40 SMALL & MINI HYDRO NO. 31 / 2017 HYDRONEWS

### SWITZFRI AND

## **INNERTKIRCHEN 3**

### More power for Grimselstrom.

Since the end of 2016 a new hydropower plant has been producing a further 11.5 GWh of electrical energy per year for the Canton of Bern in western Switzerland. Kraftwerke Oberhasli AG (KWO) awarded an order to

ANDRITZ HYDRO for the supply of electro-mechanical equipment for the hydropower plant Innertkirchen 3 in September 2014.

KWO was founded in 1925 in order to exploit the hydraulic potential in the Grimsel/Susten area for the production of electrical energy. With a total of nine power plants, eight storage lakes, and an installed turbine capacity of 1,368 MW, KWO produces about 2,350 GWh of renewable electrical energy annually.

HPP Innertkirchen 3 is operated as a runof-river power station, with only a small pondage, but without reservoir management. The scope of supply comprised installation and commissioning of a vertical, six-jet 3.2 MW Pelton turbine, including governor, a 3.5 MVA generator, cooling water system, and main inlet valve (DN 1000, PN 16).

### **AUTHOR**

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Total output: 3.2 MW Scope: 3.2 MW Voltage: 6.3 kV Head: 131 m Speed: 430 rpm Runner diameter: 1,070 mm



ANGOLA

# LUACHIMO

### New Compact turbines for more power.

In March 2017, ANDRITZ HYDRO was awarded the contract for delivery of the complete turbine equipment for the new Luachimo hydropower plant in Angola. Located on the Luachimo River, near Dundo village in Lunda-North Province, the Luachimo Dam was originally built in the 1950s.

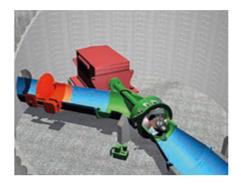
The general works include the construction of a complete new powerhouse with a total capacity of 36 MW next to the old power

station. ANDRITZ HYDRO will deliver four Compact Axial Turbines (CAT) in a horizontal arrangement, each with a runner diameter of 2,850 mm, as well as four hydraulic power units and the sealing and lubricating water supply systems. The electrical governor, the transportation up to the site, and the installation are included within the contractual scope of supply, as is commissioning.

Delivery of the main turbine components is planned for the end of 2018 while commercial operation of the new hydropower plant is scheduled to start in June 2019.

### **AUTHOR**

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### **Technical data:**

 Total output:
 36 MW

 Scope:
 4 × 9 MW

 Voltage:
 10 kV

 Head:
 16.7 m

 Speed:
 230.8 rpm

 Runner diameter:
 2,850 mm