

## Application-Report - Turbine Test Rig



### Task:

Every type of turbine has its own special application: depending on the volume flow to be processed, the existing drop height and the rotational speed of the machine, the suitable geometry is determined. This is measured on site on a test rig to be able to ensure the best possible effectiveness for each unit, to know the operating behavior of the machine as well as possible and to defend and expand the technological advance permanently.

To examine the whole operating environment of a Francis turbine, various operating curves are followed and the related measured values are recorded which supply the information for calculating the machines' properties. In addition, visual examination of cavity behavior and whirl phenomenon is carried out which take place through the transparent suction-pipe of the machine.



Image source: Wasserkraftwerk Volk

### Solution:

The [RT STROBE 5000 XENON](#) (A6-5000) offers the perfect solution for this with its high intensity of light. After a test phase on site, we decided to additionally use the [RT STROBE Control](#) (A6-1000) as well as the [Machine sensor](#) (N0001.746) as a trigger solution. The RT STROBE Control unit, which enables a simple control of the stroboscope and the settings of all parameters offers the ideal complement. Hence, all necessary components are provided for the final solution, making the synchronization between drive and stroboscope possible.

### Company:

The company Wasserkraft Volk AG is second to none as a producer of small and medium-sized hydroelectric power plants. More than 120 highly qualified employees and over 2000 shareholders are now participating in the successful further growth of the company. In over 30 years of business, more than 500 small and medium-sized hydroelectric power plants have been built in Europe, South- and Central America, Africa and Asia, which are now generating environmental-friendly energy.



[RT STROBE 5000 XENON](#)



[RT STROBE Control](#)



[Maschinen-Sensor](#)

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