

REINSTEIN

— Wir vernetzen Energien —



COMPETENCE

AT YOUR FINGERTIPS

Company Profile Reinstein GmbH

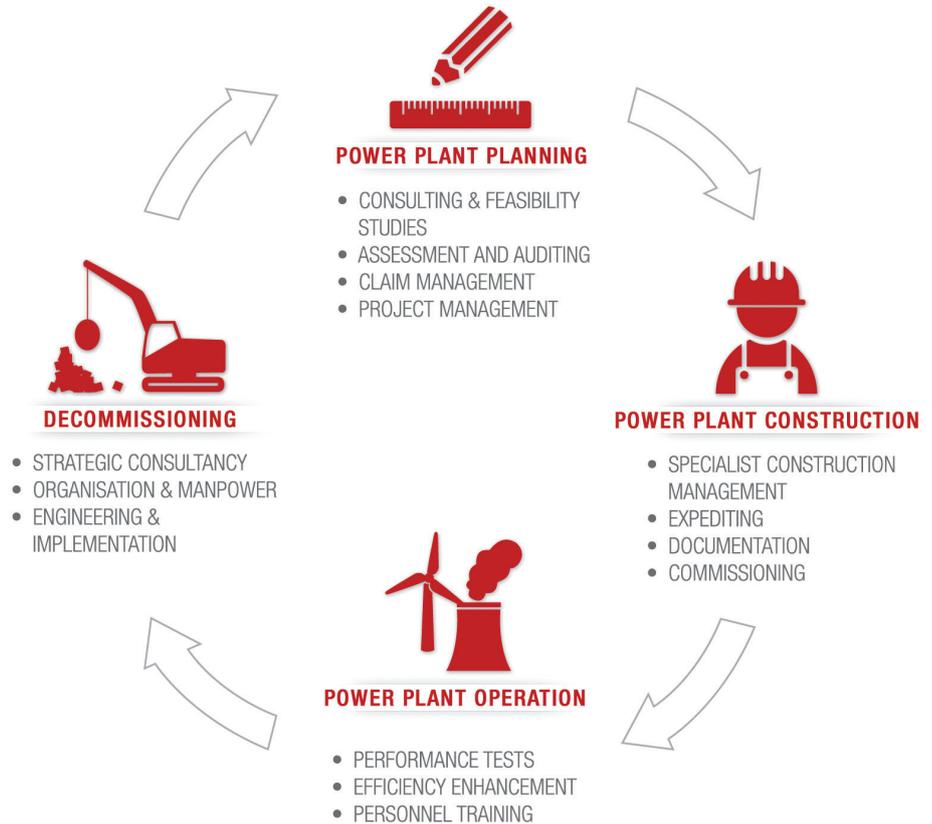
EXPERTISE WHERE AND WHEN YOU NEED IT

These clients already trust in our expertise

- ABB
- Alstom
- Bayernoil
- Biokraft GmbH
- DEG (KfW-Group)
- Deutsche Steinkohle AG
- eon
- EnBW
- Endress + Hauser
- Envia Therm
- Ferrostaal Power
- Fortum
- Fresenius
- Friotherm
- Hitachi
- ISE
- Kartonfabrik Buchmann GmbH
- Kernkraftwerk Leibstadt
- Kernkraftwerk Mühleberg
- KWS – Kraftwerksschule Essen
- MAN
- MiRO
- Munich Re
- Papier- und Kartonfabrik Varel
- PCK Raffinerie GmbH
- RAG Mining Solutions GmbH
- Raffinerie Heide
- RWE Power
- RWE
- Sandvik
- SCG Paper
- Shell
- SIEMENS Power Generation
- Statkraft
- STEAG
- Westinghouse Nuclear
- Wärmeverbundkraftwerk Freiburg
- Zott

As an engineering company, REINSTEIN is your partner for domestic and international projects – with main focus on power plant technologies. We offer an exceptionally high level of expertise meeting your specific requirements.

From planning, construction, commissioning and operation up to decommissioning: our services cover the entire power plant lifecycle.



Our clients bank on our wide experience in various kinds of large-scale projects – with main focus on combined-cycle and coal technology. Likewise, we are able to perform challenging nuclear power assignments.

CUSTOMISED SUPPORT – TAILORED TO YOUR PROJECT

Reinstein is a global power generation specialist company. Our core team and our network of experts provide local support wherever in the world it is required. We offer comprehensive support on all aspects of planning and implementation - with main focus on

- Consulting and engineering services
- Efficiency enhancement
- Training and education.

The following pages will give you details of our services with selected project examples.

How can we support your project?

ENGINEERING & CONSULTING

Complex engineering assignments require specialised experience. By focusing exclusively on power plant technologies, we offer our clients a clear added value that makes us a winning choice.

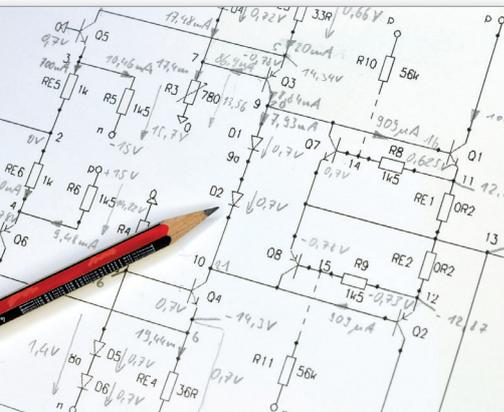
We provide consultancy to globally acting companies, local energy suppliers, and industrial customers who have set up their own power plants. Of course entirely independently and without regard to any manufacturer interests.

GIVE US A CHALLENGE

Our team of engineers and specialists cover all disciplines that have to interact in power generation. The highly specific questions in mechanical, electrical, instrumentation and control, or structural engineering can never be answered independently of each other. We are your partner for the overall picture - without losing the flexibility for detailed tasks.

Our consulting services include:

- Concept studies, feasibility studies, surveys such as risk assessment surveys
- Engineering of the overall facility or of individual components
- Assessments of the condition of a plant
- Claim management support
- Project management assistance through all engineering and implementation stages



OUR REFERENCES: ENGINEERING & CONSULTING

- For the operator of a refinery in south-western Germany, REINSTEIN prepared a feasibility study that included the provision of a heat recovery steam generation from exhaust gas. Pre-basic engineering services were provided and all possibilities and alternatives reviewed and analysed in detail. A calculation of costs formed the basis of the client's decision about the solution to be implemented.
- In a nuclear power plant in Switzerland, we reviewed the feasibility to provide an exhaust air filtration in the air ventilation system of a safety-relevant power plant area. The well-documented results of the study also met the requirements of the regulatory authorities.
- For a German business development bank that provides support to infrastructural projects in Pakistan, REINSTEIN, as "banker's engineer", evaluated the project progress during the construction of two combined-cycle power plants. The objective assessment enabled the client to identify potential project risks and to initiate optimisation measures.

How can we support your project?

EFFICIENCY & PROCESSES

In view of increasingly scarce natural resources, there is only one guiding principle that is accepted worldwide: energy must be generated and utilised as efficiently as possible. However, unfortunately not all facilities reflect the current state of technology in this area.

This is where REINSTEIN comes in. With our own consulting and implementation model, we assist our clients in getting the optimum out of their plants - always keeping focused on economic and ecological parameters.

THREE STEPS TO IMPROVE EFFICIENCY AND RESOURCE PROTECTION

3 Implementation

2 Feasibility Study

1 Potential Analysis

In our three-phase approach, the critical starting point is the analysis of the existing facility and of all production factors. Not only do we review data from the past but we generally also collect our own measuring data. Our principle is to work side-by-side with our clients' operating teams, who know the facilities inside out.

In detailed studies, we develop optimisation proposals and strategies affecting the entire facility. We always present various options to enable you to flexibly select the most appropriate alternative.

Finally, we mutually define the concrete measures to be taken and provide continuous assistance throughout the implementation process.

OUR REFERENCES: EFFICIENCY & PROCESSES

- Efficiency improvement of the industrial power plant of a pulp and paper mill. The measures were intended to ensure the mill's supply with electric energy but above all with the necessary process steam. Several optimisation scenarios were compared by our team of experts. The facility is now operated without the need for supplementary electricity from the public grid; and the investments will be amortised within the next few years.
- Energy efficiency improvement of a refinery in Bavaria, Germany. The site's largest consumers of energy and steam were identified and potential of energy savings investigated for these components. A full technical and economical assessment was carried out, which also considered the effects of changes in operational procedures.



TRAINING & EDUCATION

A power plant is a complex high-tech system with strong interdependencies between its components. Your staff is required to have sufficient theoretical and practical knowledge of mechanical, electrical, chemical and I&C engineering.

This knowledge must keep pace with the constant technical development. Many of our clients have recognised the importance of this “lifelong learning” and already take advantage of REINSTEIN’s variable training concepts.

Our training enhances the skills of managers and technicians on how to operate the plant and keeps them up-to-date. And this is a key element to achieve an optimal plant operation and continuous improvements of performance and reliability. With comparably low investments.

TRAINING WITH RESULTS – SPECIFIC TO YOUR DEMANDS

Our coaches have decades of power plant experience and they worked in numerous training projects worldwide. But most important they know how to maximise the benefit for all participants.

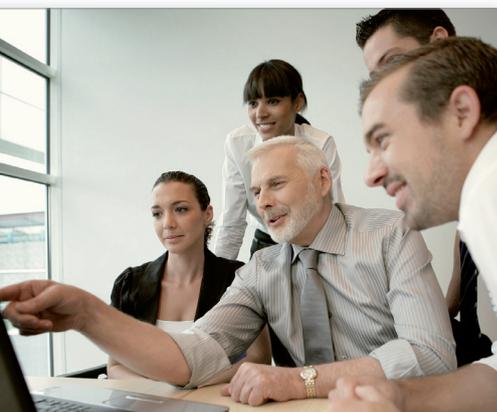
According to your specific needs, REINSTEIN offers a bunch of different types of trainings:

- Standard training modules and workshops (e.g. thermodynamics, steam generation, turbines & condensers)
- Short and long term courses (a few days up to several weeks)
- Workshops and seminars
- Individual company specific inhouse trainings

Do you want to improve your staff’s holistic understanding of your power plant? Do you want to guide them to better solve problems by themselves? Or do you want to receive the latest information on technical developments? If so: just ask for our training concepts.

OUR REFERENCES: TRAINING & EDUCATION

- Operator training for a coal-fired power plant in South-Africa: we conducted several technical component-specific trainings during a period of totally 15 months. Training modules covered all relevant topics e.g. tasks and operation methodology, maintenance, risks & mitigation, fault investigation.
- For our client ABB in Mannheim / Germany we developed 3-day inhouse trainings to acquaint engineers with essential basics of thermal power plant technology including topics like combined-cycle power plant, turbines, electrical and process control. REINSTEIN’s detailed training handbook was created such that it could be used by the trainees as reference in their daily business.



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