

Products and Services of the Siempelkamp Group

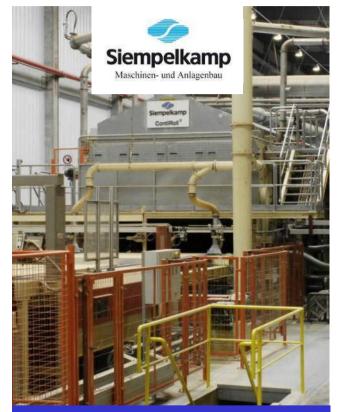
U. S. NRC – Pre-application Meeting on December 5, 2012 in Rockville, MD

Dr. Holger Spann



Siempelkamp Devisions

Siempelkamp Group 2011Order intake:628.2 Mio. €Turnover:704.6 Mio. €Employees:3,306*



Machinery and plant: Planning and construction of complete factories for the woodworking industry, metal forming and the rubber industry.



Foundry:

Manufacturing of hand-formed large castings made of cast iron with nodular graphite from 3 t up to 300 t piece weight.

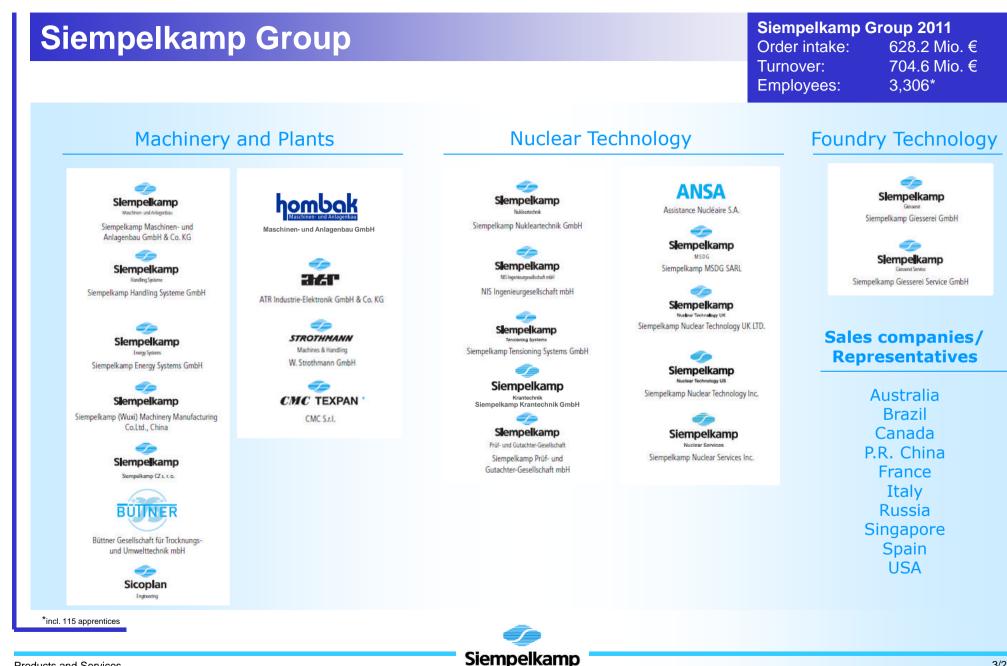


Nuclear technology: Products and Services for nuclear facilities.

*incl. 115 apprentices

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Nukleartechnik

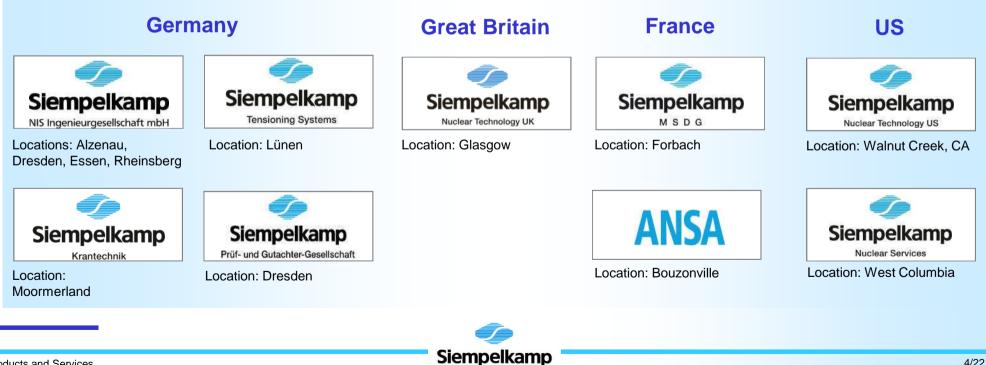
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Siempelkamp Nukleartechnik Structure



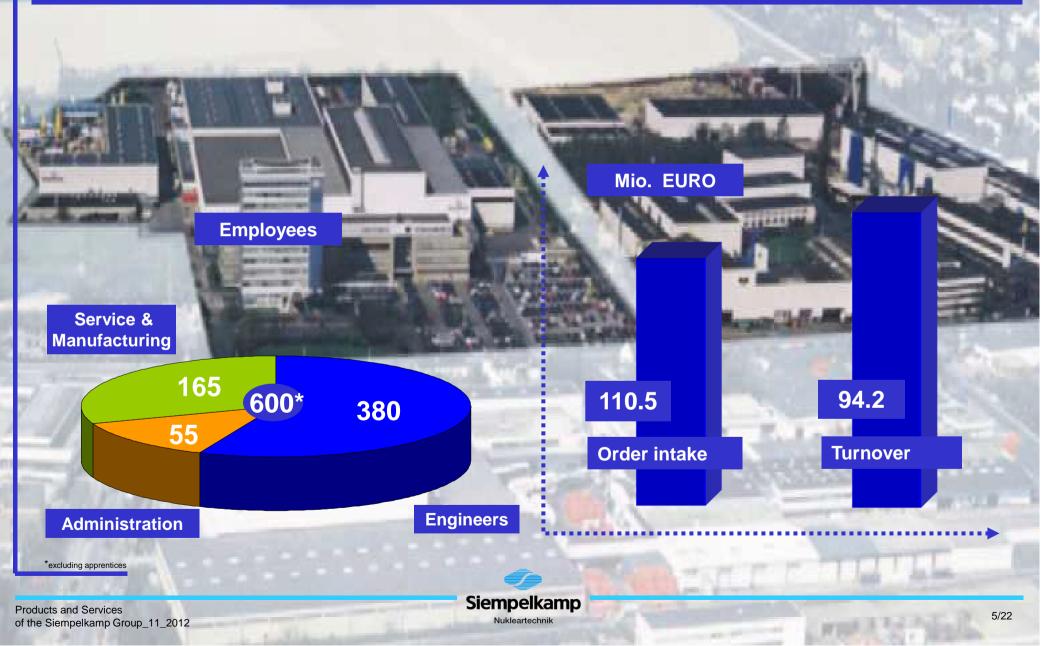
Nukleartechnik

Locations: Germany: Krefeld, Heidelberg, Muelheim, Hamburg; Austria: Linz; France: Tours



Nukleartechnik

SNT: Facts and Figures 2011 (Germany)



History



- **1965** Construction of the primary shielding elements for the NS "Otto Hahn"
- **1975** Starting the development of vessel structures of thick-walled nodular cast iron for fuel assembly shipping and storage casks
- 1989 Starting up CARLA plant (Centrale Anlage zum Recyclieren Leichtaktiver Abfälle = Central Plant for Recycling Low Level Radioactive Waste) for decontamination melting of contaminated scrap material
- **90ies** In the middle of the nineties start of acquisition to expand Siempelkamp Nukleartechnik's scope
- **1998** Starting up the **GERTA** plant (Large-Scale Melting Plant for the Recycling of Toxic Waste) for decontamination melting of chemical / toxic scrap material
- **2001** Reorganization of the business areas
- 2003 Manufacture Centre Mülheim

Engineering



Safety reports

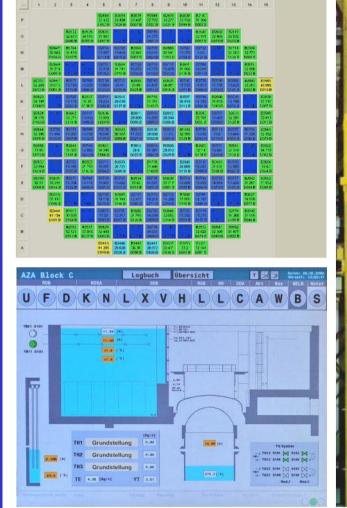
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Nukleartechnik

- Concept, approval and implementation planning
- Decommissioning and dismantling concepts
- Licensing support in coordination with authorities and surveyors
- 3D-simulation of processes



NPP Service



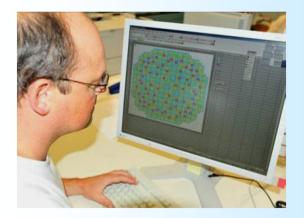


Information technology

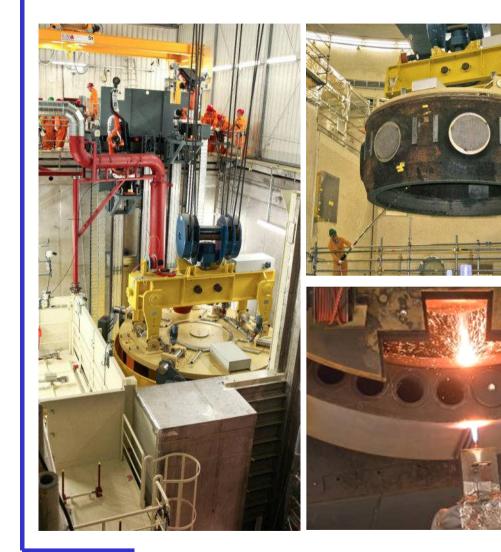
- Process information systems
- Turbine generator diagnostic system
- Consulting
 - Nuclear physics
 - Decommissioning cost calculation

Operational support

- Plant engineering
- Clearence measurement service
- Quality surveillance



Decommissioning / Dismantling



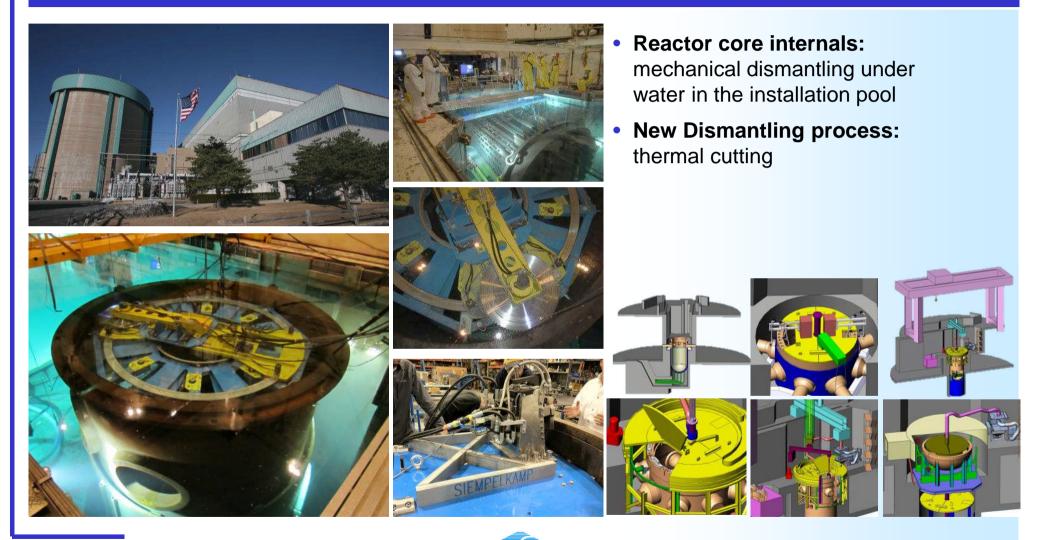
- Project management
- Dismantling technology: design, manufacture, delivery and assembly of facilities
- Waste treatment plants



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ZION NPP: Dismantling of the RPV and the Reactor Core Internals



Siempelkamp

Stud Tensioning Technique



- Multiple stud tensioners and single stud tensioners for reactor pressure vessels
- Devices for transporting and handling RPV-studs
- Electronic elongation measuring systems
- Thread cleaning units for bolt and blind hole threads





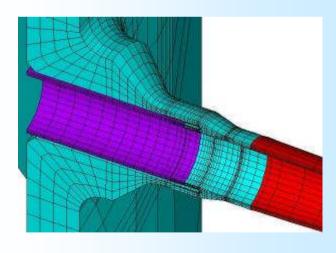
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Service

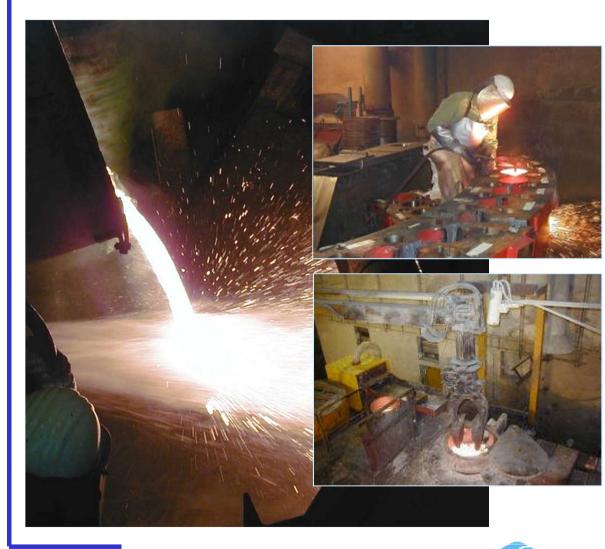


- Radiation monitoring and exterior measurement technology
- Assembly, start-up, inspection
- Quality and ageing management
- Examinations, assessments

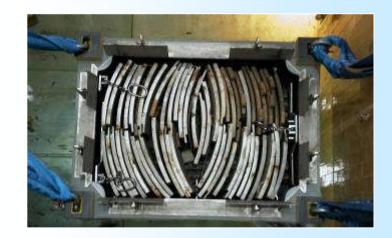




Recycling



- Waste management
- Recycling / melting plants
- Shieldings
- Transport and storage casks





Mechanical Treatment & Coating



- Manufacture, project management, planning, quality assurance, assembly and commissioning
- Machining of cast and steel components from the conventional and nuclear field





Safety and Quality tested

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- Certified quality assurance system as per DIN EN ISO 9001
- Accrediting of test laboratories as per DIN EN ISO / IEC 17025
- Authorization according to the general requirements for nuclear plants KTA 1401
- ASME-certification for construction of transportation and storage containments as well as manufacturing and supplying ferrous and nonferrous material
- Certified environment management system as per DIN EN ISO 14001



Ductile Cast Iron – a Material for various Applications



- World record casting June 2009
 270 t molten iron
- World record casting 08.07.2010: Casting of a head beam for one of the world's largest closed-die forging presses; 450 MN, 283 t molten iron, simultaneously poured out of 5 ladles







Press building



Crossbeam for a pipe-forming press for Europipe



 Components for metal forming, tile presses and plastic injection molding machines



ALCOA: upper, cross and lower beams for one of the world's largest closed-die forging presses, 450 MN



Raw materials processing

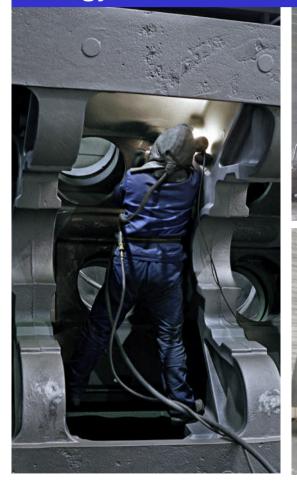


Components for vertical- and horizontal mills e.g. mill heads, grinding tables, crusher etc. for metal mining





Energy transformation 1/3





- Engine block for marine diesels and power generation
- Inner compressor housing of a steam turbine
- Core catcher cooling elements









Energy transformation 2/3



• Components for wind turbines

- Machine carrier	15 – 64 t
- Rotor hub	20 – 45 t
- Axle journal	6.5 – 36.5 t
- Lower deck	16.5 t



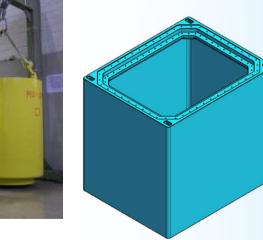


Energy transformation 3/3





- Casks and Containers for transport and storage of radioactive material
 - CASTOR[®] cask bodies
 - MOSAIK[®] casks
 - Cast-iron containers
 - Special casks

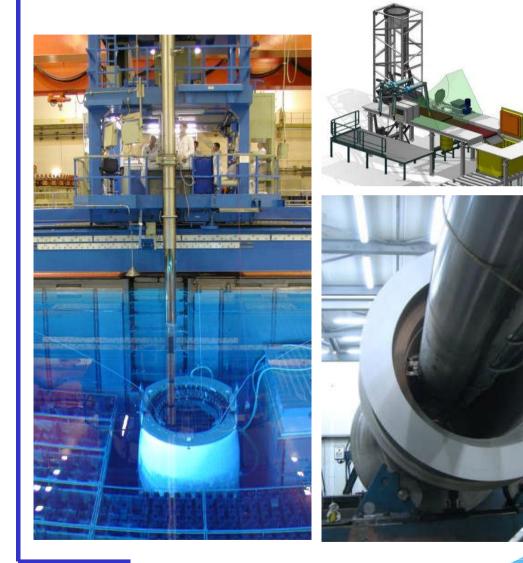








Contact / Information





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