

EXPO BRIDGE LISBON, 1998



Gurit engineered a composite footbridge span for installation in Lisbon for the 1998 EXPO. Two of the bridges span across roads, and the third crossed a railway line. Design was carried out to Portuguese codes, including seismic load cases.

The bridge spans over the road were supported by metal columns with metal stairs. The deck and soffit of the bridge span were constructed from moulded composites with a mixture of carbon and glass reinforcement. Carbon sections formed the shear webs, resulting in a light and airy structure. The resulting bridge had a mass of 6.2 tonnes for a 30m clear span bridge.

This enabled rapid installation, with the road closed for only 30 minutes whilst the span was lifted into place. In addition the light weight of the bridge minimised the foundations required, which avoided disturbing the services running underneath the pavement.

The FRP structure of the bridge has only been subject to a minimal maintenance routine, and a review of the structure after 12 years indicated that the FRP structure was in good condition, although fairly dirty. The metal supporting structure and stairs were starting to show significant corrosion.