

**Commercial Buildings****Reference Details:**

General Contractor Acciona Infraestructuras, Dragados, Spain +++ **Architect** Santiago Calatrava, Spain +++ **Project Developer** Cacsá, Spain

DSI Unit DYWIDAG Sistemas Constructivos, S.A., Madrid, Spain

DSI Scope Supply of DYWIDAG Threadbars for formworks and accessories



Palau de las Arts Valencia

DYWIDAG Threadbars for the new Opera House in Valencia

With "Ciudad de las Artes y de las Ciencias" (City of the Arts and Sciences) star architect Santiago Calatrava, born in Valencia in 1951, has created his most outstanding work in his home city to date. Among his most important works are the expansion of the Milwaukee Art Museum near Chicago, the new opera house in Santa Cruz on Tenerife, the BCE Place Mall in Toronto and the Oriente Train Station in Lisbon. He is also internationally recognized for the bridges he has designed such as the Alameda Bridge in Valencia, the Blackhall Place Bridge in Dublin and the Alamillo Bridge in Sevilla. The latter was built for the World Exhibition in 1992 using DSI Stay Cable Systems.

Following major destruction caused by flooding from the Turia river in 1957, Calatrava's home city of Valencia diverted the river into a canal outside the city on the spur of the moment. After decades in which the former river bed had become desolate it was decided in the late 1980s to build the new city of the arts and sciences on 35 hectares of desiccated river bed instead of the originally planned expressway. This new cultural center is also a consequence of the ambition of the boomtown of Valencia to regain the importance in Spain that Valencia had already had in the 15th century as Spain's biggest and most dynamic city.

The 1.2 km long and 200 m wide Ciudad de las Artes y de las Ciencias was designed to illustrate the efficient symbiosis between arts and sciences in Valencia. Since its opening in 2001, more than 6 million visitors have demonstrated that the investment had been justified. The three most essential buildings designed by Santiago Calatrava for that complex comply with his own sculptural design at a high aesthetic level.

The largest of these three structures standing in one row from the west to the east is the new opera house "Palau de las Arts Reina Sofia" that has the shape of a monumental helmet. This 75 m high building was built on 40,000 m². Two symmetrical concrete shells crowned by a steel roof combine the individual structures that otherwise seem to be randomly arranged. With seats for more than 4,000, this is now the largest opera house in the world. The stage of the main hall ranks among the largest of the world with 460 m². In addition, the 166 m² large orchestra pit is the third largest in the world. Also, the artistic management is very impressive - Lorin Maazel conducted the ceremonious opening concerts in early October 2005.

All of these superlatives were also reflected by the architect's very high demands on the performances of the construction companies involved and the quality of the materials used. DSC supplied DYWIDAG Threadbars for formworks and accessories for this landmark cultural building via PERI.