



## Verein für Kernverfahrenstechnik und Analytik (Nuclear Engineering and Analytics Inc.)

www.vkta.de



Decommissioning of old nuclear facilities at the Dresden-Rossendorf research site which is rich in tradition and future-oriented

### ■ Safety and Radiation Protection

Incorporation control, external dosimetry, leakage test points, measuring technology for radiation protection; environmental monitoring

### ■ Analytics

Chemical and radionuclide analysis Release measurements and declaration of residual materials Electrochemistry (water treatment)

### ■ Decommissioning and Disposal

Radioactive waste and monitoring of nuclear material Decommissioning concepts and control Collection place for radioactive waste from Saxony, Saxony-Anhalt and Thuringia

## Structure

The **Kompetenzzentrum OST** für Kerntechnik (**East German Centre of Competence** in Nuclear Technology) is an alliance of the following institutions

- TU Dresden
- Helmholtz-Zentrum Dresden-Rossendorf
- Hochschule Zittau/Görlitz - IPM
- Verein für Kernverfahrenstechnik und Analytik (VKTA)

having the goal to ensure the next generation of academically educated experts in universities, colleges (Hochschulen), in operating and manufacturing companies of nuclear power plants as well as in authorities and experts boards.

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## Goals / Projects

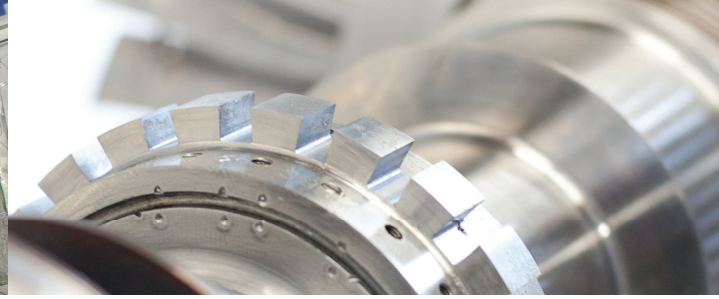
- **Knowledge Transfer**  
Intensive know-how transfer between the four institutions
- **Maintaining Competences**  
Maintenance and extension of further education in the field of nuclear and radiation technology and also radiochemistry at TU Dresden, Zittau/Görlitz University and the Helmholtz-Zentrum
- **KEK-Topics**  
Doctoral candidates work on topics in line with the initiative of the Federal Minister for Economic Affairs and Energy (BMWi) on maintenance of competences in nuclear technology
- **Seminar of Doctoral Candidates**  
Within the framework of a traditional annual seminar, doctoral candidates of various scientific disciplines represent their progresses and results of research work in the field of nuclear safety research.

## KOMPETENZZENTRUM OST FÜR KERntechnik (EAST GERMAN CENTRE OF COMPETENCE IN NUCLEAR TECHNOLOGY)

*Technische Universität Dresden  
Helmholtz-Zentrum Dresden-Rossendorf  
Hochschule Zittau/Görlitz  
Verein für Kernverfahrenstechnik und Analytik*

Maintaining Competences by  
promoting the next generation





**Technische Universität Dresden  
(Technical University Dresden)**  
www.tu-dresden.de



*Institute of Power Engineering*

- **Safety Analyses**  
Performance of safety analyses for state-of-the-art and advanced reactors
- **Ceramic Components**  
Development of ceramic components for high-temperature energy technology
- **High Temperature Reactors**  
International expert in the field of safety and reliability of high temperature reactors using the example of the Very High Temperature Reactor (VHTR)
- **European Competence Centre**  
Successful establishment of a European Competence Centre for high temperature reactor technology at the Technische Universität Dresden accompanied by the foundation of a graduate school.
- **Nuclear Reactor for Training AKR - 2**  
Homogeneous zero power critical assembly with solid moderator  
Practical training relating to nuclear reactors, radiation protection and reactors  
Predominantly used for education and teaching  
Instrument for research work in national and international projects

**The Helmholtz-Zentrum  
Dresden-Rossendorf**  
www.hzdr.de



The Helmholtz-Zentrum Dresden-Rossendorf (HZDR) is a member of the Helmholtz Association of German Research Centers and performs interdisciplinary research in the field of health, material and energy. One focus of research is nuclear safety research.

Several institutes with multiple state-of-the-art test facilities are involved in national and international research activities on safety of nuclear reactors and nuclear repositories. Institutes of the energy research area are:

- **Institute of Fluid Dynamics**  
Experimental Thermo-Fluid Dynamics  
Computational Fluid Dynamics (CFD)  
Magnetohydrodynamics
- **Institute of Resource Ecology**  
Reactor Safety  
Biogeochemistry and Biophysics  
Interface Processes and Molecular Structures  
Reactive transport
- **Institute of Ion Beam Physics and Materials Research**  
Structure materials  
Investigation of reactor material aging
- **Institute of Radiation Physics**  
Radiation induced transmutation

**Hochschule Zittau/Görlitz  
(Zittau/Görlitz University of Applied Sciences)**  
www.hszg.de



- **Institute of Process Technology, Process Automation and Measuring Technology (IPM)**  
www.ipm.hszg.de  
The IPM conducts application oriented research and development work in the field of energy technology and mechatronics. It is subdivided into 6 departments:

- Measuring Technology / Process Automation
- Pattern Recognition / Image Processing
- Nuclear Engineering / Soft Computing
- Mechatronic Systems
- Applied Electronics
- Power Plant-, Steam Generator and Firing Technology

- **Faculty of Machine Engineering** <http://f-m.hszg.de/>  
The diploma course of studies "Energy and Environmental Engineering" of the faculty contains the area of "Radiation and Nuclear Energy Technology" with the following specializations (modules):

- Dosimetry, Radiation Protection, Radio Ecology
- Neutron and Reactor Physics
- Nuclear Energy Technology
- Radiation Technology I and II in practical training
- Disposal and release

- **Energetisches Kabinett (ETK)**  
The ETK is equipped with presentation boards, nuclear power plant models and exhibits and a reactor simulator. The work spaces are used for practical training of students and pupils in the area of nuclear technology and regenerative energy technology and also to help them to decide on a career or a field of studies.