Powder Coating Systems

Powder coating is an advanced method of applying a decorative and protective finish to a wide range of materials and products that are used by both industries and consumers. The powder used for the process is a mixture of finely ground particles of pigment and resin, which is sprayed onto a surface to be coated. The charged powder particles adhere to the electrically grounded surfaces until heated and fused into a smooth coating in a curing oven. The result is a uniform, durable, high-quality, and attractive finish. Powder coating is the fastest-growing finishing technology in North America, representing over 10% of all industrial finishing applications.

Surface Preparation

All exterior steel surfaces are blast-cleaned in accordance with the Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6). The cleaned surface is free of all visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter. The blast cleaning method is done using dry abrasive blasting consisting of a closed cycle, recirculating abrasive system with centrifugal wheels and abrasive. The selection of an abrasive size and type shall be based on the type, grade, and surface condition of the steel to be cleaned, the finished surface to be produced and whether the abrasive will be recycled.

Interior and Exterior Coating

After the blast cleaning process, the interior of the base of each pole is mechanically cleaned and coated for a length of approximately 2.0 feet with a zinc rich epoxy powder which is electrostatically applied and cured in a large convection oven heated to 400 degrees Fahrenheit. The exterior of all steel surfaces is coated with a urethane polyester powder meeting the requirements of the project specifications and cured in a convection oven at 400 degrees Fahrenheit. The dry thickness is typically between 2.0 and 5.0 mils (0.002" and 0.005").   The finished product is wrapped in a protective plastic-backed foam to safeguard against damage during shipment.