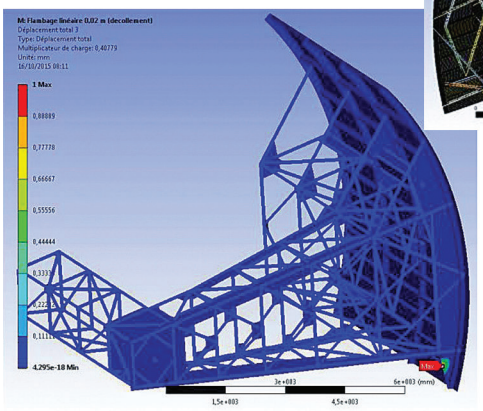
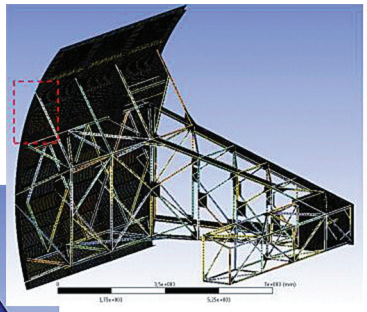
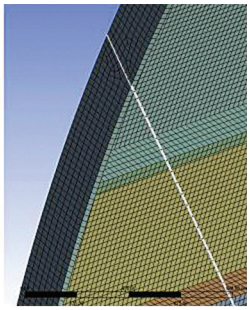
Tractebel

Expert investigation of gates for a dam in Morocco

On-site checks and calculating dam gate strength are traditional remits for the experts at Cetim. This provided the opportunity to carry out a worthwhile operation on behalf of Tractebel Engineering by providing support abroad.







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OUR CUSTOMER

Corporate name
Tractebel Engineering

Business activity
Engineering and consultancy services in the field of water, energy and large-scale infrastructure for over 125 years. This Engie (former GDF Suez) subsidiary operates in over 30 countries.

Workforce
Approximately 4,400 employees around the world.

The customer for a Moroccan hydro-electrical dam entrusted Tractebel Engineering with the feasibility study for the cofferdam and related expert investigation of gates in order to check the condition of the structure and the mechanical strength of the five spillway gates. Tractebel based its study on Cetim expertise. Cetim has long provided this type of service in France in an industrial context. This also provided the opportunity to launch a partnership with an operator reputed for its mechanical expertise.

High level checks

An expert was initially designated to check the gates overhanging the dam. For five days, accompanied by a rope technician for safety purposes during the operation, he visually inspected each of the gates - with a length of 12 metres and a height of 8 metres - examined the condition of their coatings and structures, and measured the thickness of sheets using ultrasonic non-destructive testing techniques. All of these data on the loss of material and damage to some components, was then incorporated in the models designed by Cetim using the original plans for the gates. The goal was to determine, based on simulation using finite element calculations, the conformity of the gates with the applicable criteria and their ability to absorb all stresses which may potentially be applied. Tractebel was satisfied with the services of Cetim for this initial partnership, both in terms of effectiveness and meeting deadlines and costs. The engineering firm also incorporated the digital models, provided with the final report, and recommending the renovation or replacement of gates.

Cetim's asset

The complete diagnostic of structures such as dams requires on-site inspections and measurements followed by calculations using the data obtained in these operations. Cetim has these complementary skills in-house, reinforcing the quality of the models and the diagnostic.

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