Anodize Finishes

ARCHITECTURAL CLASS I ANODIZE
This process creates a film of aluminum oxide on the surfaces of aluminum extrusions with a minimum coating thickness of 0.7 mil. This hard and durable finish resists abrasion and corrosion. It is especially well suited for heavy abuse environments. It is used for exterior and interior applications with a life expectancy of over 30 years depending on environmental conditions. Architectural Class I Anodize finishes are available in the following colors:

- CLEAR (AA-M12 C22 A41)
- GOLD (AA-M12 C22 A43)
- LIGHT BRONZE (AA-M12 C22 A44)
- MEDIUM BRONZE (AA-M12 C22 A44)
- DARK BRONZE (AA-M12 C22 A44)
- BLACK (AA-M12 C22 A44)
- HARD COAT (MIL-A-8625, Type III, Class I)

MECHANICAL PRETREATMENTS
All Anodized finishes may be applied over pretreated aluminum extrusions. When used, the pretreatment number replaces the “M12” in the AA designation. The most commonly used pretreatments are: M32-Medium Directional Texture and M21-Smooth Polished.

Uses, Applications
Aluminum Tube Railings are ideally suited for virtually maintenance free requirements such as decks and balconies. Railing systems over 4’-0” (1.21 Meters) high also produce virtually maintenance free fencing for pool areas and site perimeters. Other ornamental applications include Juliette or false balcony rails, trellis structures, friteway, and chair rails.

Assembly, Installation
Aluminum Tube Railings are easily installed, requiring virtually no assembly on the jobsite. Railing sections are shipped pre-assembled in lengths up to 20’-0” (6.09 Meters) long. Field assembly of Aluminum Tube Railing sections is accomplished by joining together the prefabricated sections and setting them into place. Shop drawings are provided for each awarded contract. Additional instructions are provided upon request. Installation by ATR Technologies, Inc. is available depending on project magnitude, location and requirements.

Materials, Finishes
Aluminum Tube Railings are produced from 6063-T6 & 6005-T5 aluminum alloys. A variety of finishes are available including several grades of baked enameled, powder coat and anodize. All mechanical connections use interlocking technology which is hidden from view or use internal fasteners of aluminum, cadmium plated or stainless steel. Typical designs utilize non-welded joints. These mechanically connected joints avoid welded construction and also avoid the “halos” or discolored areas commonly seen with anodized finishes on welded joints. When required, welded construction is utilized.

Technical Support
ATR Technologies, Inc. provides design and cost estimates, installation, shop drawings, engineering calculations, custom extrusions and additional support for any project as required.

Workmanship and Installation
Aluminum Tube Railings shall be fabricated according to approved shop drawings and actual field dimensions. All materials shall be installed plumb, square, and level and shall be anchored securely in proper alignment with adjacent work. Posts shall be anchored according to approved shop drawings. Adequate provisions shall be made for thermal expansion and contraction of all exterior railings. All miters and field cuts shall be smoothed after joining. When aluminum is placed in contact with dissimilar materials, the aluminum surface shall be protected by a vinyl tape or epoxy paint barrier.

Final Acceptance
The railing subcontractor shall complete the railings for final inspection and acceptance as installed according to the contract requirements. The General Contractor shall be responsible for protecting the installed railings from subsequent operations of other trades during the balance of construction.

Cleaning
Aluminum Tube Railings shall be cleaned with plain water containing a mild soap or detergent or distillate. No abrasive agent shall be used.

Codes, Certification
Engineering calculations are provided as required. When specified, certified engineering is provided by a California State Certified engineer for each project awarded. Aluminum Tube Railings by ATR Technologies, Inc. meet and exceed the loading requirements established by CBC, IBC, OSHA and local Building Codes, including ADA Accessibility Guidelines (ADAAG).

Operation, Maintenance
Aluminum Tube Railings by ATR Technologies, Inc. are virtually maintenance free. Depending on finish selected, seasonal rains may rinse off dust and debris on exterior installations. When heavier deposits are subject to occur or when periodic maintenance is required, mild detergents and warm water are generally recommended, subject to the applicator’s cleaning recommendations. These recommendations vary by finish and location and are available as required.

There are three basic categories for aluminum finishes: ANODIC FINISH, BAKED ENAMEL FINISH and POWDER COAT FINISH. Each are available and are briefly described below:

- **Powder Coat Finishes**
  This coating process offers hundreds of industry standardized “RAL” colors in many quality options:
  - High Performance Powder: Tiger Drylac, Spraylat, Akzo Nobel and others provide a variety of powder coating options. High Performance Powder Coatings meet the performance criteria of the AAMA 2604 up to 2605 specification.

- **Baked Enamel Finishes**
  This coating process offers virtually unlimited colors and a wide variety of quality.
  - Superior Performance: Kynar 500®, Hylar 5000®, Duranar®, or other baked enamel products that contain 70% polyvinylidene fluoride (PVDF) resin. These products meet the performance criteria of the AAMA 2605 specification. Such finishes have a 30-year life expectancy on aluminum depending on environment.

- **Anodized Finishes**
  Anodize is best used on 6063 or 6005 series aluminum alloys. Aluminum oxide coatings are known to have a hardness similar to that of a diamond. Since welding aluminum changes temper slightly, exposed welded joints may halo or appear slightly discolored under the anodized finish.

ATR TECHNOLOGIES, INCORPORATED
805 Towne Center Drive • Pomona, CA 91767-5901
California State Contractors License 679259
909-399-9724 • 909-399-5834 (Fax) • 800-423-4148 (Outside CA)
www.ATR-Technologies.com • Sales@ATR-Technologies.com (E-Mail)

© Copyright 2010. Printed in the USA.