

A continuous protection around the piers of the highest lift bridge in Europe

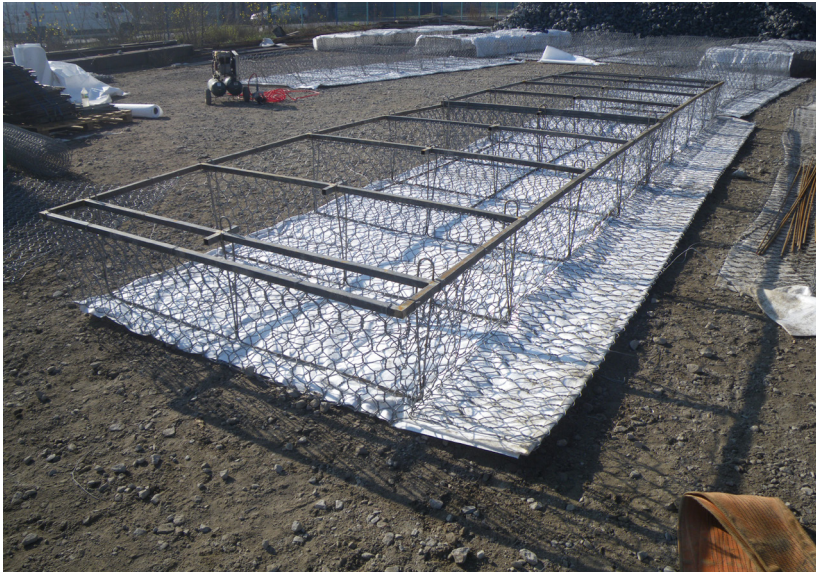
The Garonne is a river which flows from the central Spanish Pyrenees to the Gironde Estuary at the port of Bordeaux, in the southwest France. The city of Bordeaux is a popular tourist destination for its cultural heritage, its architecture and its famous castles and vineyards. The Garonne divides the city in two parts and a new connection was needed to facilitate exchanges between the two banks and to harmonize the development of the districts. Pont Jacques Chaban-Delmas is the highest lift bridge in Europe and it was inaugurated in Bordeaux in 2013. The hydraulic stresses caused by the Garonne River required an effective protection and the urban community of

Bordeaux entrusted France Maccaferri with the protection of the bridge piers. RenoMac Plus was chosen as the best solution for the work: this type of mattress is equipped with double-twisted wire mesh overlaps and a geo-textile, ensuring a continuous protection around the bridge piers. Several reasons led to the decision to use RenoMac Plus in such a major project. A prefilled solution like RenoMac Plus is ready-to-use and significantly reduces the installation time and effort: the Garonne river experiences strong tides and high velocities, which means limited time to work (less than two hours with flows at 0.5 m/sec).



BRIDGE PIER PROTECTION

PONT BACALAN-BASTIDE, BORDEAUX, FRANCE



Thanks to the filling process which can be carried out on the ground, RenoMac Plus can be installed with great accuracy even at high depths. A crane with 20 meters long boom together with a pneumatic lifting beam placed the mattresses at 15 meters depth, with the assistance of specialized divers. Compared to a traditional rip-rap solution, a prefilled mattress allows a much greater durability, which was required from the designer, and a reduction in the suspended particles in the watercourse, which already has a high turbidity. Last but not least, RenoMac Plus needs less filling material than traditional applications and considerably reduce material waste, both during the filling and the laying process, potentially leading to over 70% stones savings.

