

Environmental Qualification of Containment Components

A comprehensive testing solution to qualify components under accidental ambient conditions in accordance with international standards (IEEE, RCC-E, US NRC 10CFR50 Appendix B, KTA)

Challenge

Environmental qualification tests must be performed on safety-related components that are required to operate under accident and post-accident conditions, such as for a loss-of-coolant accident (LOCA). Proper function must be verified over the entire service life of the component.

Solution

We offer you the full range of services to meet the requirements of qualification campaigns. You can benefit from the full scope of our test facilities and our long lasting experience.

Our offer includes:

- Preparation and planning of the tests in close cooperation with the customer as well as performing all tests
- Performance of qualification tests
 - Climatic test
 - Thermal aging
 - Radiological aging
 - Vibration tests
 - LOCA/severe accident tests
 - Accidental radiation
 - Post-LOCA tests
- Handling of the test specimens and preparation of auxiliary systems
- Planning and supply of customized measurement equipment.



Heating and climate chamber

Customer benefits

- Efficiency and cost optimization: all tests are performed in one hand
- Extended possibility with access to the Framatome thermal-hydraulic worldwide platform
- Reliable test results through accreditation as test and inspection body in accordance with ISO 17025 and 17020, accepted by ILAC
- On-time delivery through our long experience

Your performance
is **our** everyday **commitment**

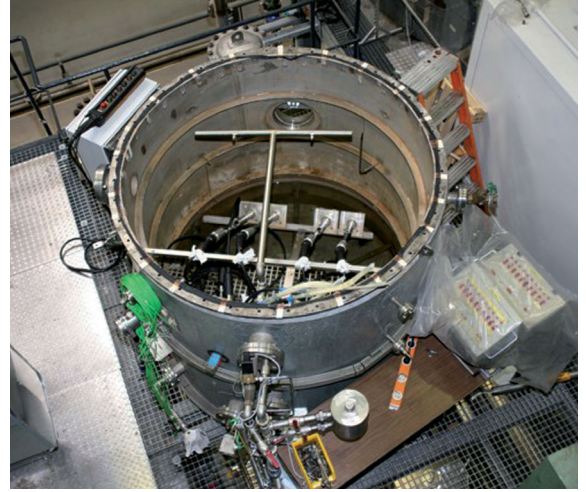
Technical information

Preconditioning (aging)

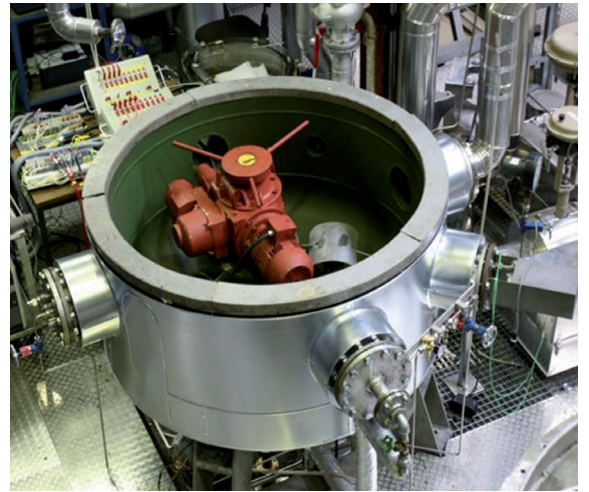
- Heating chamber
 - Test volume: 5.9 m³
 - Design temperature: up to 180°C
- Climatic chamber
 - Test volume: 1 m³
 - Design temperature: from -40°C up to 180°C
 - Design humidity: up to 98%
- Radiation aging and vibration tests are performed in cooperation with our partner laboratories

Accidental simulation

- LOCA test chamber
 - Test volume: up to 5.4 m³
 - Design conditions: 250°C/10 bar (abs)
 - Test conditions: saturated/superheated steam
 - Injection time: 10–15 s (25°C–160°C)
 - Chemical solution spray system
- Post-LOCA test chamber VB2600
 - Test volume: 2.6 m³
 - Design conditions: 100°C/1 bar (abs)
 - Chemical solution spray system
- Post-LOCA test chamber VB12000
 - Test volume: 12 m³
 - Design conditions: 168°C/6 bar (abs)
 - Chemical solution spray system



Post-LOCA test chamber VB2600



LOCA test chamber

Key figures

More than **500** environmental qualification campaigns in the past **25** years

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