Metropol Parasol: A new Plaza and a unique Timber Mega Structure right in the heart of Seville

Volker Schmid
Structural Engineer
Arup
Berlin, Germany
volker.schmid@tu-berlin.de

Volker Schmid, born 1964, studied in München and received his Phd from the Universität of Stuttgart, Germany. He worked as a consultant for bridge engineering before he joined Arup in London in 2000.

He is a Professor for Conceptual Design of Hybrid Structures at the Technische Universität of Berlin. His main area of research is related to hybrid structures, connections and timber engineering.

Summary

This paper describes the conceptual and structural design of Metropol Parasol, a unique hybrid structure right in the centre of the old town of Seville. The structure of the Parasols, the most visible part of the redevelopment of the Plaza de la Encarnación, is made from timber, steel and concrete. It comprises a museum, shops and a new designed plaza level, 5 m above ground. The focus point of the new structure is the 28 m high and 150 m long timber mega structure. The six merging Parasols are manufactured from up to 3 m high laminated veneer lumber plates (LVL). The timber structure is protected against weathering, by a 3 mm thick elastic polyurethane coating, sprayed onto the LVL planks. Due to the hot climate the epoxy-adhesive for the bonded-in steel rods is post cured in order to increase its heat resistance to up to 80° Celsius.

Keywords: Timber, hybrid structure, PUR-coating, post curing, bonded-in steel rods

Fig. 1: LVL-Timber structure with 3 mm Polyurethane coating

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