Studsvik

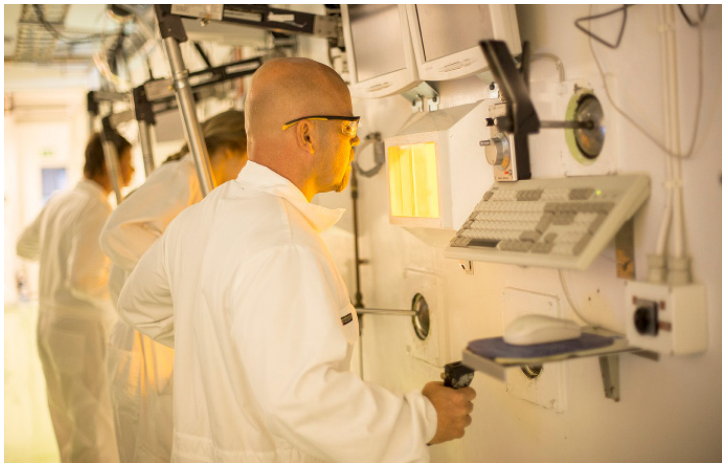
Plant Life Management

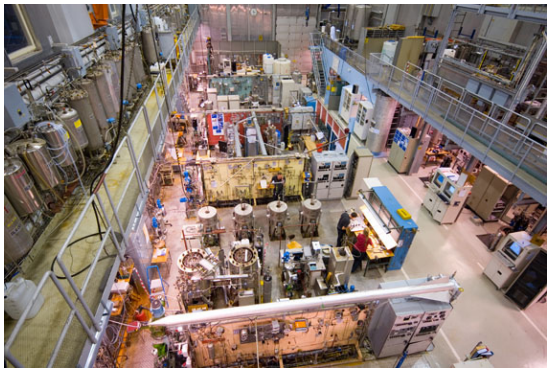
Support for Plant Aging Management and Life Extension Programs

Studsvik's extensive experience in aging of metallic materials and components, notably Reactor Pressure Vessel (RPV) and Core Internals (CI), is available to organizations throughout the world seeking support with their plant aging management and life extension programs. Studsvik's world renowned reputation of many years as experts in performing testing and analysis of RPV and core internal materials, is available to customers worldwide.

Description

Studsvik's offering includes expertise, testing and analysis applicable to individual components, as well as entire reactor systems, regarding plant life extension (PLEX) and life management of BWRs and PWRs. Through extensive experience, Studsvik has developed expertise in the design and construction of custom-built hotcell equipment for on-line creep, crack initiation and crack growth rate measurements in water chemistry environments simulating actual plant conditions, as well as developed analytical tools and techniques for mechanistic understanding and input for modelling.





Transportation

Studsvik has also extensive experience in transporting material to and from the hot-cell. Contact Studsvik today for further discussions of tailored customized solutions regarding aging management or life extension of your reactor components/systems.

Studsvik has extensive experience and expertise from testing and analysis of materials from commercially operating reactors

A holistic view based on experience

- Effects of in-service irradiation and/or thermal aging
- Environmentally assisted fatigue of components with a service history from PWRs and BWRs
- Relevant simulation of water chemistry
- Effect of high dose and long service life on component integrity
- Using real commercial reactor material
- Using test reactor irradiated material

Support based on 40 years of experience

- World leading test capabilities
- Extensive experience in testing materials aged and irradiated in commercially operating BWRs and PWRs
- Experience from several international customers, examples: EPRI in US, VF in Sweden, EDF in Europe
- Global customer base covering BWR, PWR, AGR, fusion and GEN IV reactors

Safe and efficient key success factors

- Compliance with global quality and technical standards
- Extensive transport capability and experience
- Robust and reliable facilities allowing work on active material
- Long range of analytical tools and techniques adapted for irradiated material
- Motivated staff recognized by international customers

Unique customer values

- World class technologies and methods benchmarked to international standards and reviewed by international experts
- Experience from several international customers, examples: EPRI in US, EDF in Europe, VF in Sweden
- Independent supplier
- Risk mitigation applying Studsvik's long experience
- High customer commitment

Facts of Studsvik hot-cells

- Located ca 100 km south of Stockholm
- Unique testing facilities with nuclear licences
- 7 concrete cells with more than 40 fuel rods examined per year
- 4 autoclaves with simulated LWR environment
- 11 lead cells and 8 steel cells with advanced material and mechanical test methods
- In-pile testing of various fuel types and material (more than 1,000 ramp test)
- Advanced chemistry laboratories for fuel and structural materials analyses
- Facility with fuel ponds for measurement of material and development of equipment
- International transport cask and services
- 95 % yearly availability with no unplanned outages
- Safe and efficient maintenance with well-established waste streams

Studsvik offers

- Critical sets of data required from authorities for life extension projects
- Independent establishment of material property data for assessment of critical components life expectation
- Independent expertise obtaining in-depth understanding of mechanisms involved
- Support of existing models, validation and or development required for life management of reactors
- Expertise and long experience within test set ups and on-line techniques
- A wide selection of advanced analytical tools
- Expertise and experience benchmarked by many international experts

For further information please contact:

Joakim Lundström
Phone: +46 (0)155 221153
Email: joakim.lundstrom@studsvik.com

www.studsvik.com