

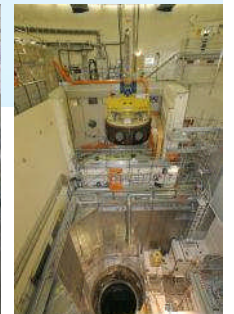
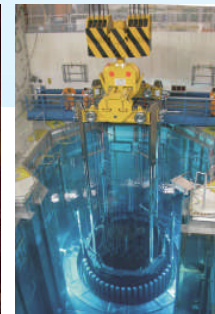


# Siempelkamp

## Products and Services of the Siempelkamp Group

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

Dr. Holger Spann



# Siempelkamp Divisions

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



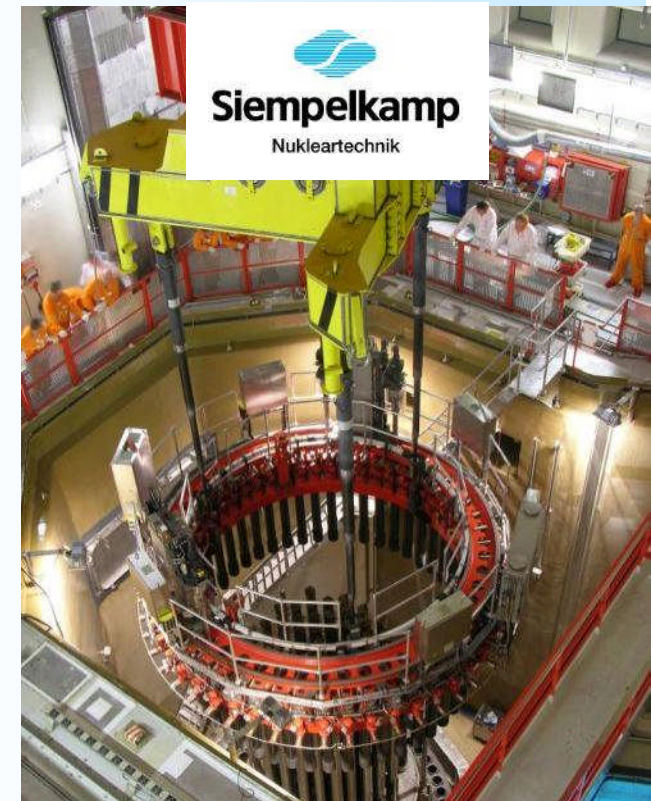
  
**Siempelkamp**  
Maschinen- und Anlagenbau

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



  
**Siempelkamp**  
Giesserei

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



  
**Siempelkamp**  
Nukleartechnik

**Nuclear technology:**  
Products and Services for nuclear facilities.

\*incl. 115 apprentices



# Siempelkamp Group

**Siempelkamp Group 2011**  
 Order intake: 628.2 Mio. €  
 Turnover: 704.6 Mio. €  
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## Machinery and Plants

 Siempelkamp Maschinen- und Anlagenbau GmbH & Co. KG	 Maschinen- und Anlagenbau GmbH
 Siempelkamp Handling Systeme GmbH	 ATR Industrie-Elektronik GmbH & Co. KG
 Siempelkamp Energy Systems GmbH	 Machines & Handling W. Strothmann GmbH
 Siempelkamp (Wuxi) Machinery Manufacturing Co., Ltd., China	 CMC S.r.l.
 Siempelkamp CZ s. r. o.	
 Büttner Gesellschaft für Trocknungs- und Umwelttechnik mbH	
 Sicoplan Engineering	

## Nuclear Technology

 Siempelkamp Nukleartechnik GmbH	 Assistance Nucléaire S.A.
 NIS Ingenieurgesellschaft mbH	 Siempelkamp MSDG SARL
 Siempelkamp Tensioning Systems GmbH	 Siempelkamp Nuclear Technology UK LTD.
 Siempelkamp Krantechnik GmbH	 Siempelkamp Nuclear Technology Inc.
 Prüf- und Gutachter-Gesellschaft Siempelkamp Prüf- und Gutachter-Gesellschaft mbH	 Siempelkamp Nuclear Services Inc.

## Foundry Technology

 Siempelkamp Giesserei GmbH
 Siempelkamp Giesserei Service GmbH

## Sales companies / Representatives

Australia  
 Brazil  
 Canada  
 P.R. China  
 France  
 Italy  
 Russia  
 Singapore  
 Spain  
 USA

\*incl. 115 apprentices

# Siempelkamp Nukleartechnik Structure



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

## Germany



Locations: Alzenau, Dresden, Essen, Rheinsberg



Location: Lünen



Location: Moormerland



Location: Dresden

## Great Britain



Location: Glasgow

## France



Location: Forbach



Location: Bouzonville

## US

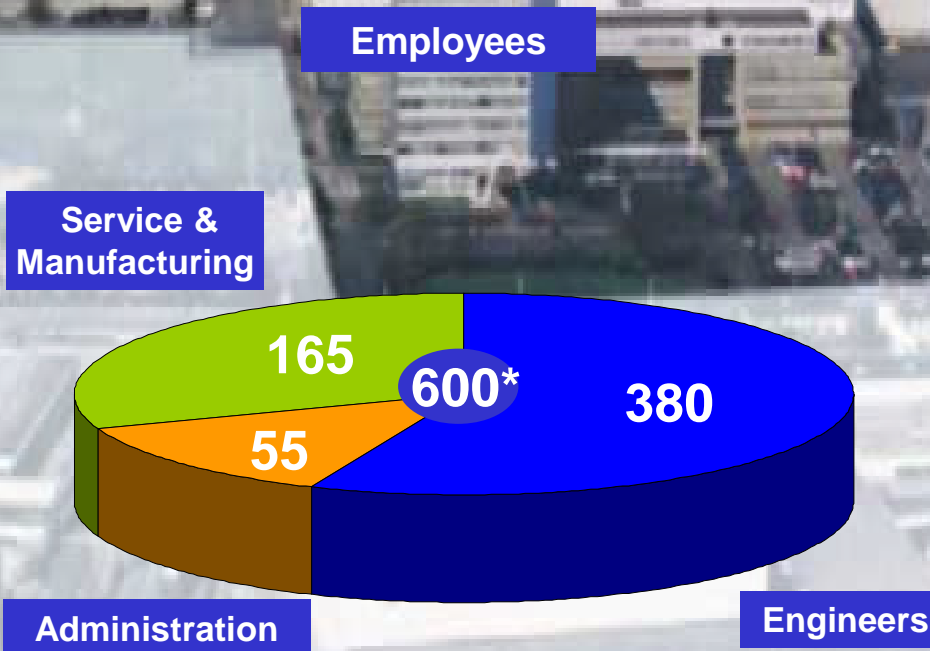


Location: Walnut Creek, CA

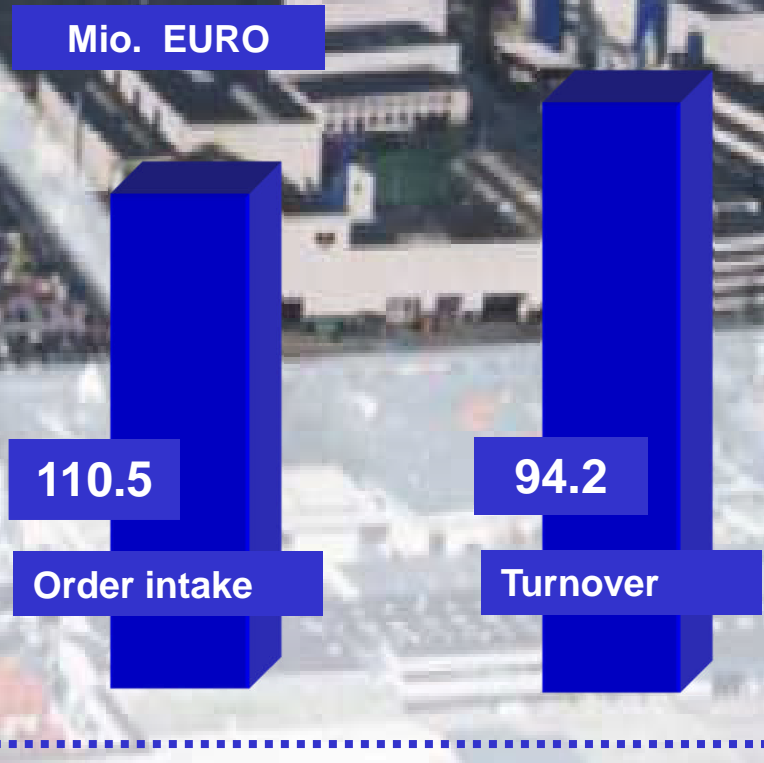


Location: West Columbia

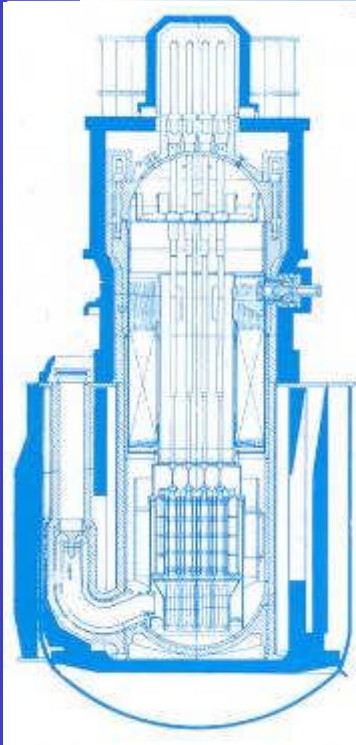
# SNT: Facts and Figures 2011 (Germany)



\*excluding apprentices



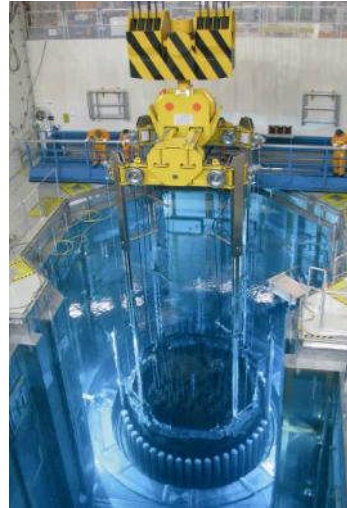
# History



- 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 (**C**entrale **A**nlage zum **R**ecyclieren **L**eichtaktiver **A**bfälle = 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
- Concept, approval and implementation planning
- Decommissioning and dismantling concepts
- Licensing support in coordination with authorities and surveyors
- 3D-simulation of processes

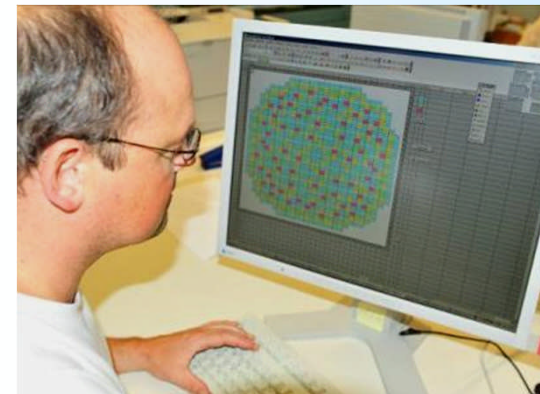
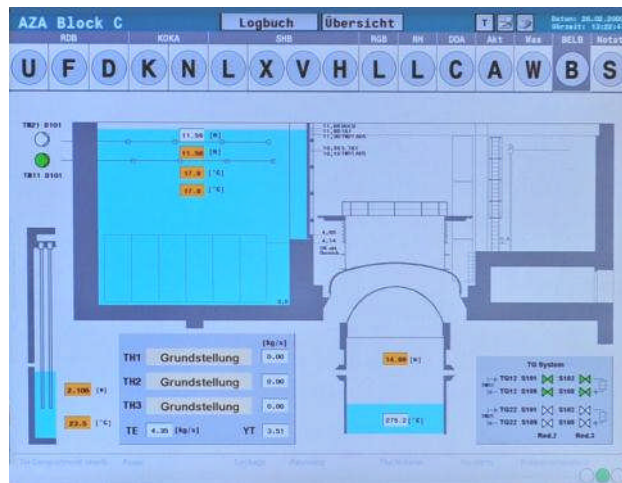


# NPP Service

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
P															
Q															
N															
M															
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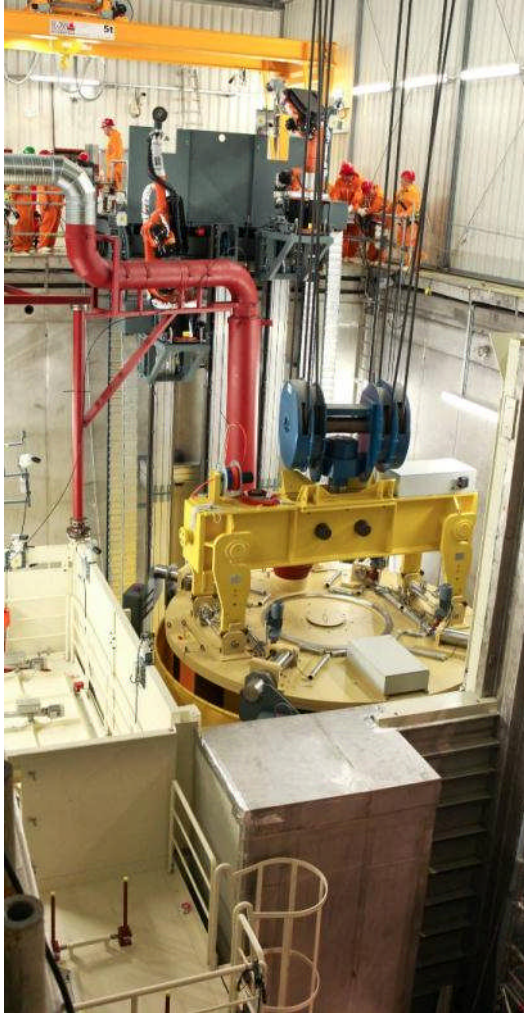


- **Information technology**
  - Process information systems
  - Turbine generator diagnostic system
- **Consulting**
  - Nuclear physics
  - Decommissioning cost calculation
- **Operational support**
  - Plant engineering
  - Clearance measurement service
  - Quality surveillance





# Decommissioning / Dismantling

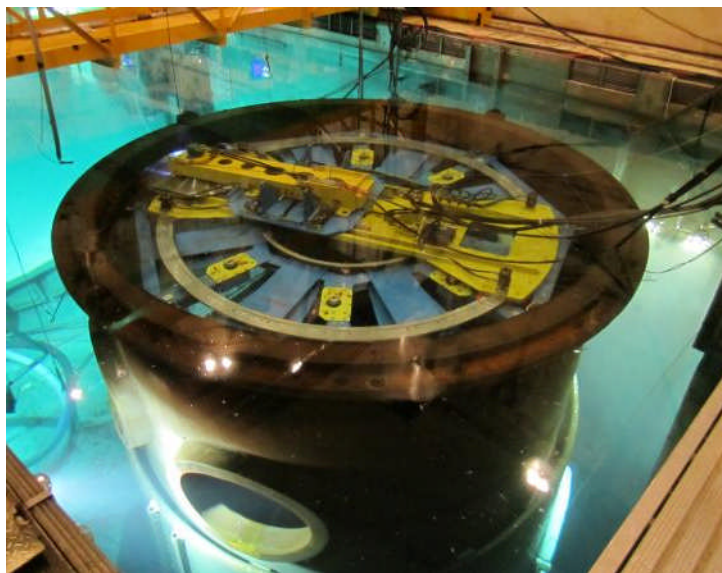


- Project management
- Dismantling technology: design, manufacture, delivery and assembly of facilities
- Waste treatment plants

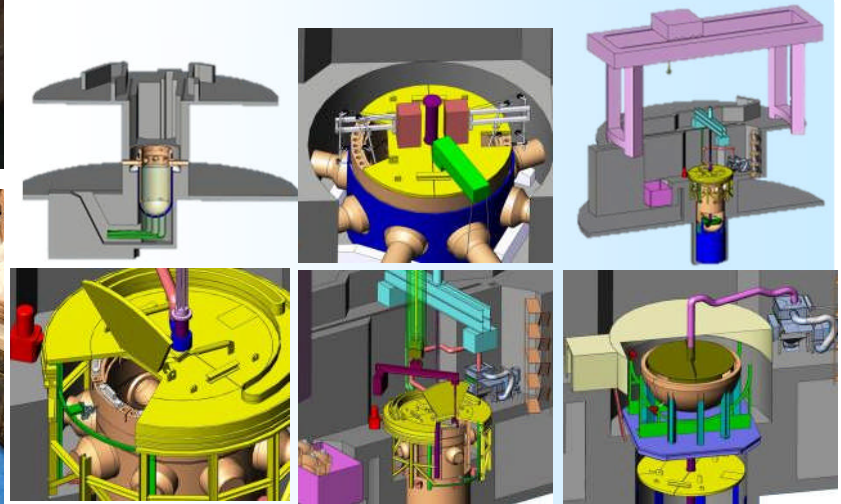




# ZION NPP: Dismantling of the RPV and the Reactor Core Internals

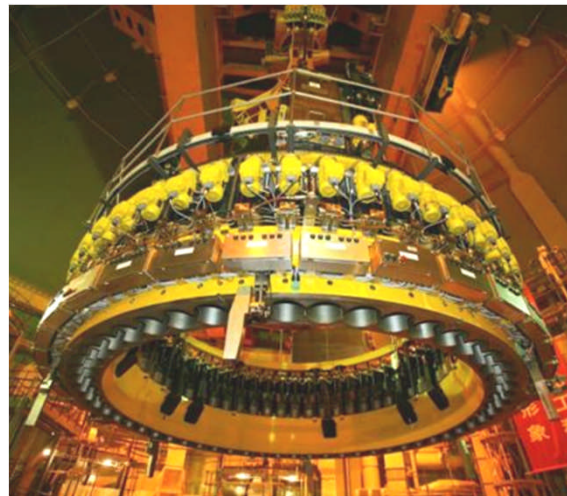


- **Reactor core internals:** mechanical dismantling under water in the installation pool
- **New Dismantling process:** thermal cutting

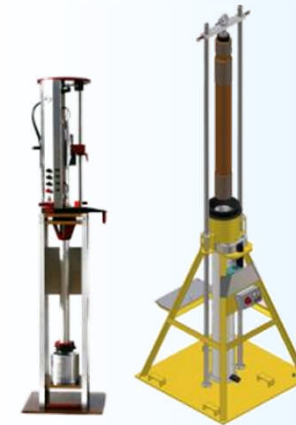




# Stud Tensioning Technique



- 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

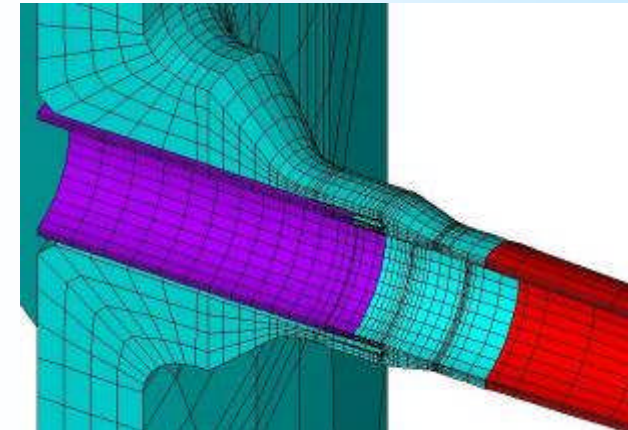
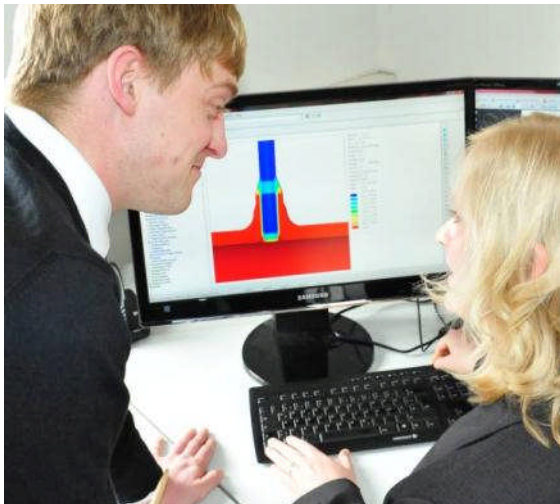




# Service



- 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

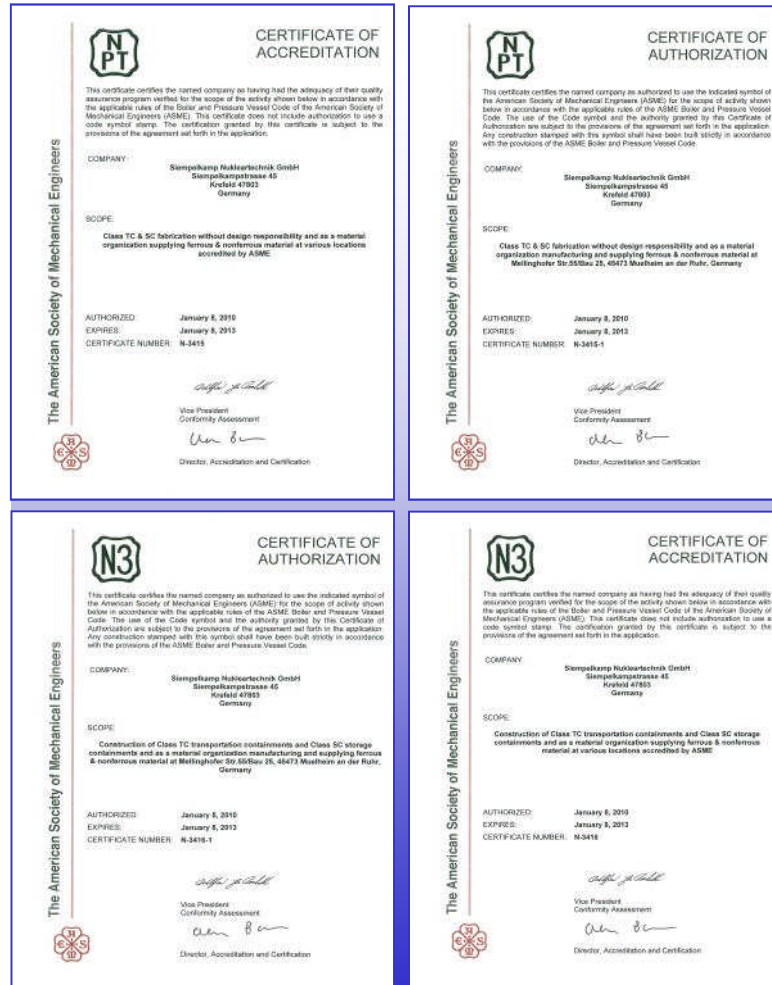


- **Manufacture, project management, planning, quality assurance, assembly and commissioning**
- **Machining of cast and steel components from the conventional and nuclear field**





# Safety and Quality tested



- 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



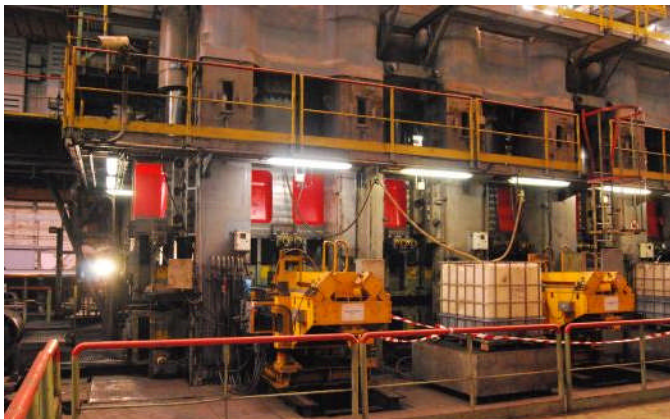
- World record casting June 2009  
270 t molten iron
- World record casting 08.07.2010:  
Casting of a head beam for one of  
the world's largest closed-die  
forging presses; 450 MN, 283 t  
molten iron, simultaneously  
poured out of 5 ladles





# Business Fields of DCI

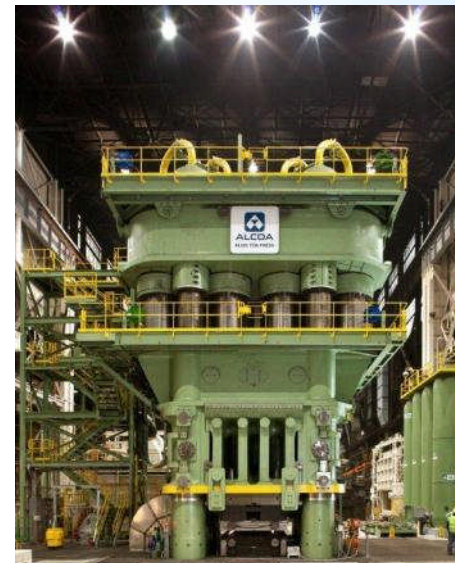
## Press building



Crossbeam for a pipe-forming press for Europipe



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

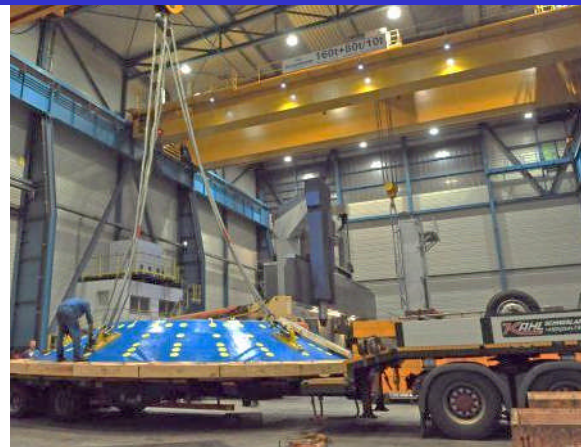


ALCOA: upper, cross and lower beams for one of the world's largest closed-die forging presses, 450 MN



# Business Fields of DCI

## Raw materials processing



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



# Business Fields of DCI

## Energy transformation 1/3



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





# Business Fields of DCI

## 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

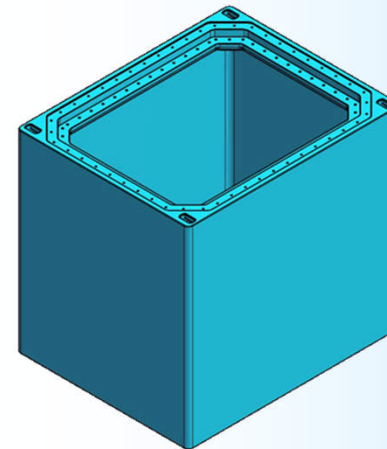


# Business Fields of DCI

## Energy transformation 3/3

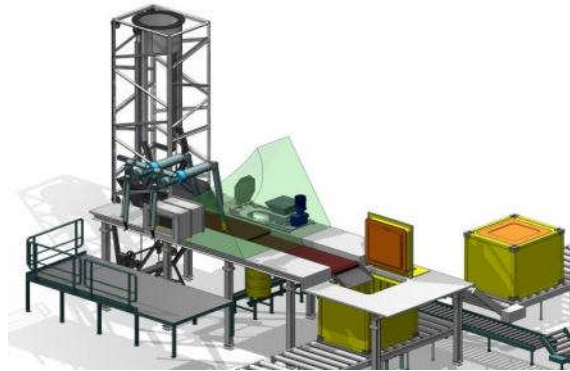
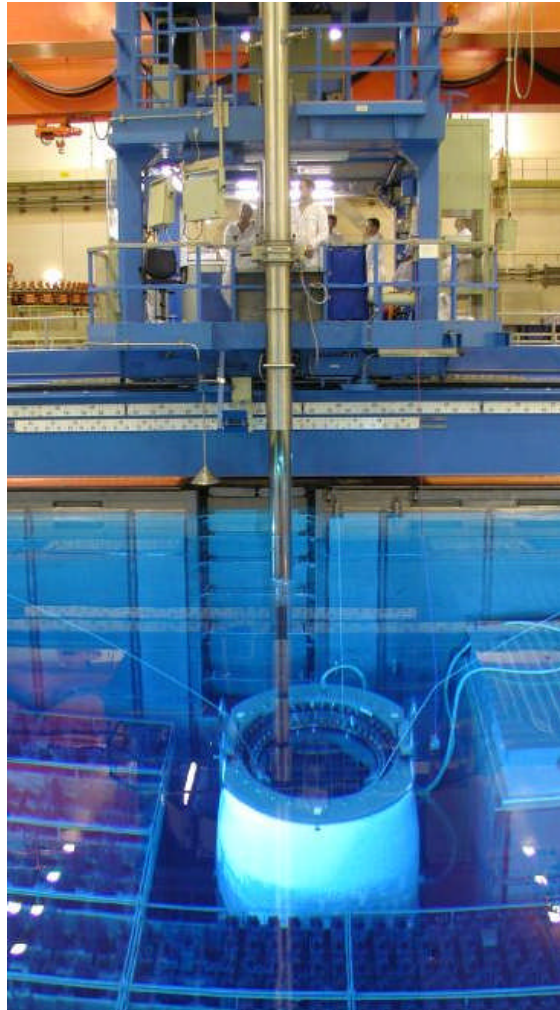


- **Casks and Containers for transport and storage of radioactive material**
  - CASTOR® - cask bodies
  - MOSAIK® - casks
  - Cast-iron containers
  - Special casks





# Contact / Information



## Siempelkamp

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West Columbia, SC 29169 - USA

Phone: +1 803 796 2727

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[www.siempelkamp.com](http://www.siempelkamp.com)