

Great roof marquee in the new railway station for high speed trains of Málaga

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Abstract

The new railway station of María Zambrano for AVE (Spanish high-speed trains) located in Malaga, has been inaugurated in November 2006, just on the site of the former railway station. The new railway station with an investment of 134.7 million Euros occupies a surface of 51.377 m², five times the surface of the former station. The enclosure is the biggest intermodal transport and commercial center of Spain which comprises a parking of 21,000 m² for 1,300 parking places, one commercial area and a hotel of 35 m height, with a total extension constructed of approximately 100,000 m².



Figure 1. Aerial sight of the new commercial centre and railway station of the AVE, in Malaga

The architectural set integrates perfectly the intermodal station that connects the line of AVE, which joins Madrid with Malaga and the suburban rail networks. It comprises a commercial centre named VIALIA, the hotel Barceló VIALIA and an underground parking.

Before the trains reach the railway station, it is located a very big marquee with a span of 71.475 meters without any intermediate pillar, the biggest marquee in Spain at this time.

Under the marquee there have been constructed six platforms that give service to 6 trains, four with an international width and two with an Iberian width.

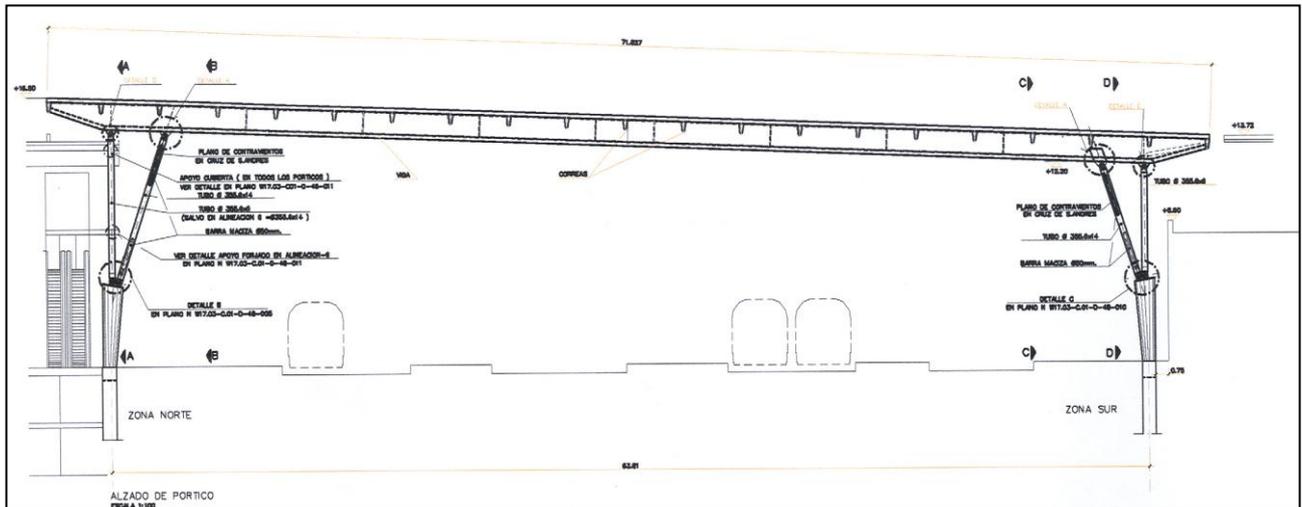


Fig. 2. Transverse section of the marquee

The portals of the marquee with different height in his ends of 16.50 m (left hand) and 13.72 m (right hand) have on the top a metallic girder beam of 1.60 m of height.

The structure is constituted by 10 metallic portals separated 8.00 m each from the following one, covering a zone of 72.00 x 71.475 m². The Project of the marquee has been realized by means of a three dimensional model of finite elements with the program SAP2000N, considering static and dynamic loads.



Fig. 3. The marquee from the parking in construction