



INNOVATION

ENGINEERING

OPTIMIZATION

Energy Supply

Our service ...

We provide professional services for projects within the field of energy generation and distribution – from the initial concept through detail engineering to the successful start-up and project conclusion.

Our core competencies include the development of energy supply concepts and technical contract reviews.

Our services comprise:

- Plants for the generation of steam and electricity (boilers, cogeneration, combined-cycle power plants);
- Refrigeration plants (chilled water systems, complex ammonia plants), cooling towers;
- Treatment of industrial water and potable water, demineralized water plants;
- Generation of compressed air, supply of industrial gases.



Flame tube boiler plant, Goslar, Germany



Generation of compressed air, Bitterfeld, Germany

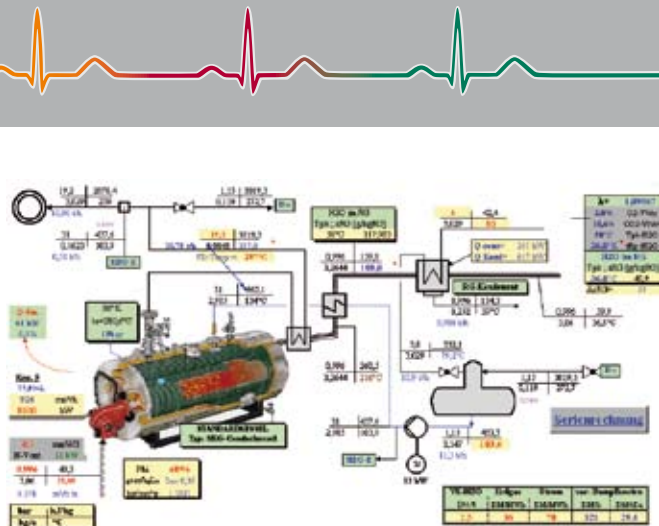
... is your gain

You benefit in several ways from our full portfolio of services:

- We provide a complete customized service package from concept through commissioning – neutral and independent from manufacturers.
- We offer a holistic analysis of the energy supply for your production site. Optimization of the entire concept ensures minimum investment and operating costs at maximum availability.
- We have extensive experience gained from projects within Germany and abroad and from continuous feedback from plants operated by the Bayer Group around the world.



Bayer Technology Services
Powering Your Performance



Calculations for a fire tube boiler using ThExcel®

Our approach ...

Our work is based on performance specifications and engineering tools that are being continuously refined on the basis of our experience of projects and applications. These ensure efficient working practices.

Of course, we use the latest and most appropriate software for cost controlling and schedule tracking, as well as for professional layout planning and flow diagram processing.

We use ThExcel® software for thermodynamic calculations for plants used for the generation of electricity, steam and refrigeration.

Project work includes:

- Consideration of the energy integration for the total site;
- Consideration of alternative plant concepts and operating modes and agreeing their use with the operator;
- Comparisons with benchmarks from around the world;
- Reliability assessments based on the probability of failure and the cost of the investment.

Our competence in this field is based on the qualifications and experience of our employees, but also on:

- A continuous surveillance of the market and on market analysis based on literature for the field and company documentation, discussions with specialist suppliers and attendance at trade fairs and exhibitions;
- Information exchange with plant operators on plant malfunctions and their causes and the operating characteristics of plants and plant components, including at their operating limits.

References

- Infrastructure and energy supply for the sites Bitterfeld/ Germany, Map Ta Phut/Thailand, Shanghai-Caojing/China of the Bayer group;
- Combined cycle power plant, Port Jérôme, France;
- Flame tube boiler plants;
- Fluidized bed boiler at power plant Leverkusen;
- Central chilled water system up to 20 MW in chemical plants in Germany, France, Thailand, China and the USA;
- Wet cooling towers up to 100 MW, compressed air stations for up to 65,000 Nm³/h and fully-demineralized water plants of up to 1,000 m³/h at locations around the world;
- Central ammonia refrigeration with refrigerant distribution and far more than 100 evaporation stations Leverkusen, Dormagen, Wuppertal and Brunsbüttel.



Combined cycle power plant, Port Jérôme, France