Industrial valves

Velan France

Dynamic tests under high pressure

Velan France SAS, the specialist in high performance industrial valves, requested Cetim expertise to qualify a valve designed for the nuclear market, and later to test a new anti-cavitation valve model.

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OUR CUSTOMER

Corporate name
Velan France

Business activity
Velan France (subsidiary of Velan Inc. - Canada) was founded in 1974 and is the internationally renowned specialist in cryogenic and nuclear valves

Turnover
70 million euros (Velan Inc.: 331.8 million dollars)

Workforce
Velan Inc.: 1800 employees, with plants in 9 countries

Nothing can be left to chance in the nuclear industry! Data precision and, above all, accuracy, cannot be controversial. Velan, the specialist in cryogenic and nuclear valves, has acquired unique experience by deploying its technology for over 350 nuclear reactors and in over 22 countries. In terms of EPR type reactors, designed in France, Velan France particularly equipped Olkiluoto 3 in Finland, Flamanville 3 in France and Taishan 1-2 in China. The company contacted Cetim to cover this need for absolute safety, and more specifically to characterize a three-way valve with an inlet diameter of 400 mm and an outlet diameter of 500 mm, weighing 2 tons. *"We needed to know the precise performance levels of this new valve, designed for a new type of reactor"*, explained Nicolas Crépin, Research and Development manager for Velan France. *"The aim was to regulate the two circuits operating in parallel to an extreme level of precision and to simultaneously qualify the flowrate coefficients for the two branches at different openings in the valve"*.

A new anti-cavitation valve

Thanks to the precise expertise provided, the test resources used and the excellent results achieved, Velan France decided to submit a new challenge to Cetim experts: test the prototype of a new high pressure valve operating at 50 bar (DN 100, PN 250) in order to determine the cavitation coefficients of six different configurations. When conducting these tests, Cetim constructed a specific soundproofed chamber. *"The aim was to optimize the design of the valve in terms of cavitation performance and to validate the robustness of the solution via endurance testing"*, explained Nicolas Crépin. Operations for these two different designs lasted 500 hours! "After these tests, we will be able to optimize our design before the end of the year", concluded Nicolas Crépin.

Cetim's asset

Cetim can boast expertise, high power facilities (50 bar) and soundproofed chambers, able to meet product characterization requirements in a wide range of real situations.

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