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SECTION 05720 Aluminum Handrails and Railings: Sample Specifications

2.05 FABRICATION

- A. General: Fabricate handrails and railing systems to comply with requirements indicated for design, dimensions, details, finish and member sizes, including wall thickness of hollow members, post spacings, and anchorage, but not less than those required to support structural loads.
- B. Preassemble railing systems in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for field assembly and coordinated installation. Use connections that maintain structural value of joined pieces.
 - i. No mechanical, field assembled railing systems shall be permitted for use.
 - a. The nature of field assembled, mechanical railing systems require components to be of pre-painted extrusions. Following shop assembly, individual panel sections are sent to jobsite for installation, and due to railing systems assembly, top rails are "cut-to-size" creating mill finish edges. These cut edges serve as passageway for premature paint failure.
- C. Assembly shall be in a neat workmanlike manner using M.I.G. or T.I.G. Welding Processes as required. Horizontal Channels shall be punched to receive pickets and welds in this application shall be concealed from view.
 - i. Channels to receive a snap cover only when specifically required and noted on drawings.
 - ii. All Posts shall be structurally welded to top rail and mid and lower horizontal members to assure fixed fastening for the life of the rail.
 - iii. Segmented railing sections and Corners shall be hairline fitted by mitre and further welded as required to obtain maximum assurance of strength through the railing's useful life.
 - a. Exposed welded surfaces shall be ground smooth (when applicable). Finish to be no less than National Association of Architectural Metal Manufacturers (NAAMM): Finish Type 2 or National Ornamental & Miscellaneous Metals Association (NOMMA): Finish #2.
 - iv. All splices shall be accomplished by butting one top rail to the next with a structural sleeve insert extending from one top rail to the next and further secured by means of a stainless steel, aluminum or other proper screw or pop-rivet.
 - a. Butt splices to be either hairline fitted or properly gapped to provide for proper expansion and contraction movement. For expansion joints be sure that only one side of the sleeve insert is fastened to the top rail.
 - v. End connections required to fasten to the building structure require either a welded end clip or a separate side clip.
 - vi. Provide weep holes when necessary to drain closed sections from pretreatment immersion and sprays.