

## ROMA – NEW EXHIBITION CENTER

### DESCRIPTION

The roofing system of the footbridge is formed by a multi-span tension structure with variable pitch from 48 to 53.6 metres.

The suspended roofing is made from stainless steel sheets with 125 mm width and 15/10 mm thick arranged according to a catenary configuration and each separated by about 25 cm, so as to create a total transversal width of 10 metres. The sheets with their role of supporting cables have an arrow/span of about 10 %.

At the extrados of the steel sheets is a real waterproof covering, obtained from a polyester material covered by a layer of PDVF on both sides.

The stabilization of the covering and steel sheet is by steel tubes set on the roof covering and vertically anchored by pre-stressed cables, to the reinforced concrete floor below of 6 metres in height.

The tension structure spans are supported by a series of portals formed by metal tubular uprights having transversal inter-axis of about 12 metres.

The 1500 metre long structural system has longitudinal bracing portals with a progressive breakage short-circuiting function due to accidental causes.

**Service provided:** Structural preliminary, final and executive design design

**Client:** Lamaro Appalti

**Year:** 2005 - 2006

**Surface:** 12x1500m (roof); 80x160m (Exhibition halls)

**Amount of works:** € 131.000.000

