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• **Digitalization in Hydropower 2021**

VGB and VERBUND organize an online Expert Event!

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• **New topical homepage: KKS | RDS-PP®???**

Discover novelties - find your tailor-made solution!

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• **VGB Congress 2021 - 100 plus**

Don't miss the keynote by Professor Dr. Ernst Ulrich von Weizsäcker?

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VGB Congress 2021 - 100 plus

Don't miss the keynote by Professor Dr. Ernst Ulrich von Weizsäcker

"Come on! What we have to change to survive"

This is the gripping and encouraging title of this year's keynote speech at the VGB Congress in Essen, Germany.

Today's world with climate change as the biggest challenge of our time needs a new enlightenment. Many thought patterns still originate from a time when the world was empty, mankind small and nature immeasurable. The biologist, environmental politician and bestselling author Prof. Dr. Ernst Ulrich von Weizsäcker is one of the 100 most influential thinkers of our times. He has been co-president of the Club of Rome since 2012. The list of his awards and titles is impressive: Grand Cross of the Order of Merit of the Federal Republic of Germany, German Environmental Prize, Theodor Heuss Prize, three honorary doctorates, former chairman of the Environment Committee of the German Bundestag, head of the California Environmental University. His lectures are exciting, his energy is contagious. We expect an exciting talk around the topics of climate change, resource conservation and energy efficiency. Don't miss it!

[more...](#)

VGB oil laboratory tests oil blends to avoid cost-intensive oil change in a hydropower plant

Similar to any conventional power plant, hydropower plants and their components such as turbines and hydraulic systems as well as drives for gates, slides and flaps, require large quantities of lubricating oils. Regular inspections and thus the early detection of system malfunctions and impending damage ensure the safe and smooth operation of power plants and prevent unscheduled unavailabilities and repairs.

[more...](#)

VGB POWERTECH JOURNAL 6/2021

Download selected papers from the latest issue free of charge:

- [System separation as a warning shot? - Current aspects of electrical supply security](#)
Marc Oliver Bettzüge
- [Risk analyses: Identifying and managing the risks of new energy projects](#)
Thorsten Weidl
- [KKS and RDS-PP® – VGB speaks the language of power plant technology](#)
Andreas Böser and Sabine Kuhlmann

PT-Journal - Current Issue

New record: 36 percent minimum load reached at the Maithon power plant in India

From 20 to 28 July 2021, a German-Indian team coordinated by the VGB conducted flexibility test runs at the Maithon power plant. The investigations were carried out in the 525 MW unit 2 of the power plant which is situated in the state of Jharkhand and operated by Tata Power. The record value of 190 MW minimum load was achieved. Further tests with regard to load ramps and coal distribution provided further valuable input in order to derive measures for permanent flexible operation.

[more...](#)

Hydropower Industry Guide 2020/21

The Hydropower Industry Guide 2020/21 gives a comprehensive and up-to-date overview of the newest products and services offered by the hydropower sector. It provides an easy-to-use directory of companies providing key products and services to the worldwide hydro market. These products and services can help you do your job more effectively.

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events

• **VGB CONGRESS**

22/23 September 2021 in Essen, Germany

Further details will be provided in a due time.

[\[more ...\]](#)

• **VGB Conference Chemistry**

27/28 October 2021 in Ulm, Germany

The international VGB Conference Chemistry deals with all chemical aspects of power and heat generation plants as well as other industrial processes. The event is a forum beyond Europe for the exchange of experience and the status of technical/ chemical developments.

[\[more ...\]](#)

• **Gas Turbines and Operation of Gas Turbines**

11/12 November 2021 in Potsdam, Germany

In the context of the energy transition in a short period of time, the changing requirements in electricity and heat market and the public gas transport network require the timely adjustment of operational and plant engineering concepts for economical, safe and environmentally operation of gas turbines.

[\[more...\]](#)

New Publications

• **PowerTech Journal 6/2021**

- ◆ IT management
 - ◆ Flexibility
 - ◆ Current aspects of electrical supply security
 - ◆ Risk analyses: Identifying and managing the risks of new energy projects
 - ◆ Secure IT-/OT-devices according to IEC 62443-4-2: A worldwide solution
- and further news from industry, development and research

[\[more...\]](#)

• **Availability of Power Plants 2010 - 2019, Edition 2020**

TW103Ve

The Technical-scientific Report Availability of thermal power plants for the period 2010 to 2019 is available. The current report provides performance indicators for 659 power plant

units plus 183 machine sets of storage and pump storage hydro power plants.

[\[more...\]](#)

- **Basic Terms of the Electric Utility Industry**

VGB-S-002-01-2019-05-EN | Available as free of charge eBook

Apart from the familiar content relating to structural terms in the industry, power plant, grid and integrated supply system terms, energy and capacity terms and terms from the stock exchanges and trading markets now also newer terms from the immigrant energy transition and the global initiative to phase out fossil energy sources.

[\[more...\]](#)

- **Life Cycle Management of Buildings and Structures in Industrial Facilities and Power Plants**

VGB-S-044-00-2019-05-EN

This VGB-Standard is applicable to structural works in new-build, existing industrial facilities and power plants. Its focus is primarily on structural engineering systems which ensure load-carrying capability, serviceability and durability.

[\[more...\]](#)

- **Structural Design of Cooling Towers**

VGB-S-610-00-2019-10-EN

VGB Standard on the Structural Design, Calculation, Engineering and Construction of Cooling Towers.

[\[more ...\]](#)

- **Failures and Forced Unavailability of Power Plants (Henk C. Wels)**

B035-ebook

Power plants are not functioning to the fullest 100 % of the time. Maintenance and inspection of some components require them to be off-line in time, however, this can be planned such that customers continue receiving power from the electrical grid, steam or district heating from other plants. Unplanned outages due to failures or external conditions may cause surprises and can lead to situations in which the demand is not satisfied at short term at large costs.

[\[more...\]](#)

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VGB-Standard KKS. Pocketbook

VGB-S-811-91-2020-09-DE-EN

The "KKS Pocketbook" (3rd revised and extended edition 2020) is an abridged version (extract) of the publication VGB-S-811-91-2020-09-DE-EN "KKS - Identification System for Power Stations". The handy 148-page brochure supports the decoding of KKS codes, one of the world's most widely used key systems for the designation of equipment and components in power generation.

[\[more\]](#)

• **Analysis of Unavailability of Power Plants**

VGB-TW103Ae-eBook

The report provides information about weak points of equipment and power plant systems. VGB is analysing the annual unavailability (UA analysis) in order to identify the root causes, i.e. those systems causing unavailability to be able to upgrade such weak equipment.

[\[more\]](#)

• **Amendment sheets at a glance!**

The listed amendment sheets include all amendments regarding to the VGB-Standard. Its structure complies with the chapters of the VGB-Standard. It documents the amendments with naming the chapter number.

[\[more\]](#)

benefits for members

- Provide an international platform for the exchange and transfer of technical know-how
- Identify, raise and organisation of joint R&D activities
- Offer technical services, engineering consulting and construction supervision
- Guarantee access to a pool of expert knowledge
- Generate technical and operational standardisation
- Organise and offer training

[Experience More](#)

Facts and Figures

437

Members

33

Countries

302.000 MW

Installed Power

Competence areas

• Nuclear Power Plants

The European nuclear power plants generate more than 30% of the electricity need. Thus the CO₂ load of the atmosphere is reduced by over 900 Mio. tons (if replaced by coal fired power plants). VGB PowerTech and the committees of the department „Nuclear Power Plants“ are dealing with all issues concerning a safe and economical operation of NPPs.

[\[more...\]](#)

• Power Plant Technologies

The competence area “Power Plant Technologies” is the communications platform for all questions concerning the technology and operation of all power plant types, and covers all technical areas from boilers and turbines to I&C systems. The focus is on both short-term issues relating to daily operation and long-term, strategically oriented topics.

[\[more...\]](#)

• Renewables and Distributed Generation

The committees related to "Renewables and Distributed Generation" are dealing with all technical and economic issues concerning the use of renewables and decentralized generation technologies

[\[more...\]](#)

• Hydropower

In Europe hydropower is not only an indispensable renewable source but it is still the frontrunner in renewable energy with an annual electricity production of more than 375 TWh, as approximately 41% of the renewable energy is based on hydropower. For more than 20 years an exchange of experience of the leading companies organized by VGB PowerTech is taking place on an expert level regarding technical and strategic topics.

[\[more...\]](#)

• Wind Energy

For more than 16 years an intensive exchange of information and experience to improve the efficient operation of wind power plants organized by VGB PowerTech is taking place. In this context, the requirements of the wind power plant operators are highlighted. The companies are mainly interested in cooperation to push forward standardisation (best practice) and to incorporate operator interest in the different user groups.

[\[more...\]](#)

• Biomass

Power generation from biomass is a crucial part of transforming the global energy supply structure towards a sustainable energy future. Currently 167 TWh electricity and 855 TWh heat are generated from Biomass in Europe. Therefore Biomass has a share of 18.6% in

renewable electricity generation and 87% in renewable heat generation. Since 2002 VGB has provided a growing platform for owners and operators of biomass power plants for sharing experience and knowledge at a high expertise level.

[\[more...\]](#)

• **Environmental Technology, Chemistry, Safety and Health**

The Competence Area „Environmental Technology, Chemistry, Safety and Health“ focuses on important general issues of power and heat generation. Its specialised committees offer the platform for the necessary exchange of experience and the forming of opinion of the branch for the respective specialists in the member companies

[\[more...\]](#)

• **Technical Services**

Technical services are an integral part of VGB PowerTech's work. They are to be regarded as an enhancement to the services for our members and cover all aspects of engineering and operation in power plants. These services are used by members worldwide to achieve sustainably safe, fault-free and cost-effective operation

[\[more\]](#)