

New tandem dampers, ND 4500 x 4500 mm for the FGD plant of the Buschhaus power station.

Juli 2002

RAUMAG - JANICH Systemtechnik GmbH

Fabrication at the works of RAUMAG – JANICH in compliance with ISO 9001

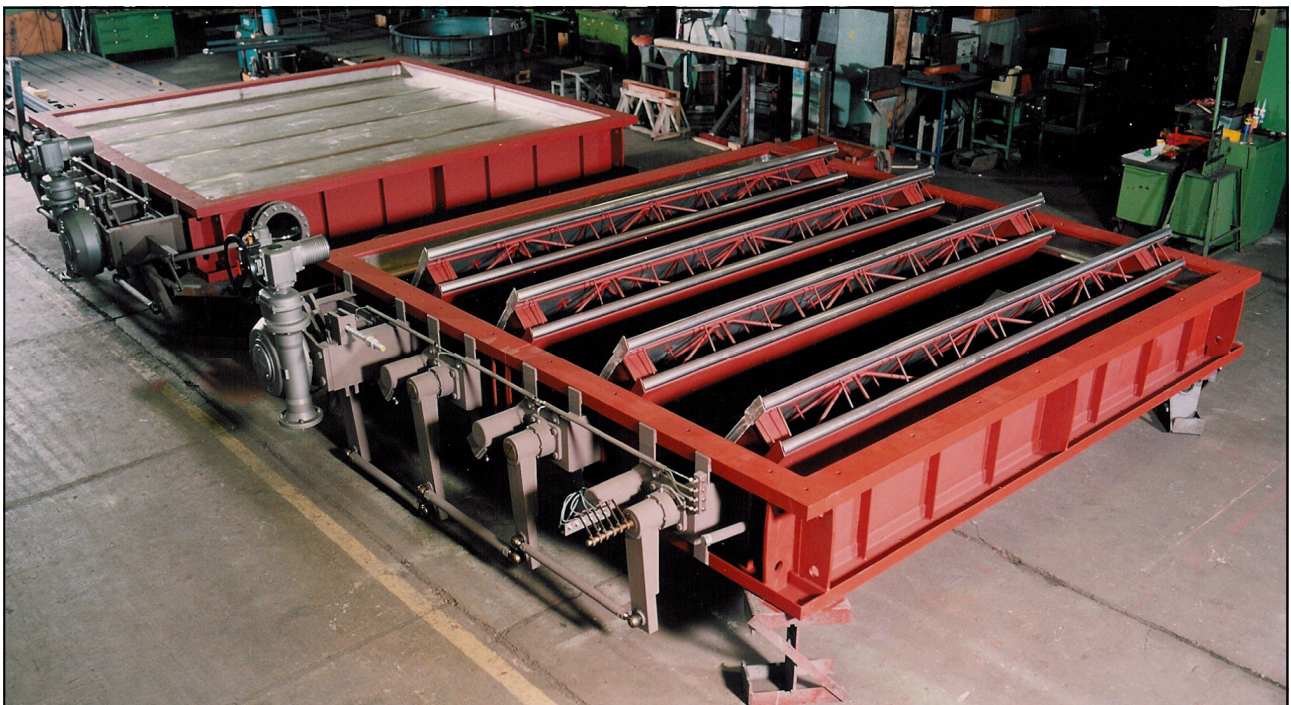
In the course of a refurbishing and modernisation program undertaken at the FGD plant of Buschhaus power station, RAUMAG – JANICH obtained an order for the supply of a tandem damper, ND 4500 x 4500 mm.

This damper was designed with the new, lattice structure supported hollow blade DBP, which permits the flue gas to flow unimpeded through it when in open position, and incorporated also the new, patented NICROFLEX – HIPERFORM sealing system.

The salient feature of this blade design is its very low loss of free damper area and its attending low cross damper pressure drop. Moreover, the lattice support structure features an inherently high stability which need not be further enhanced by the blades covering shrouds. These are therefore of light gauge, with a free floating, cardanic attachment to the support which rules out any possibility of heat distortions. Also, if ever required, the shrouds can be replaced easily without affecting the basic damper structure in any way.

The most salient feature of the NICROFLEX – HIPERFORM sealing system is its high resilience. The power required to close a damper is consequently low and at the same time a high sealing efficiency is accomplished. At the same time, the high resilience provides for a good cleaning effect. Dust deposits and sediment coatings break away automatically upon closing the damper. By means of the internal, vee – shaped lateral stabilizer self induced vibrations emanating from high gas velocities are avoided which in turn prevents any damage to the sealing elements. This is an important consideration if the damper is operated in the modulating mode.

For further information in this context, please refer to our publications **“TECHNOLOGY 4” & “TECHNOLOGY 6”**



The patented, lattice structure reinforced damper blade design.



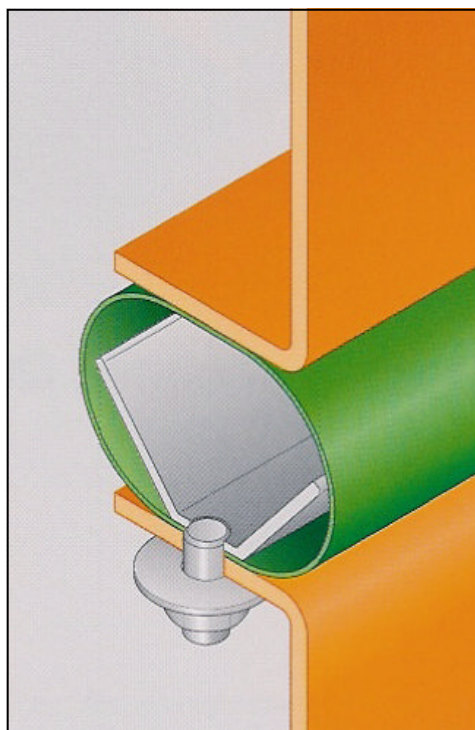
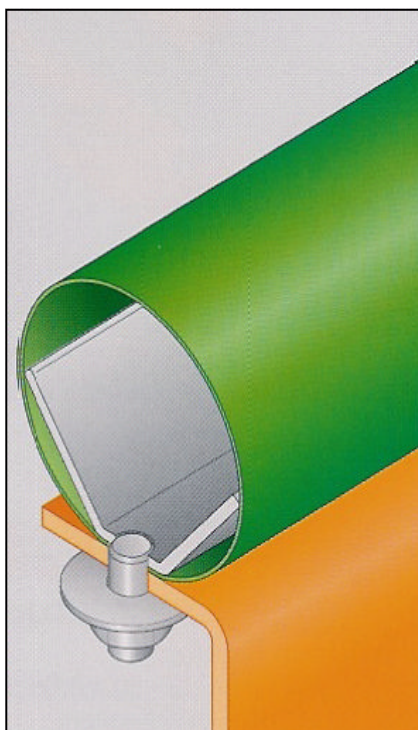
The lattice structure reinforced blade with cardanically attached free floating cover plates remains free of distortions when subjected to high and rapidly changing temperatures. High temperature gas flows continuously through the blade's latticed support structure, all parts of which heat up evenly.

The design of the lattice structure is based upon the "finite element" method.

In this connection, please refer to our publication

" TECHNOLOGY 6 "

The patented, high resilience NICROFLEX – HIPERFORM seal.



The illustrations on the left depict the new sealing system NICROFLEX – HIPERFORM, in open (uncompressed) and closed (compressed) position. In uncompressed condition the vee – shaped internal stabilizer supports the tubular seal on the inside thereby providing the necessary rigidity against vibrations. The seal's high resilience provides also a good cleaning effect. This can still be enhanced if instead of a rigid landing bar (as depicted) a second resilient seal is used, so that two resilient elements make contact with each other.

In this context please refer to our publication

" TECHNOLOGY 4 "

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