labels on each container with the following information:
 - a. Name or title of material.
 - b. Federal Specification number (if applicable).
 - c. Manufacturer's name.
 - d. Manufacturer's stock number and color.
 - e. Generic type.
 - f. Contents by volume, for major pigment and vehicle constituents.
 - h. Application instructions.
 2. Containers shall be clearly marked to indicate any hazards connected with the use of the paint and steps which should be taken to prevent injury to those handling the product.
- B. All containers shall be handled and stored in such a manner as to prevent damage or loss of labels or containers.
- C. The Contractor shall designate areas for storage and mixing of all painting materials. Such area shall be kept clean and neat and every precaution taken to prevent all danger of fire. Comply with the requirements of pertinent codes and fire regulations. Proper containers outside of the building shall be provided by the Contractor and used for painting wastes. No drains or plumbing fixtures shall be used for this purpose.
- D. Used rags shall be removed every night and every precaution taken against spontaneous combustion. Oily rags and papers shall not be left in the area overnight unless placed in covered metal cans.

1.05 JOB CONDITIONS & ENVIRONMENTAL REQUIREMENTS

- A. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be applied.
- B. Do not paint in areas where dust is being generated.
- C. Be responsible for the safety of Contractor's Employees, and provide adequate ventilation, safety masks, explosion proof equipment, and all other items necessary for this purpose.
- D. All work shall be carefully protected while painting is going on, using suitable cover cloths where necessary. Any work defaced or damaged by the painters shall be made good by the

Contractor. The Contractor shall be responsible for cleaning all accidentally spilled materials such as paint, varnish, plaster, stucco and concrete from the structures and equipment, and shall leave the work in complete and perfect condition in every detail.

- E. The Contractor shall assure himself that the surfaces are in proper condition to receive paint and shall guarantee paint against peeling and discoloration due to faulty application or workmanship, in accordance with the terms of the Maintenance Bond

PART 2 - PRODUCTS

2.01 GENERAL

- A. Where any surface is acid etched, it shall be water flushed and left until perfectly dry before any paint is applied.
- B. Compatibility between shop coats and field coats shall be the Contractor's responsibility as specified in, "Materials and Equipment Furnished by Contractor" of Section 01100.
- C. Finish colors and tints, other than specified, shall be as approved by the Department and shall conform with the Department's current color scheme. The Contractor shall tint each coat differently to assist the Department in checking work progress and to help in the elimination of holidays.
- D. All work shall be carefully protected while painting is going on, using suitable cover cloths where necessary. The Contractor shall be responsible for cleaning all accidentally spilled materials such as paint, shellac, varnish, plaster, stucco and concrete from the structures and equipment, and shall leave the work in complete and perfect condition in every detail. The Contractor shall assure himself that the surfaces are in proper condition to receive paint and shall guarantee paint against peeling and discoloration due to faulty application or workmanship.
- E. Before any pump station structure is painted, representatives of the Contractor and the Department shall inspect the interior of the wet well, influent, pump suction piping, and all accessible piping. Any foreign matter shall be removed and all interior surfaces shall be thoroughly cleaned by means of scrubbing and hosing.

2.01 MATERIALS

- A. All paint shall be manufactured by one of the following and shall be their highest grade of paint: Ameron, Somay/Valspar, Sherwin-Williams, Kop-Coat, Thoroseal, Tnemec, Glidden, or Rustoleum. Other manufacturers of paints with equal chemical qualitative and quantitative composition are considered equals.

Ameron Protective Coatings, Brea, CA.
Kop-Coat Carboline Coatings Co., St. Louis, MO.
Pratt and Lambert, Inc., Buffalo, NY.
Rustoleum Corp., Evanston, IL.
Sherwin Williams, Cleveland, OH.
Somay Product, Inc., Miami, FL

Thoro Systems, Miami, FL.
Tnemec Coatings, Kansas City, MO.

- B. The following coating systems list a product by name to establish a standard of quality; other products of the same generic types may be submitted to the Department for approval. When other than the specified coating system is proposed, the Contractor shall submit on a typewritten list giving the proposed coatings, brand, trade name, generic type and catalog number of the proposed system.
- C. Paint used in successive field coats shall be produced by the same manufacturer. Paint used in the first field coat over shop painted or previously painted surfaces shall cause no wrinkling, lifting, or other damage to underlying paint and should cover completely the previous color.
- D. Emulsion and alkyd paints shall contain a mildewcide and both the paint and mildewcide shall conform to OSHA and Federal requirements.
- E. Finish coats containing lead shall not be allowed. Oil shall be pure boiled linseed oil.
- F. Rags shall be clean painters' rags, completely sterilized.
- G. Precast sanitary sewer manholes and pump station wetwells shall be coated on the exterior and coated or lined on the interior as specified in Section 02536, "Precast Manholes & Covers" and Section UC-570, "Installation of Pump Station".

2.02 PAINTING, AERIAL CROSSING PROJECTS

Painting for aerial crossings under this project shall be as specified, and as listed below, using the materials specified, or approved equals:

AREA	NEUTRALIZE OR PASSIVATE	PRIME	FINISH
Exposed exterior concrete for aerial crossings, including piles and pile caps.	None	None	None
Steel pipe for canal crossings (water main)		See Section 15075	
Steel pipe for canal crossing (force main)		See Section 15075	
Exposed ductile iron pipe and fittings and steel fittings, to a point at least 2 feet below grade. (for water mains)	Thin heavy spots of coal tar or bituminous coating by rubbing with kerosene. The kerosene wiped surfaces shall dry cure for at least 48 hours. After the curing time has elapsed, and the surfaces are sufficiently dry in the opinion of the Engineer, apply one coat of white pigmented shellac.	After the shellac has cured, apply one coat of Rustbond Penetrating Sealer SG by Carboline	After the primer has cured, apply 2 coats of Pratt & Lambert Endu-thane High Build Urethane, Cyanine Blue (Carboline Color No. 2127)
Exposed ductile iron pipe and fittings and steel fittings, to a point at least 2 feet below grade. (for force mains)	Same as above	After the shellac has cured, apply one coat of Rustbond Penetrating Sealer SG by Carboline	After the primer has cured, apply 2 coats of Pratt & Lambert Endu-thane High Build Urethane, Eye-Rest Green (Carboline Color No. 2369)

2.02 PAINTING, AERIAL CROSSING PROJECTS (CONT'D)

AREA	NEUTRALIZE OR PASSIVATE	PRIME	FINISH
Galvanized steel pedestrian guards, including mounting bolts and nuts.	None	None	None
Exposed galvanized steel brackets, pipe straps and other hardware used for aerial crossing.	None	None	None
Corporation stop on steel pipe aerial crossing (water main).	Metal passivator as recommended by manufacturer of finish paint.	Primer as recommended by manufacturer of finish paint.	Two coats Pratt & Lambert Endu-thane High Build Urethane, Cyanine Blue (Carboline Color No. 2127)
Corporation stop on steel pipe aerial crossing (force main).	Metal passivator as recommended by manufacturer of finish paint.	Primer as recommended by manufacturer of finish paint.	Two coats Pratt & Lambert Endu-thane High Build Urethane, Eye-Rest Green (Carboline Color No. 2369)

2.03 PAINTING, PIPING AND PUMP STATION PROJECTS

Painting for piping or pump station projects shall be as specified, and as listed below, using the materials specified, or approved equals:

AREA	NEUTRALIZE OR PASSIVATE	PRIME	FINISH
Exposed exterior concrete stucco and masonry. (Paint shall extend a minimum of 6 inches below finished grade where grass or natural ground abuts surface.)	None	None	2 coats, Kop-Coat 600, Exterior, Antique Ivory-378.

2.03 PAINTING, PIPING AND PUMP STATION PROJECTS (CONT'D)

AREA	NEUTRALIZE OR PASSIVATE	PRIME	FINISH
Exposed interior concrete ceiling, walls, equipment bases in dry well.	10% solution of muriatic acid.	None	3 coats of Kop-Coat Ponkote 300 enamel.
Exposed interior metal work, other than gratings, ladders or not specifically mentioned below.	Kop-Coat Passivator No. 40	One coat Rustbond Penetrating Sealer SG by Carboline	2 coats of Kop-Coat Ponkote 300 enamel.
All interior concrete surfaces of the wet well.	Lined or coated in accordance with Section UC-570.		
Exterior surfaces of wet well and manholes, which must be coated prior to installation.	Concrete must be clean and thoroughly dry.		None 2 coats of Kop-Coat Bitumastic 300-M, each coat having a minimum dry film thickness of 8 mils.
All interior concrete surfaces of new manholes.	Lined or coated in accordance with Section 02536.		
Steel and cast iron piping, valves, supports and appurtenances other than those specified above.	Kop-Coat 40 Passivator, if galvanized. Kop-Coat Inertol Tar Stop Primer, if tar coated. Sandblast if needed.	2 coats Rustbond Penetrating Sealer SG by Carboline	Somay 237 Enamel or Sherwin Williams Industrial Enamel 354 Series.

2.03 PAINTING, PIPING AND PUMP STATION PROJECTS (CONT'D)

AREA	NEUTRALIZE OR PASSIVATE	PRIME	FINISH
Emergency connection support brackets, and piping in the wet well.	None	None Bitumastic	2 coats of Kop-Coat No. 50
Black steel pipe			
(a) underground pipe and pipe embedded in concrete.	None	None	1 coat of Kop-Coat Bitumastic No. 50
(b) above ground	None	2 coats Rustbond Penetrating Sealer SG by Carboline	Somay 237 Enamel or Sherwin Williams Industrial Enamel 354 Series.
Exposed interior metal work, except aluminum, stainless steel, and other items specifically mentioned below.	Kop-Coat 40 Passivator, if galvanized. Kop-Coat Inertol Tar Stop Primer, if tar coated. Sandblast, if needed.	2 coats Rustbond Penetrating Sealer SG by Carboline	Somay 237 Enamel or Sherwin Williams Industrial Enamel 354 Series.
Aluminum surfaces in contact with metal must be steel (except stainless steel) concrete or grout	None, except clean, dry and free from oil, dust or other foreign material	None	2 Coats of Kop-Coat No. 50.
Aluminum surfaces other than above.	None	None	None
Galvanized metal	Per paint manufacturer's recommendations.	Kop-Coat 340 Gold Primer.	Kop-Coat Rustarmor 500.

2.04 MISCELLANEOUS PAINT APPLICATIONS

- A. Paint all exposed surfaces scheduled for painting whether or not colors are designated in schedules, except where the natural finish of material is obviously intended and specifically noted as a surface not be painted. Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the Department will select these from standard colors available for the materials systems as specified.
- B. Color Selection: Paint colors and tints shall be as selected by the engineer to conform to the color scheme of the project. All coding, banding, legends, etc., for exposed interior and exterior piping is as follows:

EQUIPMENT AND MATERIALS	PAINT COLOR	COLOR NUMBER
Alum or Polymers	Silver	
Ammonia	Purple	S585
Carbon Dioxide	Orange	J498
Chlorine Gas	Medium Yellow	J698
Chlorine Solution	Medium Yellow with Blue Bands	J698-A181
Chlorine Liquid	Medium Yellow with Red Bands	J698-0508
Centrate	Medium Green	0336
Condensate	Charcoal Gray	
Compressed Air	Doeskin	1217
Dangerous or Caution Areas	Medium Yellow	J698
Drains	Charcoal Gray	
Electrical Conduit	Black	C900
Electrical Conduit (Above 220 Volts)	Black with Red Bands	C900-0508
Electrical Motors and Blowers	Light Gray	0746
Flushing Water	Light Brown	
Fluoride	Red	0508
Fuel Oil	Royal Blue	A183
Fuel Oil Return	Royal Blue with Red Bands	A183-0508
Gas	White	0800
Potable Water	Jade Green	2383-0336
Potable Water (Hot)	Jade Green with Red Bands	2383-0508 or 0336-0314
Process or Treated Water Pumps	Light Brown Light Gray	0746
Steel Misc.		

EQUIPMENT AND MATERIALS	PAINT COLOR	COLOR NUMBER
Angles, Supports, etc.	Charcoal Gray	
Sewage Piping	Dark Brown	G241
Sewer Plants and Stations (Structures and Trims)	Eye-Rest Green	2369
Sewage Pumping Stations (Inside Walls)	Antique Ivory	0895
Sludge (In Water)	Ivory "WSL"	0855
Sludge (Sewage)	Light Buff or Brown White Stencil "SL"	

Note: Kop-Coat Colors from Master Color Chart 560M

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

- A. In addition to the aforementioned preparations, the Contractor shall be required to remove all dirt, rust, scale, splinters, loose particles, disintegrated paint, grease, oil and other deleterious substances from all surfaces which are to be coated.
- B. Hardware, hardware accessories, machined surfaces, plates, lighting fixtures and similar items in contact with painted surfaces and not to be painted shall be removed, masked, or otherwise protected prior to surface preparation and painting operations.
- C. Before the structure is painted, representatives of the Contractor and the Department shall inspect the interior of the wet well, the influent and the pump suction piping and all accessible piping. Any foreign matter shall be removed and all interior surfaces shall be thoroughly cleaned by means of scrubbing and hosing.
- D. Before commencing work, the painter must make certain that surfaces to be covered are in perfect condition. Should the painter find such surfaces impossible of acceptance, he shall report such fact to the Contractor who shall immediately correct the deficiencies. The application of paint shall be held as an acceptance of the surfaces and working conditions and the painter will be held responsible for the results reasonably expected from the materials and processes specified.
- E. Program the cleaning and painting so contaminants from the cleaning process will not fall onto wet, newly-painted surfaces.
- F. Prepare cementitious surfaces of concrete, concrete block, cement plaster and cement-fiber board to be painted by removing all efflorescence, chalk, dust, dirt, grease, oils, and by roughening as required to remove glaze.

- G. Clean ferrous substances, which are not galvanized or shopcoated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning. All welds, blisters, etc., shall be ground and sanded smooth. All pits and dents shall be filled and all imperfections shall be corrected so as to provide a smooth surface for painting.
- H. Surface profile as obtained from sandblasting shall be as recommended by the coating manufacturer.
- I. Galvanized surfaces shall be treated with a metal passivator prior to painting. Exposed cast iron pipe, fittings and valves, where coal tar coated shall have all heavy spots thinned down by rubbing with kerosene and shall receive two coats of shellac before any finish coats are applied.
- J. Where material or equipment is shop-primed, all bad spots shall be cleaned and touched up with the recommended primer before the finish coats are applied. Bright aluminum surfaces and all small items of equipment with factory finish in good condition, shall not be painted. Name and data plates on equipment shall not be painted over under any condition.

3.02 MATERIALS PREPARATION

- A. Mix and prepare painting materials in strict accordance with manufacturer's recommendations and directions, stirring materials before and during application to maintain a mixture of uniform density, free of film, dirt and other foreign materials.
- B. No thinners shall be used except those specifically mentioned and only in such quantity as directed by the manufacturer in his instructions. If thinning is used, sufficient additional coats shall be applied to assure the required dry film thickness is achieved. The manufacturer's recommended thinner or cleanup solvent shall be used for all clean-up. Application by brush, spray, airless spray or roller shall be as recommended by the manufacturer for optimum performance and appearance. However, spray methods shall only be used if specifically permitted by the Engineer in writing

3.03 PAINTING OF AERIAL CROSSINGS

- A. After steel pipe has been installed across the canal/river, all areas damaged by field welding, or other reasons, inside and outside, shall be thoroughly cleaned, back to good paint, by wire brushing, chipping, grinding, or other method as approved by the Department, until clean bright metal is exposed. The cleaned area shall immediately be spot primed and repainted, using the same paints and thicknesses specified in Section 15075 in accordance with the manufacturer's recommendations, and to the satisfaction of the Department.
- B. The interior painted surface of the steel pipeline shall be tested by the Contractor with an approved type electric holiday detector. Should any holidays or pinholes be found, they shall be sealed to the satisfaction of the Department, and the surface retested.
- C. The Department reserves the right to re-check the steel pipeline with its own personnel and detector equipment. The Contractor shall not connect any additional pipe and/or fittings to the steel pipe at the extreme end flanges until he has received approval from the Department to do so. If the Department exercises its option, and any holidays, pinholes, or inferior workmanship

are found, they shall be corrected by the Contractor to the satisfaction of the Department.

- D. All paint shall be applied in strict accordance with these Specifications, following the recommendations of the paint manufacturer(s), and to the satisfaction of the Department. Where minimum coat thickness has not been specified, it shall be as recommended by the manufacturer of the particular paint being applied; however, in no case will the work be approved if the paint does not cover to the satisfaction of the Department's Representative.

3.04 PAINT APPLICATION, GENERAL

- A. All painting shall be done by skilled and experienced craftsmen and shall be of highest quality workmanship.
- B. Apply paint in accordance with the manufacturer's directions. Use applicators and techniques best suited for the type of material being applied.
- C. Surface to be painted shall be dry and clean.
- D. Apply additional coats when undercoats, stains or other conditions show through the final coat of paint or if in the opinion of the Department, the paint film is of a non-uniform finish, color and appearance.
- E. Paint shall be applied in a neat manner with finished surfaces free of runs, sags, ridges, laps and brush marks. Each coat shall be applied in a manner that will produce an even film of uniform and proper thickness.
- F. Paint surfaces behind moveable equipment the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only.
- G. Paint back sides of access panels and removable or hinged covers to match the exposed surfaces.
- H. Finish exterior doors on tops, bottoms, and side edges the same as the exterior faces, unless otherwise indicated.
- I. Sand lightly between each succeeding enamel or varnish coat.
- J. Omit the first coat (primer) on metal surfaces which have been shop-primed and touch-up painted, unless otherwise specified.
- K. Retouching Existing Painting Surfaces: Existing painted surfaces damaged by the modification work or other operations of the Contractor shall be retouched to conform to the above coating systems and blend in with the new and existing work. Damaged surfaces shall be repainted with not less than 2 coats, and other existing surfaces that are listed shall be repainted with the coating system specified.
- L. The prime and intermediate coats as specified for the various coating systems may be applied in the shop by the manufacturer. The shop coats shall be of the type specified and shall be

compatible with the field coat or coats. Such Items as pumps, motors, equipment, electrical panels, etc. shall be given at least one touch up coat with the intermediate coat material and one complete finish coat in the field.

3.04 STENCILS

- A. Stencils shall be of durable material which will not absorb paint, and which will present crisp clear finished text without underflow or overspray, on the item being stenciled.
- B. The height of stenciled text on piping shall be equal to $\frac{1}{4}$ of the pipe diameter, unless otherwise approved by the Engineer of Record, but shall not be less than $\frac{1}{4}$ -inch nor more than 6-inches in height in any case unless specifically noted herein or shown on the Drawings.
- C. The height of stenciled text on structures or equipment shall vary from 1-inch to 6-inches depending on location, size and space availability on the structures and equipment, and on the importance of the text. The height of each stenciled text shall be as ordered by the Engineer of Record.
- D. Lettering shall be upper case, normally spaced, and both letters and figures shall be bold enough to be legible at a distance of at least 10-feet for text heights of $\frac{1}{2}$ -inch or less, and 30-feet for all other sizes.
- E. Letter style shall match existing stenciled text used by the Department on adjacent or connected structures, equipment and piping wherever possible.

3.05 SIGNS

- A. Signs shall be engraved of two or three layers of plastic laminate engraving stock for exterior use, and shall be of 1/8-inch thick aluminum. On general message and identification signs, the top layer shall be black and the back layer, or core, shall be white. The sign text shall be precision routed through the top layer, and shall show crisp contrasting color of the back layer, or core.
- B. Signs shall be rectangular in shape, and edges shall be beveled cut. Maximum length of signs shall be 30-inches, and the minimum width 2-inches, unless otherwise specified.
- C. The sign text shall be normally spaced, and letter text shall match that used on existing engraved signs used by the Department on adjacent or connected structures or equipment whenever possible, otherwise the letter style shall be upper case Gothic. Sign text shall be 1-inch unless otherwise specified or shown on the Plans. Sign text, and room or building number and other symbols, if applicable, shall be on the same sign.
- D. Signs shall be designed for adhesive mounting, with exterior type waterproof adhesive furnished with the signs by the manufacturer, unless otherwise specified or noted on the Plans.

3.06 NAMEPLATES

- A. All equipment and piping shall be provided with nameplates to reflect the nomenclature or

purpose of the item.

- B. Nameplates shall be of brass, 16 gauge BSG minimum thickness (.0508-inch), or AISI Type 316 stainless steel, 18 gauge MSG minimum thickness (.0478-inch), with die stamped letters not less than ¼-inch high. Each unit of equipment shall have one nameplate, and piping systems shall be provided with a nameplate on each valve and at each point of starting, termination, entering or exiting.
- C. Nameplates shall be directly attached to the equipment with stainless steel screws, bolts and nuts, or rivets where applicable. Where there is impractical due to equipment size or shape, the nameplate may be wired to the equipment with stainless steel wire. Nameplates shall be wired to valves and piping with stainless steel wire. The stainless steel wire shall be 18 gauge SWG minimum (.0475-inch).

3.07 APPLICATIONS RESTRICTIONS

Application of materials shall be done only on properly prepared surfaces as herein specified, and all exterior painting shall be done only in dry weather. Any surface coating damaged by moisture or rain shall be removed and redone as directed by the Department.

3.08 MINIMUM COATING THICKNESS

- A. Coatings shall be applied in accordance with the manufacturer's recommendations.
- B. Apply a prime coat to material which is required to be painted or finished, and which has not been prime coated by others.
- C. Recoat primed and sealed walls and ceilings where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.

3.09 FINISHES

- A. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
- B. Complete Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specific requirements.

3.10 FIELD QUALITY CONTROL

All completed surfaces will be checked by the Department, and the Contractor shall provide the necessary properly calibrated gauges. All nonferrous surfaces shall be checked for number of coats and thickness by use of a Tooke gauge. All ferrous surfaces shall be checked for film thickness by use of an Elcometer or Micro-Test magnetic dry film gauge properly calibrated. In addition, submerged tank linings and metals shall be tested for freedom from holidays and pinholes by use of a Tinker-Razor or K-D Bird Dog Holiday Detector. All defects shall be corrected to the satisfaction of the Department.

3.11 PROTECTION

All other surfaces shall be protected while painting equipment, piping, etc., using suitable cover cloths where necessary. Protection of movable objects, equipment, fittings, and accessories shall be provided throughout the painting operation. Remove all electric plates, surface hardware, etc., before painting, protect and replace when completed. Mask all machinery nameplates and all machined parts not to receive paint. Lay drop cloths in all areas where painting is being done to adequately protect flooring and other work from all damage.

3.12 CLEANING

- A. The Contractor shall perform the work under this Section while keeping the premises free from accumulation of debris and rubbish and shall remove all scaffolding, paint cloths, paint, and brushes from the building when completed.
- B. Cleaning: All paint brushed, splattered, spilled or splashed on any surface not specified to be painted shall be removed.

END OF SECTION