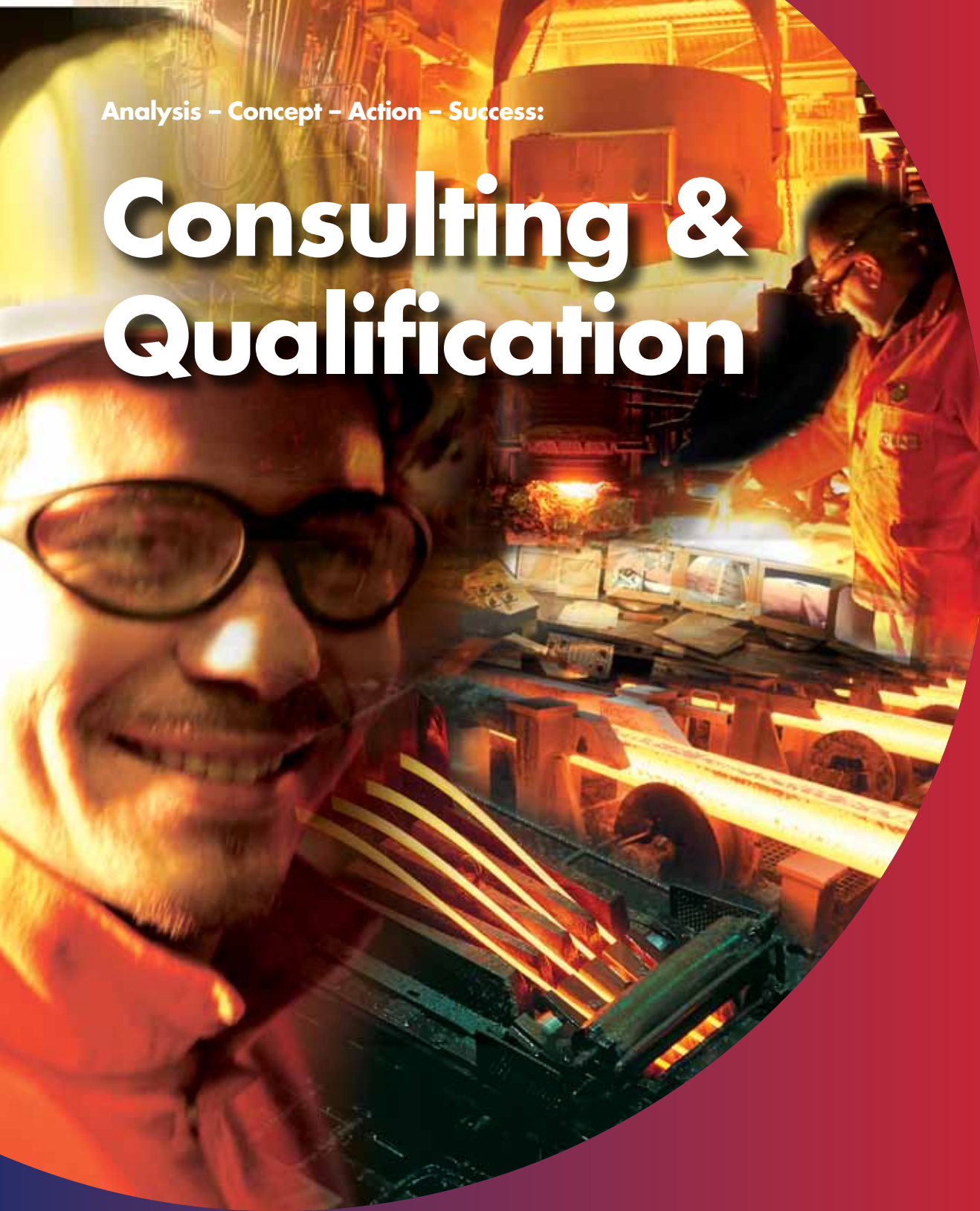


Analysis – Concept – Action – Success:

# Consulting & Qualification



**BSE**

BADISCHE STAHL-ENGINEERING GMBH

**From Steelmaker to Steelmaker**



# Consulting from steelmaker to steelmaker

BSE consultants represent the operational know-how of the Badische Group with BSW as one of the world's leading mini-mills regarding productivity, efficiency and costs plus the experience of more than 300 consulting projects worldwide.

Detection of potentials, elaboration of concepts and implementation of the improvement measures – from start till end: BSE consultants work closely together with the people of our customers to make success happen!

BSE consulting & qualification services range from comprehensive know-how agreements (Mini-Mill Culture), training seminars for companies and individuals (Training & Academy), optimisation projects for specific steelmaking areas (Individual Package) to plant layout and business concepts (Conceptual Study).

## Mini-Mill Culture

Learning from one  
of the world's most  
successful mini-mills



### Principles.

● Implementation of mini-mill culture:

**Skilled, motivated personnel equipped with proper tools and assigned clear responsibility within a lean organisation.**

- BSW mini-mill serving as the main platform for know-how exchange and inspiration.
- Know-how agreement for steel plants and rolling mills comprising diverse consulting and training services:
  - On-site investigation at customer
  - Concept development
  - Improvement projects
  - Seminars at BSW
  - Implementation support
- Smart adaptation of selected method and technologies from mini-mills also to steel plants with different raw material and metallurgical processes.
- Highly qualified consultants with long-lasting experience in the steel industry becoming a part of YOUR steelmaking team!

### Concept.

- Process analysis and optimisation based on the plant's status quo and realistic future perspectives.
- Consideration of all important levers for achieving an effective and efficient operation.
- Improvement of equipment and standardisation of the entire process.
- Definition of short and long term goals and measures.
- Application of method with skill and passion.
- Continuous and open-minded exchange of know-how and philosophy.
- Mutually agreed-on future concepts for development.

### Advantages.

- Increase of productivity, efficiency and availability.
- Higher motivation and qualification of your staff on all levels.
- Implementation of clearly defined process standards.
- Detection and elimination of bottlenecks.
- Improved market approach.
- Implementation of new and state-of-the-art technologies.
- Modernisation programme with profound future investment plan.
- Continuous monitoring of your success.



BSE consultants reveal the true potential of your steel plant and rolling mill



Motivated and qualified people ensure sustainable success of the company





# Training & Academy

Add more intelligence to your steelmaking

## Principles.

BSE Training & Academy aims to close the gap between general theoretical training (provided by schools) and specific equipment training (provided by OEM) in order to provide the essentials of day-to-day needs for efficient plant operation.

The BSE Academy is a global „Steelmaking University“ offering comprehensive solutions for education, qualification and training displayed in three educational components:

- Open courses for individuals.
- Classic seminars for groups.
- Customised training for groups.

- Impartment of theoretical knowledge and practical skills for steelmakers.
- Aiming for different levels of qualification and for everyone involved in the steelmaking process.
- Seminars are conducted by steel industry experts with hands-on experience – from steelmaker to steelmaker.
- Understanding your needs with our extensive industry know-how and contact to almost every mini-mill in the world.
- Conducted in real steel plant atmosphere either at Badische Group production sites or customer site.

## Components.

### Open Courses

- Taking place all year round with subjects starting at technical skills and hands-on steelmaking practice, operational competence and heading all the way up to leadership and management principles.
- Maximum group size of 15 participants guarantees promising learning results and an experience exchange with like-minded people from different companies.
- Find out which course meets your demand best and have a look at our latest seminar programme – available on our website [www.bse-kehl.de](http://www.bse-kehl.de)



Look.



Listen.



Do!

### Classic Seminars

- Management and operator & maintenance seminars for selected customer personnel at Badische Group production sites in Kehl.
- Participants get general instructions in technology supplemented by practical hands-on training at BSW facilities and maintenance workshops.
- Providing a great learning experience but also an uplifting motivational “kick”.



Classroom training with BSE/BSW experts

### Customised Training

- Tailor-made training modules and courses based on the analysis of individual customer situation and skills.
- Training execution either at training locations in and around the Badische Group production sites or at customer location.



Observation of BSW steel production



Teambuilding and leisure programme



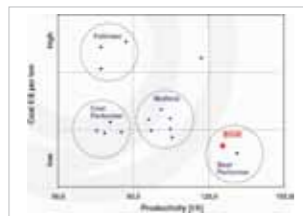


# Individual Package

Highest productivity and cost efficiency happen when all influential key factors are perfectly adjusted

## Best Practice

- Benchmarking analysis of key performance indicators and main cost figures.
- Anonymous comparison with other companies shows different levels of performance and clearly indicates potentials for improvement.
- Initial participation in the Best Practice Study is free of charge.



## Operation & Process

- Process analysis and optimisation based on the status quo and realistic future perspectives.
- Evaluation and recommendations concerning the technical equipment and tools.
- Implementation of clearly defined process standards.
- Identification and elimination of bottlenecks.



## Organisation & Human Resources

- Mutually finding an optimum organisation.
- Creating an open and positive working environment.
- Forming of team spirit.
- Establishing a committed workforce.



## Logistics & Layout

- Detailed analysis of all logistical processes in your plant.
- Bottleneck analysis.
- Computer simulation of present and future material flow.
- Evaluation of handling procedures and equipment.
- Definition of an appropriate plant layout design.



## Energy Efficiency

- Investigation and layout of the entire electrical power supply.
- Optimisation of active power input through measurements.
- Investigation and optimisation of chemical energy reactions.
- Optimisation of injection tools for oxygen and solid materials.



## Maintenance

- On-site investigation and analysis of all aspects of maintenance from strategy to downtime planning and execution, definition of potentials, warehousing, risk assessment, reporting.
- Application of continuous improvement processes and method.



## Safety

- Increase of general safety awareness.
- Mutual elaboration of adequate safety guidelines.
- Providing method and finding technical solutions for accident prevention.



## Environment

- Less emissions to air, water and soil.
- Legal security through compliance with regulations.
- Improved acceptance by population living nearby as well as by the employees.
- Cost savings through integrated recycling concepts – sell what you may have dumped before.



# Conceptual Study

The optimum concept for your individual situation



## Components.

### Greenfield/Brownfield Concept

- Elaboration of plant concept for highly productive and efficient operation.
- Evaluation of most suitable technology/review of investment plan.
- Determination of main equipment, major characteristic process data, consumption figures.
- Layout development based on material flow simulation.
- Development of a lean organisation.
- Selection of equipment supplier to guarantee effective and efficient execution of specified investment projects.
- Summarising results in a fully developed feasibility study and/or in a business plan for project funding.



### Due Diligence

- Evaluation of actual assets on-site.
- Set-up of different market scenarios.
- Specific recommendations for upcoming investment decisions.
- Technical due diligence: Evaluation of equipment conditions, assessment of operating costs and plant performance.
- Strategy and market due diligence: Independent review of strategy and market assumptions.



### Business Concept

- Development of a clear strategy based upon a detailed investigation of the business environment, the customer needs and the company strengths and potentials.
- Detection of market opportunities and definition of a sound product mix for a sustainable company success.
- Meeting the stakeholders' expectations through technical and strategic improvements by applying the expertise of the Badische Group.





**Consulting & Qualification**



**Tools & Equipment**



**Services & Spare Parts**



**Engineering & Projects**

# We are Steelmakers!

BSW and BSE – a unique partnership that will help you to reach even ambitious goals.

Since 1983, the Badische Stahl-Engineering GmbH (BSE) has been acting as a service provider for increasing the efficiency and productivity in the electric steel industry worldwide.

BSE is a sister company of the Badische Stahlwerke GmbH (BSW), one of the world's most efficient Electric Arc Furnace steel plants.

This unique partnership between BSW and BSE ensures that all products and services provided by BSE are not just based on mere theory, but on more than 4 decades of own proven operational experience.

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