

TAPAS PROJECT

Description

R+D Project TAPAS proposes an effective solution that allow the refloating of square cell maritime caissons to provide an alternative and economic solution in comparison to the demolition of damaged caisson and the construction of a new one and even in comparison to other refloating procedures.

So the point of the project is to develop a new refloating technology for sunken caissons that will result in a new product being flexible, developing its function in less time, more competitive and environmentally friendly.

Objectives and improvements

Updating of knowledge about main actual methodologies for refloating caissons

Design and 2D model of a caisson refloating system

Physical prototype at real scale and accomplishment of the tests that guarantee its correct operation and tightness.

Results

Project was successfully finished according to the plan, achieving the development of a self-adjusting lid proto-type on the perimeter of the rectangular cells of caissons that are currently manufactured. In addition, due to its own shape, the lid supports great pressures so for this and thanks to the adjustable adhesion system it can applied at higher depths and thanks, being very easy to be placed on the top side of the caisson without any other adjusting system. As it has to be done with other systems.

Finally, after carrying out the tests, the absolute tightness of the assembly was checked and validated.

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Image 1. Test preparation finished cell



Image 2. Test under development

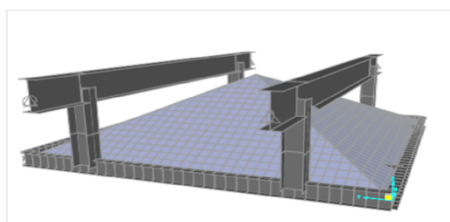


Image 3. 3D calculus model



Image 4: General view with profiles and its regulators on the top

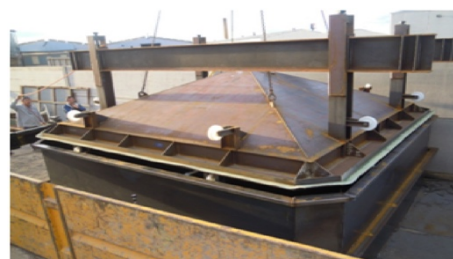


Image 5. Colocation of cell.