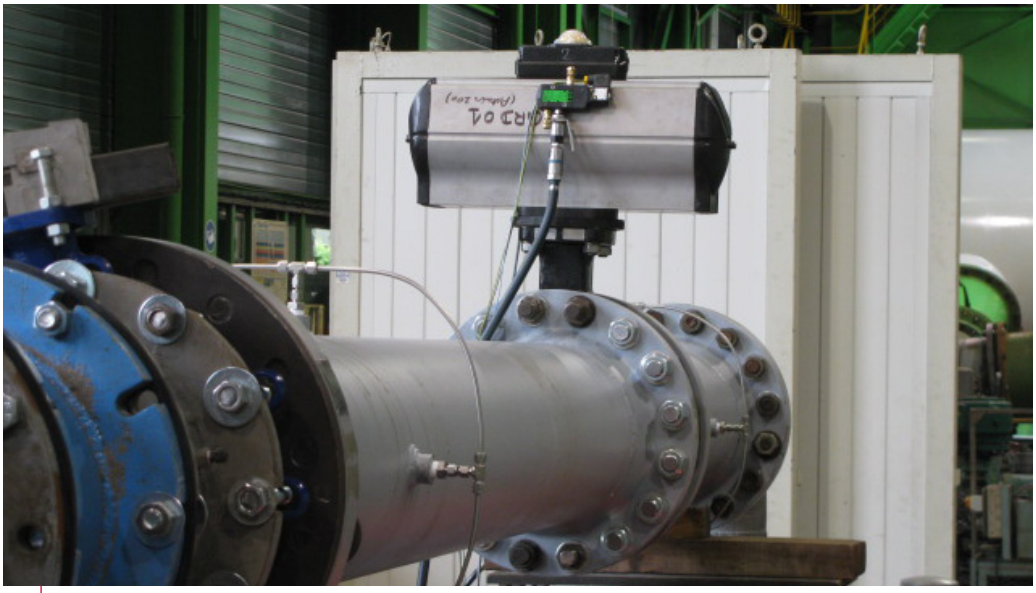
Nuclear

KSB SAS

More stringent endurance tests

KSB needs to test the service life of its valves in a more stringent manner in order to meet the increasingly stricter requirements of nuclear industry customers. Here are a few explanations.



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Cetim's asset

Cetim has water facilities which make it possible to test equipment items over a large number of cycles at flows up to 20,000 m³/h and maximum pressures of 50 bar (under temperatures of 90 °C) and air test lines at 180 bar.

OUR CLIENT

Corporate name
KSB SAS

Activity
A world leader on the pumps and valves market

2013 turnover
Approximately 300 million euros in France

Workforce
1,200 employees in France, including 500 for valves and fittings

KSB is one of Areva's top suppliers. Among other products, the company provides the nuclear plant manufacturer with butterfly valves for primary and auxiliary systems as well as for cooling systems.
Obviously, these valves are subject to very strict specifications. "*We have to prove that they correspond to our calculations and that they meet the obligations stipulated by the customer,* explains Thierry Lafarelle, KSB's nuclear valve development manager. *In particular, we need to prove that our products can withstand a certain number of cycles without excessive wear and in compliance with criteria (strength, pressure, leak rate, etc.) consistent with Areva's requirements.*"

Dynamic tests

But the French Nuclear Safety Authority's requirements and, thus, Areva's requirements, have been reinforced since the accident of the Fukushima nuclear plant in Japan in March 2011. This is why KSB requested Cetim to carry out a series of endurance tests on a butterfly valve (nominal diameter 300 mm) for Areva NP Taishan. Dynamic and ageing tests were performed and involved several series of hundreds of cycles under various flows and pressures as well as periodic leaktightness checks.
For Cetim, these tests require the implementation of data acquisition and cycle programming systems as well monitoring and alarm modules to secure the line.
The tests of the valve were successful and KSB has just entrusted Cetim with a new batch of five valves for Areva TA's Jules Horowitz reactor (Areva TA RJH batch D05).

Contact
Question/Answer Service
Tel: +33 (0)3 44 67 36 82
sqr@cetim.fr
cetim.fr

1402-037

INSTITUT CARNOT Cetim

cetim