

CASE HISTORY 30

DIVERTER for an off – shore gasturbine plant in Denmark

March 2002

RAUMAG - JANICH Systemtechnik GmbH

Fabrication at the RAUMAG – JANICH works now certified to ISO 9001



RAUMAG – JANICH obtained an order from **ALSTOM Energy Systems**, UK for the supply of a diverter damper, ND 2100 x 2100 mm, for an off – shore gasturbine plant in Denmark.

The proven, patented, lattice structure reinforced damper blade, which averts distortions in spite of exposure to high, as well as rapidly fluctuating gas temperatures, was incorporated into the diverter's design. This is an important feature whenever temporary gas flow modulating operations have to be considered. The diverter is powered by a hydraulic actuator, suitable also for modulation service and equipped with an emergency operating facility.

Double seals of the patented **NICROFLEX – HIPERFORM** type have been selected for further details of which, please see page overleaf.

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, highly resilient NICROFLEX – HIPERFORM sealing system









The diverter has been equipped with the new, resilient **NICROFLEX – HIPERFORM, DBP**, sealing system.

The pictures on the left provide a view of the diverter blade with the seal fitted. The picture below shows the blade in contact with the double landing bar (seal air duct).

A mechanical end stop prevents a deformation of the seal beyond its limits.

The two illustrations above depict the sealing system in uncompressed condition. The internal, vee – shaped stabilizer prevents vibrations and oscillations due to high gas velocities during modulating operations.

Please refer also to our publication "TECHNOLOGY 4"

RAUMAG-JANICH Systemtechnik GmbH

Im Grund 6 D-96258 Rauenstein

Ennigerloher Straße 16 D-59269 Beckum Telefon: 036766 / 881-0 Fax: 036766 / 81032 E-Mail: info @ raumag-janich. de

http://www. raumag-janich. de

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