

**ALUMINUM FABRICATIONS**

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**1. GENERAL**

**1.1 Work Included**

- .1 Supply and installation of platforms, supports, grating, and ladders unless otherwise specified.

**1.2 Standards**

- .1 Aluminum Work: CSA S157/S157.1-05
- .2 Welding: CSA W59.2-M1991(R2003)
- .3 Company certification: CSA W47.2-M1987(R2003)

**1.3 Shop Drawings**

- .1 Submit Shop Drawings in accordance with Specification Section 01300.
- .2 Clearly indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories.
- .3 Include erection drawings, elevations, and details where applicable.
- .4 Indicated welded connections using CISC standard welding symbols. Clearly indicate net weld lengths.

**2. PRODUCTS**

**2.1 Materials**

- .1 Aluminum: to CSA Standard HA, 6061-T6 or 6351-T6 Alloy unless specified otherwise.
- .2 Nuts, bolts, and fastening devices connecting aluminum parts to aluminum, concrete, or other materials: stainless steel AISI 316 , with appropriate isolation devices.
- .3 Aluminum Grating: acceptable Manufacturer is Fisher & Ludlow Fisholow Galok Aluminum Grating, Type 30-102M, sizes as indicated on the Drawings.
- .4 Isolation coating: bituminous paint, single component, alkali-resistant coal-tar pitch based. Cleaner for surface preparation shall be compatible with the coating.

**2.2 General Fabrication**

- .1 Verify all dimensions on-site prior to fabrication.

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- .2 Grating:
  - .1 Connect bearing bars in a panel with a bar of same depth as bearing bars and minimum thickness of 5 mm.
  - .2 Finish openings requiring the cutting of four (4) or more bearing bars in the same manner as the end of the panel.
  - .3 Match position of bars and tie rods in adjacent panels to preserve a continuous appearance.
- .3 Cover exposed aluminum surfaces with pressure sensitive heavy protection paper or apply strippable plastic coating before shipping to Site. Leave protective covering in place until final cleaning of structures. Provide instruction for removal of protective covering.

### 3. EXECUTION

#### 3.1 Erection

- .1 Obtain the Contract Administrator's permission prior to Site cutting or making adjustments which are not part of the scheduled work.
- .2 Install items plumb, square and level; fit accurately, and maintain free from distortion or defects detrimental to appearance and performance.
- .3 Make provisions for erection stresses and temporary bracing. Keep work in alignment at all times.
- .4 Replace items damaged in course of installation.
- .5 Perform required field welding. Visible field welds to be smooth, grind as required.
- .6 Perform necessary cutting and altering for the installation of work of other Sections, and as indicated the Drawings. No additional cutting is to be done without the acceptance of the Contract Administrator.
- .7 Perform all field assembly bolting and welding to match standard of shop bolting and welding. Bolts and screws are to be concealed whenever possible.
- .8 Grating:
  - .1 Clip adjacent grating panels edges together at 1500 mm spacing to prevent differential vertical movement.
  - .2 Supply and install two (2) hold-down clips at each end of the panels if not detailed on the Drawings.
- .9 Supply and install anchors for setting in concrete with minimum 100 mm embedment.

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- .10 Paint aluminum surfaces in contact with concrete with two (2) coats of isolation coating.
- .11 Prevent electrolysis between aluminum and dissimilar metals in contact with appropriate isolation devices.

**END OF SECTION**