

Kössler Report

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Dear customers,
Valued Business Partners!

Do you remember our last issue of the "Kössler Report"? Nearly a year has passed in the meantime and many interesting things have happened in our company. While we were still extremely busy modernizing our production facility in our last issue, these activities have now been completed and our production halls are as good as new. But not only the optics have changed; in the course of our refurbishment work, we and our employees have launched a program to optimize our work flow and introduced the 5 S approach for more ergonomic, cleaner and more organized workplaces. Kössler is therefore part of the worldwide "Excellence @ Voith" program of Voith Hydro, which meets the quality requirements of our customers more than ever

through optimized processes, structured operations and safety at the workplace.

We celebrated the opening of our new production facilities with our customers as part of a two-day customer event, which was attended by some 80 visitors from all over Europe.

Despite our rebuilding activities, the production of our turbines carried on unrestrictedly. Since September 2009, we delivered 41 new turbines to our customers, as well as 7 runners to the Voith Group.

But we do not only want to be a competent partner to our customers when it comes to new plants, we also want to accompany them

across the entire life cycle of their power stations. For this reason, Kössler, like the entire Voith Group, now has its own AMB division. AMB stands for After Market Business and offers optimum service to our customers for operation, maintenance, spare parts supplies and upgrades including a dedicated hotline.

All this and more can be found in the latest issue of our Kössler Report, and we hope that you enjoy reading our news!

Yours sincerely,
The Kössler management

Josef Lampl Robert Doppler



Customer event "Join Small Hydro Experience" 20. - 21. May 2010

Vomperbach - 6-nozzle pelton turbine, completely without oil hydraulics

Vomperbach is one of several power stations of Stadtwerke Schwaz (Schwaz Municipal Utilities) in Tyrol, Austria. The new 6-nozzle vertical Pelton turbine constitutes another machine set in the existing power station previously fitted with two horizontal Francis turbines from Voith. The compact design of the turbine and its internally controlled nozzles, as well as the optimized power station concept, have made it possible to

minimize the floor area, which offers substantial advantages to the customer, especially as the power plant is situated on a sloping site. A complete novum is, however, that the Pelton turbine operates without any oil hydraulic system, as the nozzles are controlled by drive water. The long-standing experience of the technicians of Stadtwerke Schwaz in the field of hydro power, as well as innovative solutions by the Kössler

engineers, have ensured that not even a drop of oil is required for the operation of the turbine. This, in turn, complies with the high ecological demands of the customer.

Technical data:

1 vertical 6-nozzle Pelton turbine

Head: 235 m

Turbine output: 6,219 kW



Installation of the E&M equipment



View to the 6-nozzle Pelton turbine



Milling of Pelton runner

Bulam - Splitter blade Francis runner for high heads

Bulam power station near the city of Adiyaman in Turkey is one of several power plants operated by AK ENERJI in Istanbul. With a view to the head, which is quite high for Francis turbines, it was decided to select a so-called splitter blade runner. This means that between every full runner blade

another half-size blade is added in the runner channel. On the one hand, this principle offers the customer significantly increased efficiencies compared to conventional systems; on the other hand it makes high demands on the actual production of the runner. Using a 5-axis simultaneous milling ma-

chine, the runner was cut from a forged disc and afterwards welded with the runner hub.

Technical data:

2 horizontal Francis spiral turbines

Head: 172,6 meter

Output per turbine: 4,054 kW



View to the power house



Milled fabrication of Francis runner in so called splitter blade design



One of 2 Francis piralcase turbines

Praterkraftwerk - an invisible power station right in the centre of Munich

Munich is not only the home of the world-famous Hofbräuhaus, but, since recently, also of the Praterkraftwerk. Contrary to the popular beer palace, the Praterkraftwerk is completely invisible after completion, as it is flooded over by the river Isar. The power station itself is fitted with a Kaplan bulb turbine with an integrated variable-speed generator. Access to the power plant occurs via a lateral underground duct. With the Praterkraftwerk, the operating companies

SWM München GmbH and Green City Energy GmbH want to highlight that it is possible to successfully implement a small hydro power station right in the centre of a large city, in order to generate renewable energy.

Technical data:
 1 axial Kaplan bulb turbine
 Head: 10 m
 Turbine output: 2,502 kW



Bulb turbine during worksassembly



Installation of the bulb turbine



Isar cascade



Works inspection

Rendelstein - Small hydro power station embedded in vineyards

Rendelstein power station is surrounded by vineyards and situated almost right in the middle of the town of Bozen in Southern Tyrol. Anybody who has experienced the narrow alleyways and the idyllic location of this Mediterranean town in the mountains can imagine what it means having to manipulate an 18-ton turbine through the ancient streets. Transporting the electro-

mechanical equipment to the power house had to be negotiated almost literally by a hair's breadth. Rendelstein power station is replacing a Francis turbine that had been installed by Kössler 22 years ago, running trouble-free ever since. "The good and long-standing experience, as well as the excellent service have been at the heart of our decision to give the

order to Kössler also for the new machine set," so Dr. Urban von Klebelsberg, one of the two proprietors of the power plant.

Technical data:
 1 Kaplan bulb turbine
 Head: 13,5 m
 Turbine output: 1,653 kW



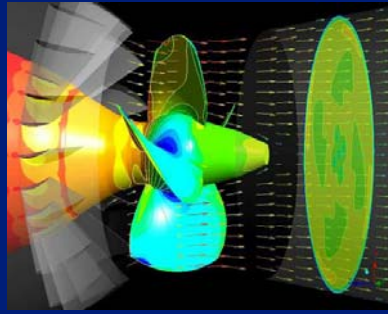
Water intake



Kaplan turbine during works-assembly



Access to the power house

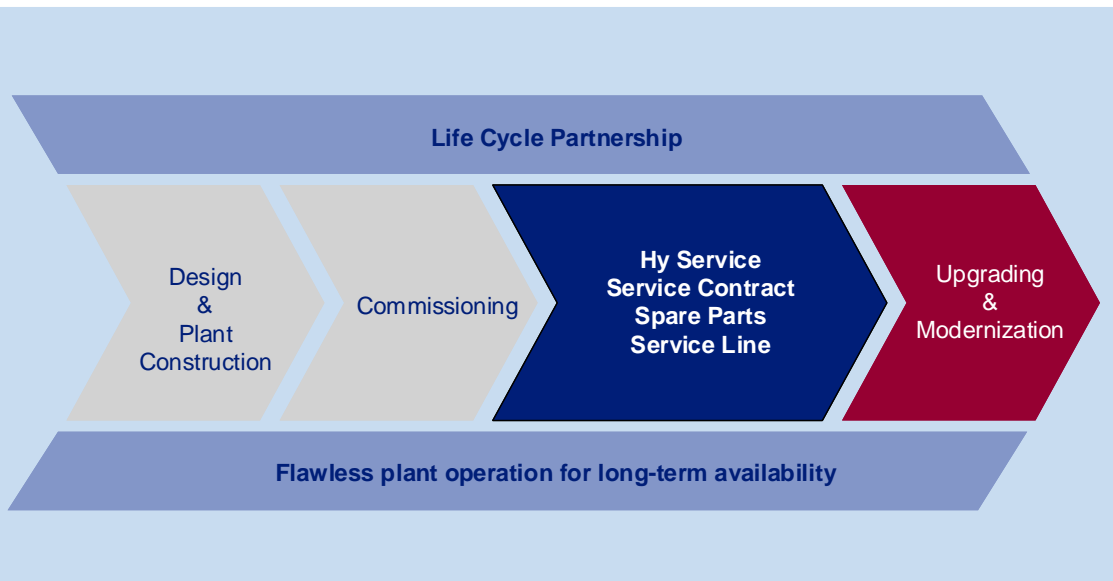


AMB - After Market Business @ Kössler:

To us, service does not end with the handover of a new turbine system. Instead, we want to be a competent partner for the entire life cycle of the power station. Routine service intervals, spare parts supplies based on original drawings, failure elimination or - after decades of operation - upgrades to the

latest turbine technology: our AMB division offers optimum service. We know that high availability is the foundation for secured income from power generation. For this reason we have set up a service line for our customers that can be reached on seven days per week from 7:00 hours in the morning

until 19:00 hours in the evening. Our customers will be advised by expert technicians on mechanical and electrical queries. Should we be unable to sort out the problem by telephone, we will organize a field service engineer to get to you as quickly as possible.



You can reach our service line by ringing the Kössler switchboard under **+43 2742 88 52 72**, adding the extension **777**.

Editorial:

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