

People
Power
Passion
Performance
Partnership
Perfection

Welcome to the World of Excellence in Steelmaking.



BSE

BADISCHE STAHL-ENGINEERING GMBH

Excellence in Steelmaking



People with skill and will make successful steelmaking happen.



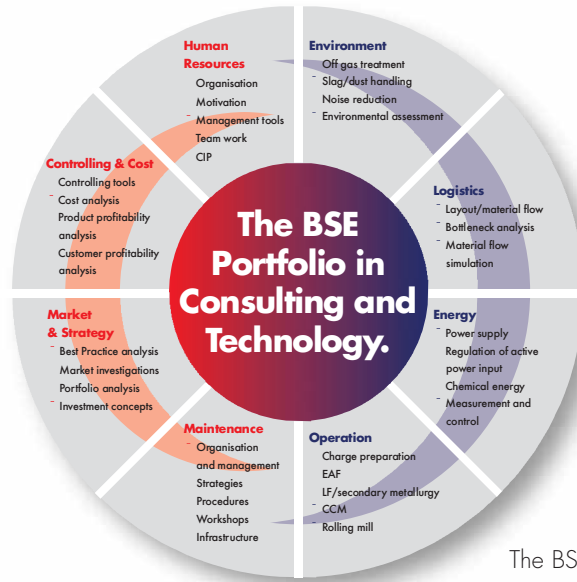
Our consultants' passion for excellence motivates steelmakers to give their best.

A more reason

BSE can help lifting a steel plant's output to all new performance levels.



People
Passion
Perform
Partners
Perform



The BSE approach: Seeing the complete picture, offering complete results. There are lots of possible ways to improve your steel plant's performance significantly. BSE knows them all – so let us help you find and implement the tailor-made solutions that exactly fit YOUR individual situation!

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able use of power can empower a steel mill's success.



ance rship

The spirit of true work partnership secures the enduring success of BSE's customers.



fection

Perfection in consulting and technology is what BSE stands for.





BSE Consulting



Steel is made by people, not by machines – employees are an important key to the success of truly excellent steel production: highly motivated, constantly expanding their know-how and proud of the high grade of efficiency of their daily work.

Backed by decades of experience from one of the world's most successful EAF steel plants, BSE offers a holistic portfolio of highest quality training and consulting services that all have one common denominator: they help improve a company's performance, efficiency, cost structure and profitability, thus providing excellent future perspectives.



BSE Consulting

Giving People the Power to be their Best.

**Achieve highest efficiency by
empowering your workforce:**

**Even the best
Job can be
done better!**





Managers and employees of steelmaking companies all over the globe come to Kehl again and again to find out more about how to maximise their own success based on what's being done there. These visits to Badische Stahlwerke are the beginning of a long business relationship that leads to sustainable success.

The same can be said both of the steel plant managers, the steel workers, from raw materials to the finished product and far beyond! The great benefit for our partners is our proven success in steel production and rolling technology – not merely a theoretical concept, but the result of continuous improvement in working with one of the most interesting “materials” in the world!



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BSE Consulting

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BSE Consulting reveals all success potentials of your steelmaking:

Reach ambitious Goals Step by Step!



Excellence in steelmaking is always the result of people doing an excellent job – on every stage of the process. So quite naturally, one major objective of BSE is to give people the status of an important performance factor in steel production.

To obtain their acceptance, respect, recognition and motivation are of highest importance. BSE's Consulting, Coaching and Training always happens in a true team atmosphere: eye to eye, from steelmaker to steelmaker. We are convinced that only with highly motivated people working together sustainable success will be achieved.

BSE's Consulting philosophy always follows clearly defined guidelines:

Involving people on all stages in corporate decisions.

Inspiration and accompanying in turning found solutions into reality: impressing show-how based on proven know-how!

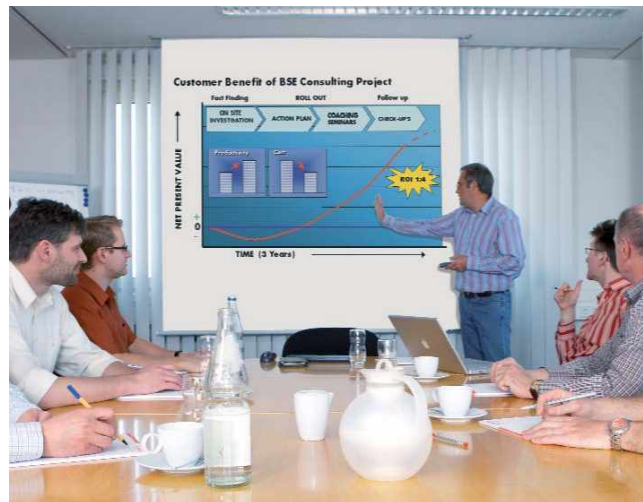
Permanent benchmarking with comparable steel plants and rolling mills.

Innovative and result oriented ideas created by experienced engineers.

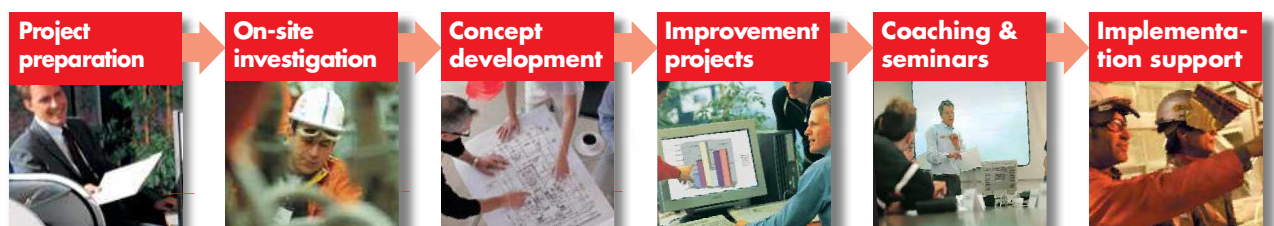
Reaching goals in logical, consecutive, continuously monitored steps.

Becoming a part of YOUR steelmaking team!

Know-how transfer incorporating principles and development of one of the world's most successful mini-mills – BSW, Badische Stahlwerke.



Strategy transforms into successful action – step by step!





BSE Technology



Only when highly motivated, excellently trained people work with the best "tools", the stage is set for the greatest efficiency in EAF steel production. With accomplishments such as the BSE Chemical Energy Concept or BSE's expertise in EAF revamping and environmental issues, BSE's services and technologies provide for considerable savings in energy and material use at all points in the steel production process. Which means that economy, ecology and excellent work conditions can match together perfectly!



Power Tools for your Success in Steelmaking.





BSE technology services and products for highest performance:

Unleash the entire Potential of your Plant!

No matter if you are planning just an upgrade of a single segment or an overall optimisation of your entire production process – as part of BSW in Kehl/Germany, one of the world's most successful and efficient steel mills, BSE knows which concepts, technologies and hardware will help a customer to unleash the entire potential of his facility. What's more, our integrated consulting and engineering approach always considers the COMPLETE picture and comes up with solutions that by far exceed the customer's expectations.



Analysis: Finding Phase

Detailed investigation of current situation on site, customer needs and process requirements.

Close partnership with the customer for incorporating their invaluable know how and setting of goals for common success.

Feasibility study to mutually define the optimal solution under consideration of the specific business environment.

Calculation of expected performance values and guarantee values.

Customer benefit- and payback-calculations.

Realisation: Implementing Phase

Efficient project management by experienced BSE project managers.

Detailed Engineering under continuous consideration and evaluation of process, maintenance, human and economic aspects.

Procurement based on compatibility and efficiency.

Planning and manufacturing by experienced sub-contractors.

Detailed and comprehensive documentation.

Installation, start-up and commissioning in close co-operation with the customer.

Advantages

Increase of efficiency and productivity.

BSE guarantees project completion

- on time
- within budget
- to achieve expected performance

Application of the extensive process know how from own steel production at BSW and many installations.

Rigid design and highest quality workmanship for a long lifetime and high availability, even under the toughest and hottest conditions.

Easy handling and maintenance of the installed technologies and devices.

Holistic system solutions, tailor-made to the customer's individual situation, no matter which furnace size or type.

Attractive cost/performance ratio for a quick return on investment.





**BSE technology for
EAF and LF optimisation:**

Tools for Top Performance.

BSE offers an impressive range of products for the optimisation of steelmaking in all stages of the process. Everything we offer is backed by daily use at the BSW plant which leads to permanent improvement – not only concerning technology and quality, but also crucial success factors such as maintenance, energy effectiveness etc.

All BSE products are tailor-made to the client's situation and come with all the service you'll ever need to enhance the excellence of your steelmaking on the long run.



EAF/LF revamping.

Current Conducting Aluminum Arms and gantry system including columns, guiding rolls, electrode lifting mechanism.



Shell, roof, elbow and other water cooled EAF parts.



Furnace platform, ladle car.

Concepts for process acceleration, hydraulic system.



Electrical power supply (network to furnace).

BSE Chemical Energy Concept.

Virtual Lance Burners for injection of oxygen.



Sidewall Injectors for solid materials.

Measurement and control.

Temperature and Sampling Manipulators.



Optimisation of active power input with DC-Online.

Delay Recording System (DRS).



Lance Manipulators for slag door injection of oxygen and solid materials.

Environmental technology.

Off-gas concepts and engineering – Fluid Dynamic Models and Computational Fluid Dynamics.

High Temperature Quenching (HTQ) system providing most rapid off-gas cooling.



BSE: the Steelmaking Excellence Network.

BSE is at the center of a world-wide active partnership that is driven by a common goal: to help steelmakers all around the globe in doing their good job even better. From raw material procurement to product portfolio and market analysis, from staff and management training and consulting to the most advanced EAF steel production soft- and hardware – the BSE Competence Network covers it all. Find out for yourself what BSE can do for YOUR excellence in steelmaking!

**BSE consulting
and training**
**BSE concepts for
chemical energy input**
**BSE measurement
and control solutions**
**EAF, LF and CCM mo-
dernisation by BSE**
**BSE environmental
services**



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