ANDRITZ Hydro

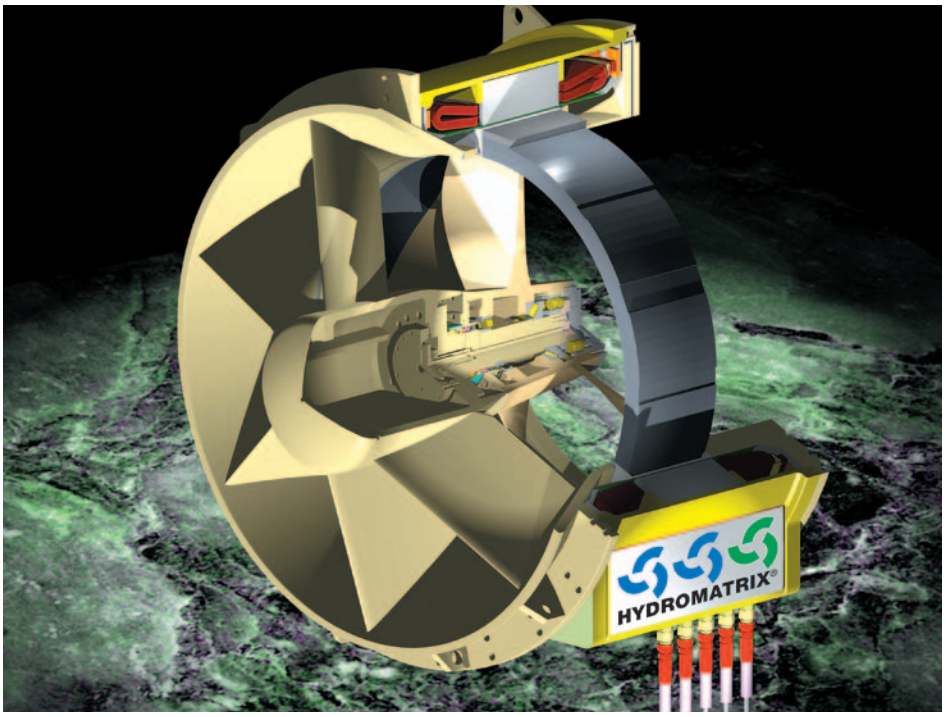
StrafloMatrix™

Agonitz - Austria

www.andritz.com

StrafloMatrix™
Hydropower plant Agonitz - Austria

StrafloMatrix™-Concept
ANDRITZ HYDRO has completed the development process for another important refinement to the HYDROMATRIX® technology– the StrafloMatrix™.



The unique feature of this innovative system is the integrated turbine runner-generator rotor design, where the outer edge of the turbine blade supports the generator rotor while both turn under flow as a single unit. This configuration has significantly reduced physical dimensions in the flow direction and allows applications where space is limited. The StrafloMatrix™ system operates synchronously with the grid system and does not require power factor compensation.

The original HYDROMATRIX® system may still be the best solution for many sites, however, the StrafloMatrix™ design with its compact dimensions will provide new economically and technically feasible development opportunities at many locations worldwide. This innovation of ANDRITZ HYDRO represents the next generation of the HYDROMATRIX® - technology and provides project solutions of simple design and high economic feasibility.

The applications of this unique turbine design are primarily existing weirs or irrigation dams, where the StrafloMatrix™ units are arranged in modules in front of or in the existing openings.

Economically feasible applications at existing dams and weirs, where StrafloMatrix™ units can be applied, should generally feature a minimum flow of about 60 m^3/s and a minimum head of about 3 meters.

The StrafloMatrix™ turbine is almost as economic as the HYDROMATRIX® turbine, but can be built into existing weirs or irrigation dams with limited space, especially if the limitations are in the plane of the turbine centerline. With the low investment costs for such solutions, new and presently unused hydro resources can be efficiently utilized worldwide.

ENERGIE AG Oberösterreich

Usually the implementation period for such a hydropower plant with the StrafloMatrix™ system is less than two years.

The Agonitz hydropower plant near Linz in Austria was equipped with the world's first commercially operating StrafloMatrix™ unit. The new power house and the application of the StrafloMatrix™ unit together with a new vertical Compact-Kaplan-turbine from ANDRITZ HYDRO increased the annual production to 15.8 GWh.

The plant output increased from formerly 990 kW to 3.1 MW.

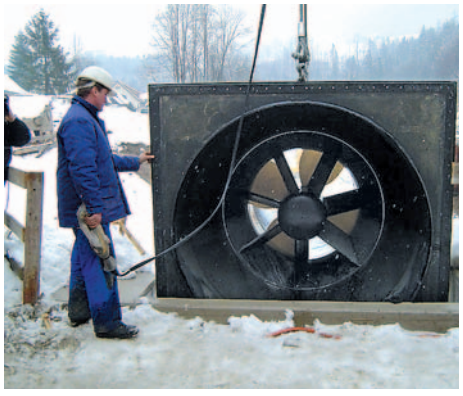
StrafloMatrix™
Further refinement of technology

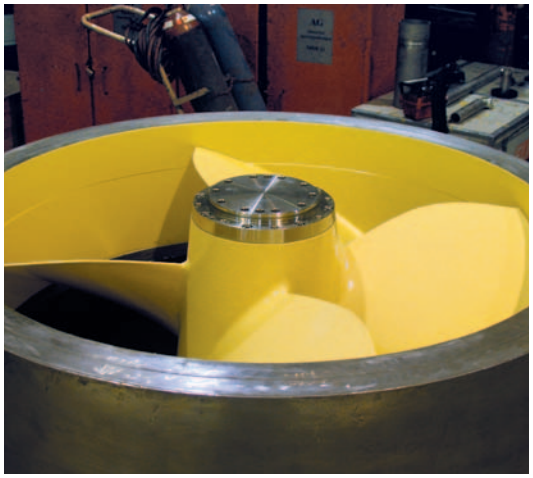
Operation of the StrafloMatrix™ demonstration unit at Agonitz has been started in June 2004. The Austrian utility Energie AG and ANDRITZ HYDRO have joined forces for testing the StrafloMatrix™ unit under real time grid conditions.

Upon request the plant is available for demonstration to potential customers and interested parties from all over the world.

Technical data:

StrafloMatrix™ Output:	700 kW
Voltage:	3.3 V
Head:	8.5 m
Speed:	428.6 rpm
Runner diameter:	1,120 mm
Number of units:	1
Average yearly production (incl. Kaplan turbine):	15,8 GWh





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