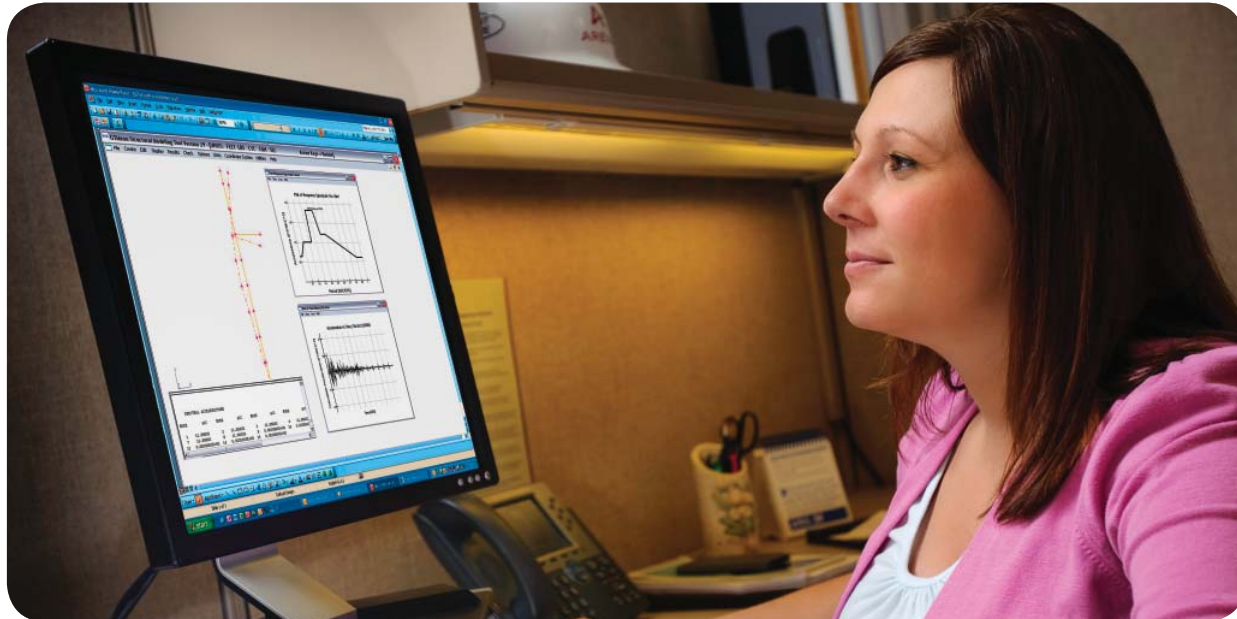


Seismic Equipment Qualification



Complete Solutions

AREVA is fully equipped to offer complete solutions for your seismic qualification needs. Our seismic analysis and testing teams bring together the Nuclear Steam Supply System and Balance of Plant experience of an Original Equipment Manufacturer, Owner/Operator and Architect/Engineer.

Whether it is a seismic qualification for a safety-related relay or an analysis of the containment structure itself, AREVA has the capability to analyze any type of equipment or structure. AREVA's U.S. Technical Center has one of the largest tri-axial seismic shake tables in North America capable of testing large equipment up to 20,000 lbs.

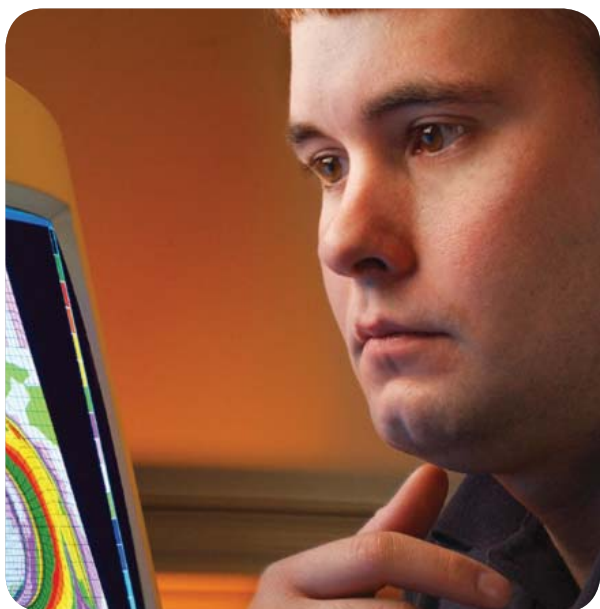
Cost-Effective and Focused Approach

AREVA stands ready with comprehensive services to apply the proper mix of solutions to bring maximum advantage for minimum cost. Our team will listen to your needs and collaborate with you to develop an approach that fulfills your expectations. Through our experience and project management capabilities, we will reduce the time burden on your plant staff and facilitate the transfer of technology and knowledge. And we don't stop there. You can count on us to assist with follow-up questions that may arise — we're here for the long haul.

AREVA is committed to help keep your plant online safely and reliably. With U.S. market leadership and global resources, AREVA delivers integrated engineering solutions to improve your plant performance.

Features and Benefits

- Proven industry record
- Strong culture of ownership and customer focus
- Comprehensive PWR and BWR experience
- Full-scope capabilities
- Strong project management processes
- ASME NQA-1 and ISO 9001 Quality Assurance
- Access to AREVA's broad international experience



Technical Capabilities

- Seismic equipment qualification by IEEE-344 & 382 analysis, test, or experience data.
- Programmatic resolution of IPEEE and USI A-46 and Post-Fukushima seismic issues.
- Engineers trained and qualified to Seismic Qualification Utility Group (SQUG) methodology.
- Static, dynamic, time-history, linear and non-linear analysis, limit-state and load factor design.
- Finite element analysis using ANSYS, STRUDL, and other computer software.
- Design to diverse codes and standards – ASCE, IBC, AISC, ACI, API, AWS, ASME, ANSI, IEEE, DOE standards.
 - Development of seismic design specifications for structures, equipment, pressure vessels, and large flat bottom tanks.
 - Performance of third party reviews, Owner Acceptance Reviews, and design verification of vender designs and seismic qualification reports.
- Investigations of complex structural behavior due to such effects as discontinuities, soil-structure and fluid-structure interaction, resonance, stress intensification/concentration, friction effects and non-linear material behavior.
- Seismicity evaluations for development of response spectra, including SSI effects and the use of probabilistic-based response spectra for applications demanding less conservatism.

AREVA Inc.

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