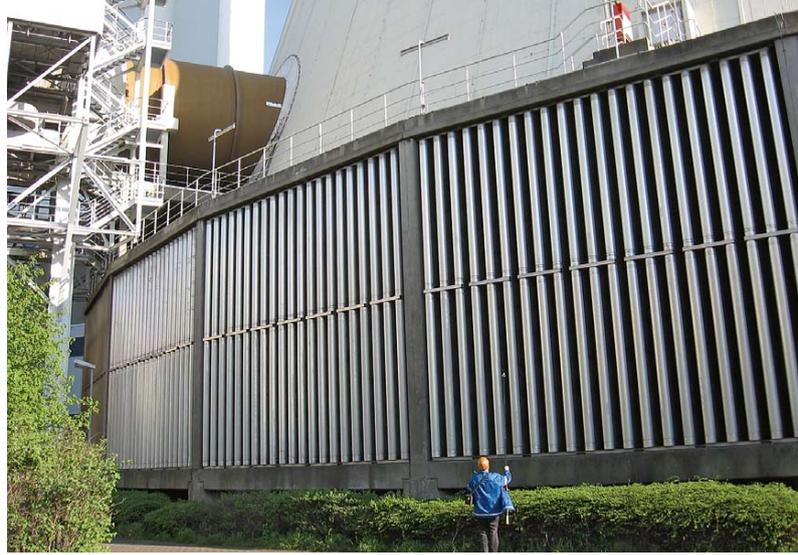




Cooling tower silencers and noise barriers

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1962
2012 50



BBM Akustik Technologie
Cooling tower silencers
and noise barriers



Cooling tower silencers

Noise control for power plants
and other industries

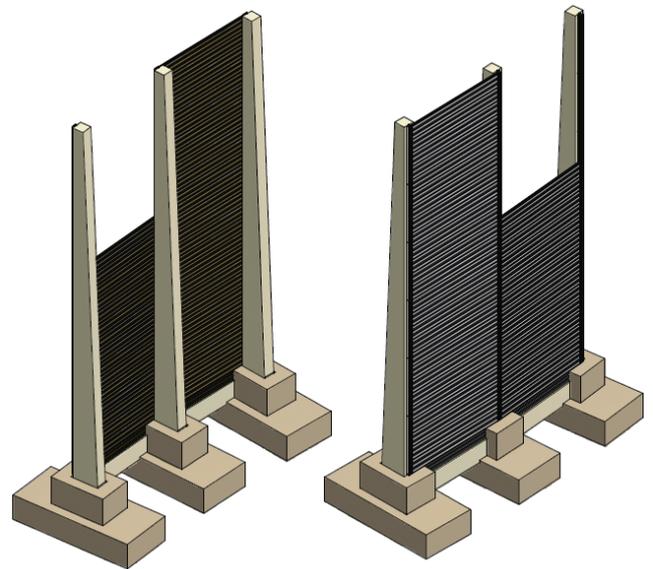


BBM Akustik Technologie cooling tower silencers

As a leading supplier of industrial silencers and enclosures BBM Akustik Technologie supplies silencers for water re-cooling systems based on wet cooling, dry cooling, fresh-water cooling or any combinations of these. These silencers are used in cooling towers that work by natural draught or by forced air. Moreover, we provide the design and supply of noise barriers for cooling towers.

In natural draught wet-cooling towers the noise is caused mainly by the impact of the cooling water falling on the surface of the water basin. The spectral components that control the A-weighted level are usually above 500 Hz. The sound pressure level at the air intake is 80 dB(A) or higher.

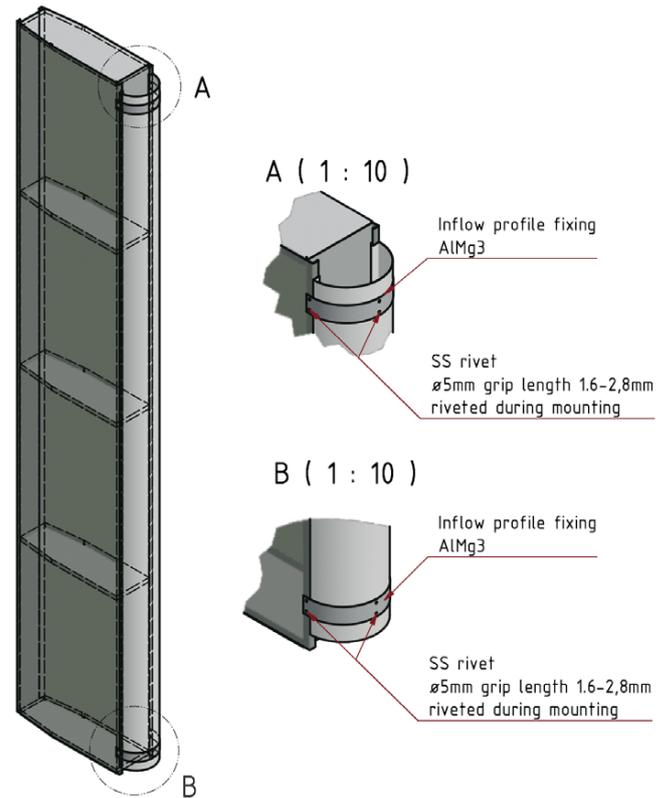
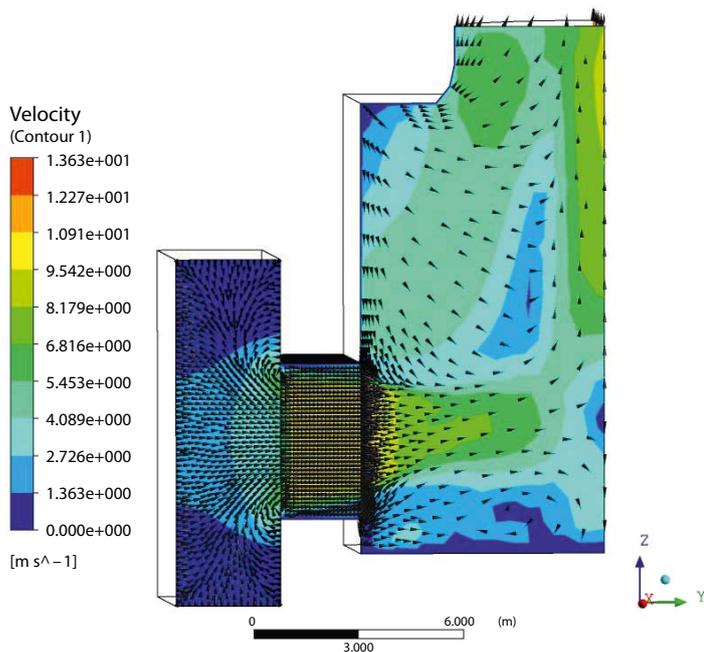
In the case of fan-operated wet-cooling towers, the fan is the dominant source of noise in the frequency range up to 500 Hz. However, in the frequency range between 500 Hz and 4 kHz the water noise becomes dominant.



Depending on the level and spectral distribution of the noise, as well as on the distance to the nearest residential area, the noise is most efficiently attenuated by barriers when the required insertion loss is below 15 dB. Splitter type silencers can provide an insertion loss of up to 40 dB. Sound protection hoods for the fan drive units or other aggregates, as well as elastic supports, complete the product range for noise control measures in cooling towers.

Acoustic and fluidic design

Our silencer design, with respect to acoustic and fluidic design, represents a balanced compromise between the initial cost and subsequent operating costs.



BBM Akustik Technologie has several testing labs, as well as the most modern measuring, analysing and data processing equipment, to optimise both the acoustic and aerodynamic performance of our cooling tower silencers. The know-how gained from numerous delivered projects enables us to implement the highest acoustic requirements.

Manufacturing

The splitter silencers for cooling towers are manufactured at our plant in Germany using state-of-the-art equipment. The splitter frames are usually made of salt-water resistant aluminium in unibody construction for heights up to 12 m. The necessary static and dynamic stability of the silencer is obtained by optimal forming and by connecting several splitters to create a very stable splitter block.



What's in it for you?

- Acoustic design of the silencer or noise barrier
- Optimisation of silencers' pressure loss and acoustic requirements under economic aspects
- Structural design, CFD and FEM calculations on request
- Verification of attenuation and of pressure loss in our own testing labs
- Access to the full know-how of the Müller-BBM Group
- Manufactured in Germany at our own workshop
- Mounting included on request
- Site coordination, monitoring and management according to the highest safety standards
- Supervision of your mounting or manufacturing procedures, if required
- Technical support with acceptance procedures
- Guarantee on acoustic and aerodynamic performance
- Complete documentation according to your requirements

Installation

BBM Akustik Technologie has developed special mechanical and hydraulic driven hoisting gears. Together with a stacker/lift truck, they ensure accurate and cost effective on-site assembly of our cooling tower silencers. Our procedures and equipment are deployed worldwide in the field of large silencers and noise barriers, and have proven successful in many major large scale projects. Staff deployed on these projects is SCC-qualified.

**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
- Optimised splitter design



Steam silencers

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



Acoustic cladding

- Facades and shrouds
- Partial HRSG enclosures
- 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

- For diesel and gas engines
- Highest attenuation
- Most compact design
- DNV certified spark arrestor



Condensate systems

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



Cooling tower silencers

- Natural draught cooling towers
- Forced air cooling towers
- Cell cooling towers
- Hybrid cooling towers



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

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