

**Acoustic claddings and shrouds
for power plants and other industries**



BBM Akustik Technologie
Acoustic claddings and shrouds
for power plants
and other industries



Acoustic claddings and shrouds

Noise control for power plants
and other industries



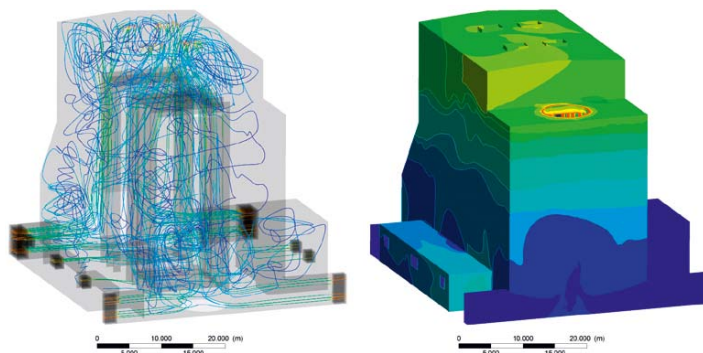
BBM shrouds and boiler houses

BBM Akustik Technologie GmbH has been in the business of providing sound insulating facades in power plants and other industries for several decades. BBM Akustik Technologie can rely on extensive experience for both partial enclosures (SHROUDS) and for full noise enclosures of boilers (BOILER HOUSE).

Starting from the acoustic requirements and the following design, BBM Akustik Technologie takes over the full planning, processing, purchasing and manufacturing, as well as delivery and installation of the components. BBM Akustik Technologie has planned and executed projects worldwide.

Acoustic design and calculation

The acoustic design and calculation of the boiler house or shroud are two of the most important tasks. This is done starting from the gas turbine emission levels, using then the information available for the diffuser, inlet duct, HRSG casing and the chimney.



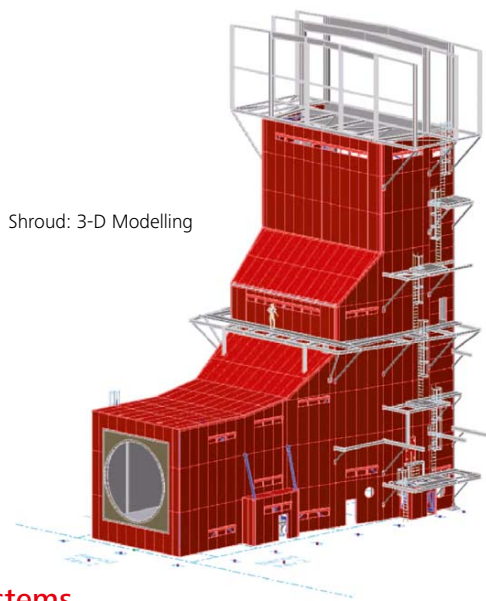
CFD analysis of air flow in boiler house

If new materials have to be used or in case optimized solutions are to be developed for very high acoustic requirements, BBM Akustik Technologie's own test facilities allow for the best solutions and results within a short time. Thus, BBM Akustik Technologie is able to easily determine the intervention area, such as the insulation of boiler parts or new arrangement and sizing of the enclosure elements.

All structural calculations for steel, cladding, roofing and sub-structures are performed in-house; in this way guaranteeing an effective, quick and problem-oriented solution for the tasks given.

Planning, 3-D design, detail engineering and project management

Today, nearly all projects are represented in 3-D CAD models. The use of this kind of software enables a close check on such critical parts as battery limits, pipes and other penetrations allowing for a »tailor-made« detail engineering.



Ventilation systems

BBM Akustik Technologie provides detailed analysis of ventilation, assisted by its own measurements and supported by the newest software (e.g. CFD analysis). Usually, two systems are applied: natural or forced ventilation. Both systems have been successfully used in past projects. BBM Akustik Technologie calculates, supplies and installs these systems worldwide, including all secondary equipment like silencers, dampers and weather protection.

Worldwide supply and installation

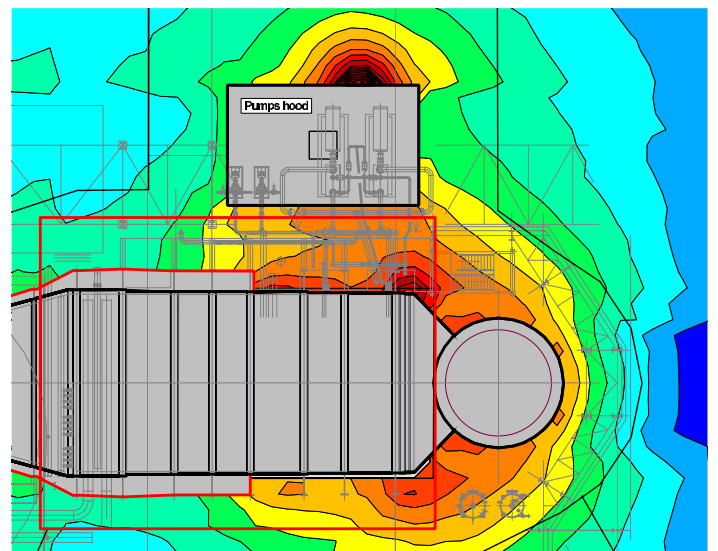
Specialized teams with BBM Akustik Technologie's own staff or as combined teams with BBM Akustik Technologie partners take care of the installation works.

Overall concept and cost optimization

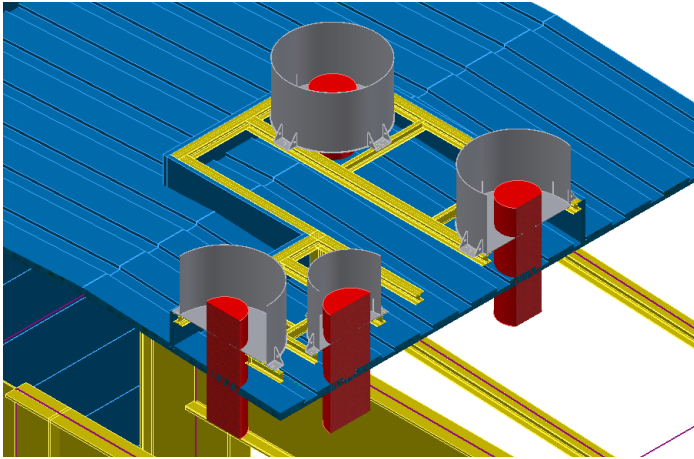
By taking all the components of a boiler house or enclosure into account, an optimized approach with respect to the complete scope and costs can be reached. In particular, a special role is played by acoustic warranty, design, quality, as well as ventilation system and method of installation.

The following shows the comprehensive range of our projects:

- Acoustic design and optimization of facades and roofs
- 3-D (CAD) model engineering
- Planning and processing
- Laboratory tests and measurements
- Static calculation
- Industrial design
- Detailed engineering of all components
- Ventilation systems: natural or forced
- Smoke and heat evacuation systems
- Openings in buildings for pressure release, design and calculation
- Interfaces with existing buildings and structures
- Procurement
- Production
- Delivery
- Installation
- Documentation



HRSg acoustical study: noise contour plots



Roof section from a 3-D model



Your benefits from projects with BBM Akustik Technologie

1. Access to all the experience of the Müller-BBM Group
2. Acoustic design and optimization of the entire noise emission of the HRSG
3. Choice of partial or complete enclosure, depending on requirements
4. Guarantee for settlement and acoustics
5. Projects economically optimized in conjunction with high BBM quality standards
6. All calculations and tests performed in-house
7. High standards for engineering and management expertise
8. Own Workshop for shrouds and steel elements
9. Site coordination, monitoring and management according to the highest safety standards
10. Global project management
11. Complete acoustic packages including all required noise reduction measures for HRSG and boilers
12. Fixed prices
13. Inspection and documentation

**We will accompany you
throughout the entire project**

Solving industrial noise problems for more than 30 years.

**BBM Akustik Technologie – a leading supplier
of industrial silencers and enclosures.**

**EN ISO
9001:2008
certified**

Our products

Hot gas turbine silencers

- Bypass silencers
- Gas turbine silencers
- Single cycle silencers
- Optimized splitter design for low-frequency attenuation



Steam silencers

- Vent silencers
- Start-up silencers
- Blow-down silencers
- Flash tank silencers
- Safety valve silencers



Acoustic cladding

- Facades
- Partial HRSG enclosures
- Shrouds
- Steam and gas turbine enclosures
- Supply and erection



Flue-gas silencers

- HRSG outlet duct silencers
- Main stack silencers
- Id and Fd fan silencers
- Minimized pressure drop



Engine exhaust silencers

- Behind combustion engines and in compressor circuits
- Suitable in combination with exhaust stacks
- Free of fibres
- Compact design providing highest attenuation



Condensate systems

- Complete system design
- Static and dynamic calculation
- Condensate tanks and flash tanks
- Piping and blow-off silencers



Cooling tower silencers

- Natural draft cooling towers
- Cell cooling towers
- Hybrid cooling towers with wet and dry air intakes
- Air inlet and outlet silencers



The range of services offered by BBM Akustik Technologie, headquartered in Germany, comprises acoustic engineering, product-specific advice, manufacture, delivery and mounting.

■ BBM Akustik Technologie GmbH

Robert-Koch-Strasse 11
82152 Planegg
Germany
Phone +49-89-891364-0
Fax +49-89-891364-11
info.planegg@bbm-akustik.de

■ BBM Akustik Technologie GmbH

Alexanderstrasse 50
45472 Mülheim
Germany
Phone +49-208-62524-0
Fax +49-208-62524-11
info.muelheim@bbm-akustik.de

■ Röhrling BBM GmbH

Workshop
Ziegelweg 7
01640 Coswig
Germany

■ BBM Akustik Technologie GmbH

Via Conservatorio 22
20122 Milano
Italy
Phone +39-02-7729-7572
Fax +39-02-7729-40
info.milano@bbm-akustik.it

■ BBM Acoustic (India) Pvt. Ltd.

266, Bhare
Post Ghotawade, Pirangut
Pune - 412108, Maharashtra, India
Phone +91-20-667324-00
Fax +91-20-667324-11
sales@bbmindia.com

■ BBM Acoustic (India) Pvt. Ltd.

E-45, 2nd Floor, Sector-63
Noida - 201301, Gautam Budh
Nagar, Uttarpradesh, India
Phone +91-120-4204444
Fax +91-120-4262020
sales@bbmindia.com

www.bbm-akustik.de