

## Technical specifications fixed walkways

### 1. Materials

Only materials not subject to corrosion can be used: extruded profiles and plates of high resistance aluminum alloy, anodized 10 micron, natural mat finishing; fasteners of stainless steel, A2-70 DaN/mm<sup>2</sup>.

No protective treatment, painting or maintenance is required, except when exposed to aggressive environments.

Welding is not allowed.

Besides for fasteners, steel is excluded, except in cases of extreme span, in which case an adequate isolation between steel and aluminum shall be applied, to prevent any electrolytic coupling. Fixed walkways can be factory painted in any RAL color by polyester powder coating (option).

### 2. Composition

The walkway is partly per-assembled in the factory, using bolts and rivets. Final assembly of the walkway is executed on the construction site. The walkway is fixed to the wall using bolts and aluminum alloy profiles.

#### 2.1 Landings

The frames of the landings are composed of hollow profiles of 8.2" x 1.2" x 0.1" with double chamber. Joists of no less than 2.4" x 0.8" x 0.1" spaced at no more than 12" are fixed in this frame. These joists support a deck made of aluminum alloy tread plates that are perforated to drain rain water. The tread plates are riveted to the joists. The allowed tread plates are :

- either five-bar pattern plates with thickness ,0.1" to 0.2"
- or plates with perforations (Ø 0.4" and 0.6") with standing edge and thickness 0.1".

#### 2.2 Guardrail

The guardrails are linked. They are made of a handrail of at least 2" wide, having rounded edges (radius at least 1.5 mm) and mounted onto hollow pickets of 2.4" x 1" x 0.1" with rounded edges. The pickets are fixed into the stringers and in the landing frames at least every 2' 5". In between these pickets is constructed:

1. Either a guardrail with three round tubes of 0.7" x 0.1" , set parallel to the handrail and running through the pickets;
2. Either a guardrail with square tubes of 1" x 1" x 0.06" with rounded edges, put parallel to the pickets and spaced at 4"; these tubes are fixed into the handrail at the top and in a square tube of 1.2" x 1.2" x 0.1" at the bottom. The pickets run through this tube;
3. Either a custom made guardrail according to agreed specifications.

The height of the guardrail is at least 3' 0" on the landings.

The handrails are at least 1.6" cleared from all obstacles. On request, the manufacturer can provide a children's handrail at intermediate height.

### **2.3 Supporting structure**

The supporting structure of a walkway shall consist of columns or of wall bracings. The columns and / or bracings are made of U-shaped or L-shaped channels of appropriate sizes, with rounded edges. They will provide the required mechanical resistance. The columns will be constructed on an adequate foundation. The wall bracings are fixed to the wall by anchor bolts of adequate sizes and numbers.

### **3. Mechanical properties**

The walkway will be able to support a uniformly distributed load of 500 Kg/m<sup>2</sup> on the landing as well as a point load of 440lb applied anywhere on landing deck (standards NBN 1-50 and NFP 06-001).

The guardrails will withstand a horizontally applied uniform load of 100 Kg/m without permanent deformation (standards NBN 03-103, NFP 06-001 and NFP 01-012).

The manufacturer shall share, on request, his calculations of stability, deformations and stresses.