



Final Assembly Plant for A400M

Seville, Spain / 2002

Structural type
Characteristics
Client
Scope

steel arches and trusses
70 m span solved with a bowstring arch, with trusses of 60 m of span in perpendicular direction
EADS
tender design



The assembly plant for the cargo plane A400M is composed by 9 modules, distributed in 2 hangars (4+5). They flank the block of the central building. Besides, there exists other auxiliary buildings who are part of the assembly plant. These are the painting workshop and other structure with lesser relevance, such as the pedestrian canopies, the access control building and one tower.

Hangar buildings are covered following the same conceptual design: no columns should be placed in their inner space, so as to a completely exent floor is obtained.

The election of arch typology for main structure it is due to the requirement of searching an adequate solution from a structural, functional and aesthetical point of view. In the case of an arch, these aspects are not only suitable, but mutually boosted.

Into the arch typology, the adopted structural scheme has been the bowstring arch, with a truss in the bottom. This truss consist in 7 spans of 10 metres each. Six suspension cables are placed, with this 10 metres spacing. The cables collect the loads of the deck, which is supported by the perpendicular secondary structure, and transfer them to the arch.

This secondary structure meets the mission of saving the lesser span of each modulus (60 m). It is formed by 8 paralel trusses separated 10 metres. They have a constant depth of 3 metres, with vertical upright profiles separated 5 metres.



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