

DIVERTER, DBP, for combined cycle plant at LINZ

Oktober 2000

RAUMAG-JANICH Systemtechnik GmbH

RAUMAG – JANICH secured an order from BABCOCK POWER AE – Graz for the supply of a diverter damper, ND 5020 x 4640 mm, for the combined cycle powerstation at LINZ, AUSTRIA.

The patented, new, lattice structure reinforced damper blade was incorporated into the diverter design. This design averts heat distortions and is therefore advantageously used wherever high and rapidly fluctuating gas temperatures have to be dealt with.

The diverter is powered by hydraulic cylinders and its casing is internally insulated.

Fitted to the blade are seals of the MICROFLEX – HIPERFORM, DBP, type so that, with seal air, a 100% gastight shut – off is achieved in both end positions.

The most noteworthy feature of the new sealing system is its high resilience. Furthermore it retains its high stability in uncompressed condition, which facilitates damper operations in the modulating mode without incurring the danger of seal destruction caused by high velocity induced vibrations.

The diverter is positioned behind a 6 FA General Electric gasturbine and serves either to reroute or modulate the turbines exhaust gas volume.

Please refer also to our publications “ **Technology 4 and 6** ”



Technical specification:

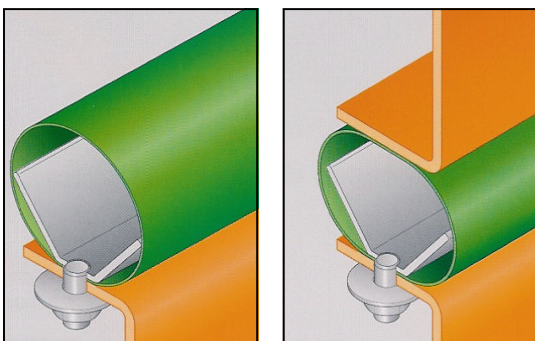
Nominal dimensions:
5020 x 4640 mm

Operating temperature:
580 degrees C

Design temperature:
650 degrees C

Internal insulation:
200 m.

Drive:
hydraulic actuator with
Siemens SP- control



The illustrations on the left depict the patented sealing system **MICROFLEX - HIPERFORM** in uncompressed and compressed condition. In uncompressed condition (damper open) the internal, vee – shaped, lateral stabiliser makes contact with and supports the seals metal loop thus preventing gas flow induced vibrations. In compressed condition (damper closed)the metal loops flatten and bulge outwards, thereby enhancing their ability to withstand high pressure differentials.

Site assembly, erection and positioning of diverter at the combined cycle plant under supervision of RAUMAG – JANICH



Due to its size the diverter had to be split and delivered to site in several sections, which were then reassembled and placed into position by qualified **RAUMAG – JANICH** personnel. The picture shows the diverter with internal insulation and its hydraulic actuator. The damper is operated by two hydraulic cylinders. Their arrangement ensures that drive shaft bending moments are kept relatively low.

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