

CLASSIFICATION

Contains information for the design of structures, systems or components: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Design verification : Not applicable <input type="checkbox"/>	Head of OU/Supervisor <input checked="" type="checkbox"/> Verifier Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/>

CONTROL OF MODIFICATIONS

Issue	Modifications
1	Not applicable, first issue

PRELIMINARY OR PENDING INFORMATION

Issue	Paragraphs	Subject	Status
1	6.12 Appendix B	Finish colors Commercial paints	Preliminary Preliminary

DISTRIBUTION

External	Internal	No. copies/Format
SEPCO III	VFA, CIV, SML, MLR, AVI, AGD	1/Electronic file 1/Electronic file

1.	PURPOSE.....	6
2.	SCOPE OF SUPPLY.....	7
2.1	GENERAL	7
2.2	SCOPE OF PAINTING IN WORKSHOP	8
2.3	SCOPE OF WORK ON SITE.....	10
3.	ENVIRONMENTAL CONDITIONS ON SITE	11
4.	REFERENCE CODES AND STANDARDS	13
5.	SURFACE PREPARATION	14
5.1	GENERAL	14
5.2	CARBON AND LOW ALLOY STEEL.....	14
5.2.1	Degreasing	14
5.2.2	Contamination by Salts, Acids and Alkalis	15
5.2.3	Rust Removal	15
5.3	PAINTED STEEL SURFACES	16
5.3.1	Surfaces with Defects	16
5.3.2	Weld Areas and Screw Joints.....	16
5.3.3	Surfaces Free of Defects.....	17
5.4	GALVANIZED STEEL	17
5.4.1	New Galvanized Surfaces	17
5.4.2	Aged Galvanized Surfaces	17
5.4.3	Zinc Surfaces with Bare Patches.....	17
5.5	COLD ROLLED STEEL.....	18
5.6	STAINLESS STEEL AND LIGHT ALLOY.....	18
5.7	CONCRETE AND CEMENT SURFACES	18
5.7.1	General.....	18
5.7.2	Cleaning	19
6.	PAINTS	20
6.1	GENERAL	20
6.2	APPLICATION.....	21
6.3	SAFETY STANDARDS	22
6.4	THICKNESS OF COATING.....	23
6.5	REPAIRS.....	23
6.6	SURFACES RENDERED INACCESSIBLE AFTER ERECTION.....	23
6.7	SURFACES TO BE WELDED AFTER PAINTING	24
6.8	INSULATED SURFACES.....	24

6.9	GALVANIZED, STAINLESS OR ALUMINUM SURFACES	24
6.10	SUPPORTS AND PIPING AND VALVES SUPPLIED WITH SHOP PRIMER	25
6.11	CONCRETE	25
6.12	COLORS	26
7.	INSPECTION AND QUALITY CONTROL	30
7.1	GENERAL	30
7.2	INSPECTION INSTRUMENTS	30
7.3	INSPECTION STAGES	30
7.4	MEASUREMENT OF THICKNESSES.....	31
7.5	ADHESION TESTS	32
7.6	HOLIDAY DETECTION	32
7.7	REJECTION	32
7.8	DOCUMENTATION.....	32
8.	WARRANTY.....	33
8.1	WARRANTY PERIOD	33
8.2	PAINTING AT SITE ON TOPCOATS APPLIED IN THE WORKSHOP	33
8.3	PAINTS APPLIED IN THE WORKSHOP	33
9.	HANDLING AND APPROVAL OF DOCUMENTS	34
9.1	WORK TO BE CARRIED OUT IN THE SHOP	34
	9.1.1 Proposal	34
	9.1.2 Award of Contract.....	34
9.2	WORK TO BE CARRIED OUT AT SITE.....	35
	9.2.1 Proposal	35
	9.2.2 Award of Contract.....	35
	APPENDIX A COATING SYSTEM SELECTION	36
	APPENDIX B COMMERCIAL PAINTS.....	42
	APPENDIX C APPENDIX C FORMS	43

1. PURPOSE

1.1 The purpose of this specification is to define the technical requirements for the paint used for components and/or structures (hereinafter all referred to as components) of the IBRI Combined Cycle Power Plant (IBRI IPP hereinafter).

1.2 The requirements specified herein apply both to the work carried out in the component manufacturer's shop and the work carried out on site.

1.3 The supplier of the component (hereinafter referred to as the Supplier) shall be responsible for the work carried out in his shop. The successful bidder for protective paintwork at site (the paint manufacturer or the painter) shall be responsible for the work carried out during plant construction.

1.4 The scope of shop work shall be that defined in this specification and in that of each individual component. Any other work up to completion of it shall be the responsibility of the successful bidder for protective paintwork at site.

2. SCOPE OF SUPPLY

2.1 GENERAL

2.1.1 All material and parts, including those items like panels, motors, manometers and other similar devices which normally are finally coated in the factories, shall be delivered with a coated primer coat and intermediate coat and final coat. Manufacturers shall comply with this specification and painting (including the paint manufacture and all the paint model number) will be subject to approval by SEPCO. Only after that the supplier can imply the painting work according to the submitted specifications. The Supplier shall be responsible for the procurement, inspection and testing of all painting materials and preparation and painting of surfaces in accordance with the stipulations of this specification.

2.1.2 The services shall include, but not be limited to the supply and storage of all painting materials and tools to be used, the preparation of surfaces, the application of the primer, intermediates and topcoats required, the retouching of painted surfaces, inspection and applicable tests.

2.1.3 The supply shall include the paints to be applied, as defined later in this document, thinners or any additives that may be required, tools and instruments required to prepare the surfaces, the application of protective coats, quality control, quality assurance and personnel safety.

2.1.4 Unless otherwise specifically indicated, the following shall not be painted: stainless steel; plastic, brass, bronze, copper, aluminium surfaces, chromed metals, glass; special coatings such as rubber, ebonite, enameling, porcelain, etc; switching devices; commercial or industrial traffic signs or nameplates; machined parts of equipment; VAC ductwork; galvanized ductwork; galvanized grating and handrailing, galvanized structural steel, unless otherwise explicitly indicated; earth connection areas in electrical cabinets, panels or switchboards; Bus duct enclosures, cable trays and supports, electrical conductors insulated or un-insulated, electrical conduits, wireways, and junction boxes (except as otherwise specified); shop fabricated tanks having shop applied chemical resistant coatings, etc.

2.1.5 The supplier shall, prior to painting, protect nameplates, lettering, gauge, sight glasses, light fittings and similar such items, to ensure that these are in no way defaced or damaged during the work.

2.1.6 The fire resistance will not be performed by painting and therefore it is not included in the scope of this Specification.

2.1.7 Architecture finishing and detailed identification of pipes and valves according to fluid conveyed are not included in the scope of this Specification.

2.1.8 Standard manufacturing components can be supplied with their usual protection if it is adequate to the operating environment of the component and the intact duration of said protection is guaranteed on writing for a minimum period of three (3) years from reception (see technical conditions of warranty period in point 8.1.3 of this document). The manufacturer shall always send all the information requested later in this specification. Though proprietary items

may be used in their standard finish, subject to the approval of the Owner care shall be taken in the application of this principle, to ensure that cosmetic, and more importantly safety and operational, color clashes do not occur.

2.2 SCOPE OF PAINTING IN WORKSHOP

The scope of the painting work in manufacturer's shop shall include, but not be limited to the following:

2.2.1 Complete painting system, according to Appendix A, in the following components:

- a) Pumps and compressors
- b) Control panels and consoles
- c) Motor control centers, power supply centers, etc
- d) Motors
- e) Ventilators
- f) Transformers
- g) Electrical equipment
- h) Hoisting equipment
- i) Tank interiors (if so specified in the corresponding Data Sheet) delivered to the site completely assembled
- j) Actuators
- k) Miscellaneous supports for tray, bus duct, conduit, lighting, electric unit heaters
- l) Equipment packages delivered to the site completely assembled on a frame
- m) Ion exchanger, sand and active carbon filters (if complete mounted in shop).
- n) Heaters and chillers without insulation (if complete mounted in shop).
- o) Building structures.
- p) Beams from bridge crane or gantry crane girders.
- q) Any other equipment or component that is so indicated in their corresponding technical specification

2.2.2 The following equipment items shall be delivered to the site correctly prepared and painted except for the final coat, excluding the areas to be welded in accordance with that stipulated in Section 6.7 of this specification:

- a) Exterior of tanks to be erected at site.
- b) Air-Cooled Condenser including structures and supports.
- c) Equipment base plates.
- d) In general, any component that is going to be welded at the site and, components that is indicated in the corresponding technical specification.

2.2.3 Piping and valves whose location is unknown at the time of painting in the shop, shall be sandblasted and painted with a inorganic zinc silicate shop primer of 25 mm dry film thickness.

2.2.4 As a general rule of supply, components such as stairs, handrails and platform netting, safety harness hooks, anchor plates, grasps and supports, junction/conduit boxes, scaffolding, etc., both inside and outside the buildings, will be hot-dip galvanized. If galvanized do not support environmental conditions, then these components shall be also painted (see paragraph 6.9) or supplied on an environmental resistant material (plastic, stainless steel, etc.). All mild steel items for platforms, toe-plates, ladders, stanchions, handrails and chains shall be protected by hot dip galvanizing after fabrication with a minimum thickness of 65 microns and according to ISO 14713 and ISO 1461 unless otherwise specified. No cutting, drilling, bending, riveting, threading or similar operation will be permitted after galvanizing

2.2.5 The indications included in section 6.8 will be taken into account for those equipment items to be thermally insulated.

2.2.6 Exposed surfaces of electrical conduit, conduit boxes, and fittings shall be painted only where they are adjacent to painted parts of the building structure or equipment. These surfaces shall be painted the same color as the adjacent building or equipment surfaces.

2.2.7 The Supplier will send instructions for final painting and/or retouches needed on site, after erection.

2.2.8 The machined surfaces shall not be painted. Will be supplied protected as indicated in their technical specification.

2.2.9 The temporary protection that will be applied in surfaces that are going to be in contact with condensate or boiler feedwater will be done with Vapor Phase Inhibitors (VPI), or with a solution easily washable with water. The drainage coming from the elimination of this solution will not contain any product that cannot freely be spilled to public channel.

2.3 SCOPE OF WORK ON SITE

2.3.1 The scope of work on site will include but not be limited to the application of complete painting systems, as defined in Appendix A, to all components supplied without painting, and the application of intermediate or finishing layers and/or retouches until completing the painting systems defined in Appendix A to all components that so required it; in general, it will comprise all painting work defined in the specification.

2.3.2 The scope will also include the preparation and painting of concrete surfaces subjected to chemical environments requiring specific chemical resistance characteristics, such as chemical tank containers and basin areas, or the battery room floor.

3. ENVIRONMENTAL CONDITIONS ON SITE

3.1 Painting will protect surfaces from corrosion and erosion caused by the environmental conditions. Moreover, painting will resist the conditions caused by the operation of the different components.

3.2 EXTERNAL ENVIRONMENTAL CONDITIONS

The document "General Project Requirements" (IBRI-00-ZAA-DR_-EAI-00400) includes the general description of the Project and all the specific information related to the site characteristics and external environmental conditions.

3.3 CONDITIONS INSIDE BUILDINGS

The ambient conditions inside buildings are as follows:

Building or room	Max./min. temp (°C)	Relative humidity (%)
GT and ST Turbine Halls CO ₂ Cylinder Room Pump Rooms Air Compressor Room Water Treatment Building Firefighting Pump House Gas Compressor Room Chemical Dosing Container	T _{amb} + 5 / Not controlled	Not controlled
GT and ST Electrical Enclosures Electronic Equipment Rooms	24±2 / 22±2	50±10
Computer Room Laboratory Facilities, steam and water sampling room	24±1 / 20±1	55±15
Control Rooms	24±1 / 22±1	55±15
Electrical Rooms	28±2 / 10	50±20
Battery Rooms	28±2 / 10	Not controlled

3.4 The painting systems shall be selected depending on their corrosivity category, as per ISO 12944-2. The environment shall be classified in the C4 category for atmospheric corrosion.

For water and soil, the categories are the following:

- Im1 = Freshwater environment. Components immersed in natural reservoir water, pretreated (non-potable) water, such as inside of tanks, submerged equipment areas or water intake structure equipment.

- Im3 = Environment: Soil. Buried tanks, piping or equipment.

3.5 The coating durability shall be based on a High Durability (>15 years to first major maintenance) for the steel structures. The standards of surface preparation and painting which shall give a minimum service life of 20 years, with need for minor remedial work only, during the intervening period, shall be used. For other elements, the coating durability shall be based on a Medium Durability (5-15 years to first major maintenance).

3.6 For equipment or components subject to these and to other conditions, such as high temperatures, submerged or in sporadic contact with chemicals, or with other specific requirements, the applicable painting systems are defined below in this specification.

4. REFERENCE CODES AND STANDARDS

4.1 The following codes and standards shall be considered to form an integral part of this specification.

4.1.1 American Society for Testing and Materials (ASTM).

4.1.2 Swedish Standard Institution (SIS).

4.1.3 Steel Structures Painting Council (SSPC).

4.1.4 Colour Register RAL.

4.1.5 International Organization of Standardization (ISO).

4.1.6 National Association of Corrosion Engineers (NACE).

4.1.7 European Standards (EN).

4.1.8 Applicable Safety Regulations in the place where the work is being carried out.

4.1.9 British Standard (BS).

4.1.10 Deutsches Institut für Normung (DIN).

4.2 In addition to the codes and standards referenced here, it shall be understood that the supplier will comply with the requirements of applicable local codes and standards in force on the date of signing the contract.

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/098004041122006025>