



+ **JuSyS® Air**
High availability using
minimum overpressure
with fresh air



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+ JuSyS® Air

The rear-ventilated **JuSyS® Air** has established itself as the preferred ceramic tube wall protection system for waste incineration plants since 1999. Worldwide, more than 115 plants and over 25,000 m² of boiler tube walls have been successfully lined with our premium tube wall panel system. To the full satisfaction of our customers.

Key Features

JuSyS®Air consists of a solidly constructed, nitride-bonded silicon carbide (SiC) tube wall tile, which is suspended tightly but flexibly in heat-resistant metal anchors in front of the boiler wall. To protect against corrosion, a narrow air gap is formed between the plate and the boiler wall, which is actively supplied with sealing air from the outside. The protective mechanism of the system is therefore based on a fresh air cushion with minimal overpressure.

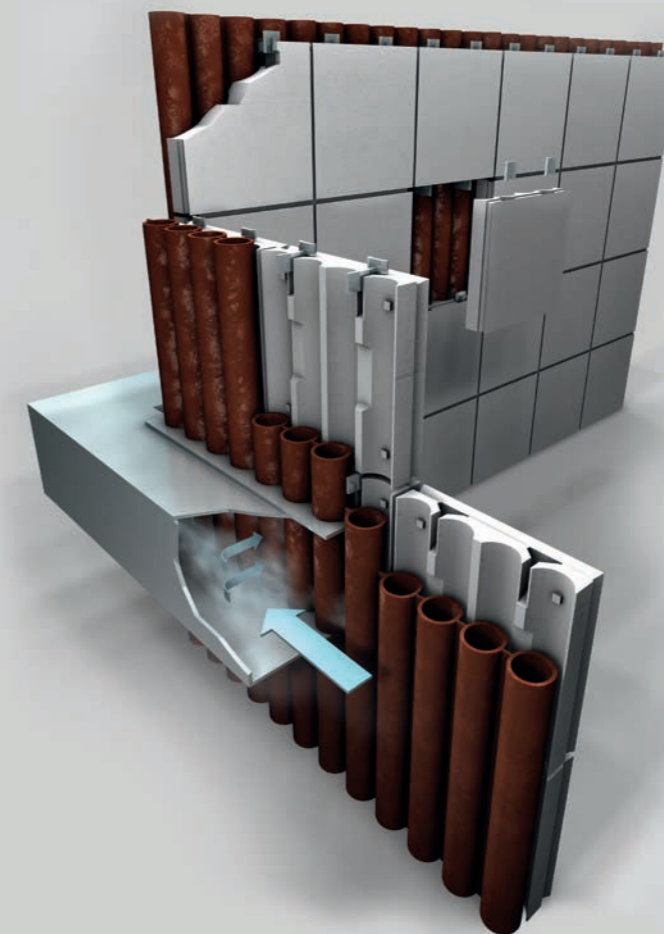
JuSyS®Air is an extremely solid, low-stress and crack-resistant system. The durability and extended corrosion protection of the pipe wall are guaranteed. Meticulous quality requirements and manufacturing specifications are combined with high testing density care for the further stability and effectiveness of the system. The longevity is also ensured by the excellent oxidation resistance of the SiC plates used.

Heat Transfer Advantages

JuSyS®Air is a surprisingly good and “intelligent” system in terms of practical heat transfer:

- at low combustion chamber or plate temperatures, the air gap has an insulating effect, which reduces the heat transfer and therefore improves combustion
- at higher combustion chamber or plate temperatures, the heat transfer due to thermal radiation increases tremendously

The replacement of backfilled plate systems, with theoretically higher heat transfer, has shown that **JuSyS®Air** is fully competitive in this aspect. There are only slight changes in the overall heat transfer. This has been proven by various practical measurements as well as by independent FEM calculations.



Sketch of the rear-ventilated tile system

Reduced Replacement Rate

Statistical studies have proven the success and reliability of **JuSyS®Air** (see graph). Compared to conventional plate systems, **JuSyS®Air** has a significantly lower replacement rate, which is directly proportional to the economic efficiency and availability of the system.

Reduced Maintenance Costs and Increased Availability

JuSyS®Air-linings have significantly lower maintenance costs. This is due to the significantly longer durability of the system as well as the significantly lower disassembly and assembly costs/times during inspections.

All in all, there are clear advantages of **JuSyS®Air**, which despite a somewhat higher initial investment provides an attractive “return on investment” within 3-4 years. For this figure, only the direct costs of the systems were compared without the long-term effects of the increased corrosion protection.

Easy to Dismantle/Reassemble

Three other advantages of the system are worth noting:

- The risk of damage to the boiler tubes during demolition is eliminated
- Bends to the inside as well as to the outside can be seamlessly covered with smaller standardised **JuSyS®Air** tiles
- Each **JuSyS®Air** tile can be replaced individually simply and easily

