

Project Title: PROTOTYPE WEDGE-SHAPED BLOCK SPILLWAY.
Acronim: PABLO
Reference: RTC-2017-6196-5
Lenght: 01/07/2018-30/06/2021
Financial Entity: Ministry of Science, Innovation and Universities´s
Call: RETOS-COLABORACIÓN 2017 (National R&D&I 2013-2016 Plan)
Coordinator: PREHORQUI, S.A.
Partners: U.P.M., CIMNE, OFITECO.
Project Funding: 1.158.235,30€

Following the research of ACUÑA and DIABLO projects, ended in 2014 and 2017, and using the prototype block obtained, this research project has been proposed with the intention of completing the work through experimental validation under real operating conditions of the patented blocks in the ACUÑA project and DIABLO design methodology. Additionally, it aims to define a monitoring system adapted to the needs of this structure to provide early warning in case of emergency. The final product of this project has ultimately been a set of prescriptions or criteria for the design and sizing, on-site execution, and monitoring of protections or spillways constructed with ACUÑA blocks. It is important to highlight the significance of prototype testing to validate the performance of the block intended for market release, as in most cases, potential customers require usage references under high flow conditions to accept its use in real scenarios.

The physical validation modeling campaign has been carried out at the "Luis Ruano" hydraulic experimentation facility, built for this project, downstream from the Laverné reservoir's supply channel. The conditions for its installation and use have been regulated through an agreement drafted between the Consortium and the Ebro River Basin Authority.

This project starts from a privileged position in this specific field of technological innovation since it possesses practical knowledge of the application of this technology both in civil engineering and laboratory experimentation, which has endowed this project with higher levels of effectiveness. It also has the great advantage of focusing on a field of activity with good market prospects. In the global context, Spain has a large number of major dams, half of which are made of loose materials, and an undetermined number of reservoirs, many of which will need to be adapted to the new regulatory framework in the medium term.

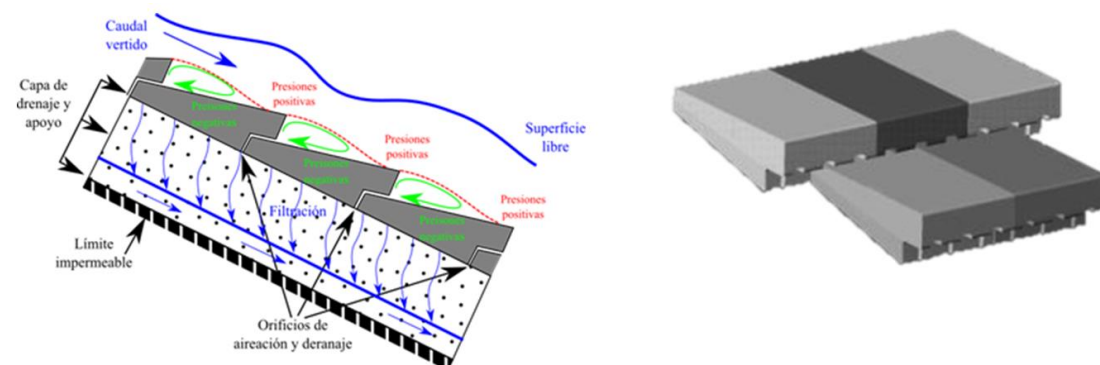
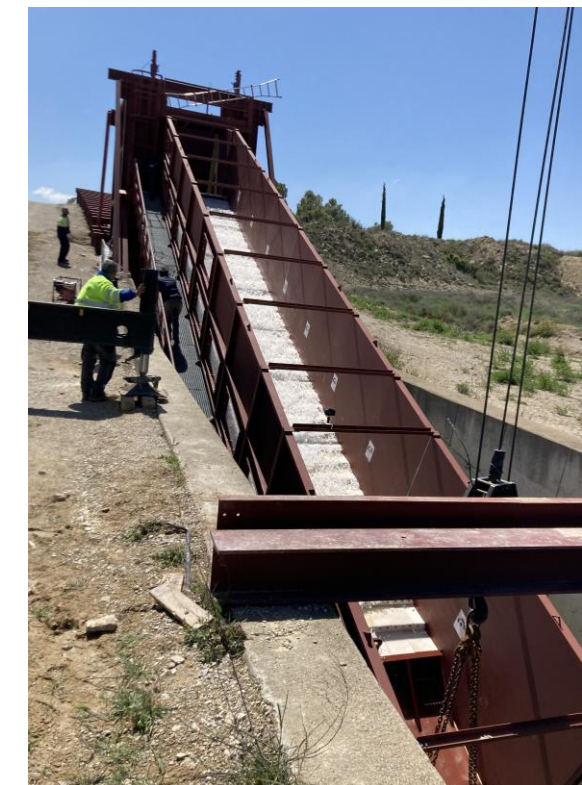


DIAGRAM OF THE FUNCTIONING OF THE WEDGE-SHAPED BLOCKS AND THEIR INFOGRAPHIC.



PHOTOS OF LUIS RUANO FACILITY



Tests essayed in Luis Ruano Facility, in old suply channel of the Laverné reservoir.

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