

Media Release

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Capacity building in Africa: Voith provides knowledge in hydropower technology to local people

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- **Development, operation and maintenance trainings for African hydropower plant operators**
- **Largest training in Voith history currently running in South Africa**
- **Further projects in Liberia and Tanzania successfully realized**

Heidenheim, Germany: The development, operation and maintenance of hydropower plants require a great variety of expertise. With the ongoing exploitation of untapped hydropower potential in many developing countries around the world, a greater involvement of new players in the sector and new international standards, knowledge gaps of hydropower plant operators have widened. To bridge these gaps, German technology group Voith has developed a global training program called HydroSchool, which contains also tailor-made solutions for developing countries and its needs. The aim is to educate local staff to obtain a qualification in their field of hydropower expertise. Various trainings across Africa showcase the progress.

Ingula, South Africa

Situated in eastern South Africa, the pumped storage plant at Ingula is the largest of its kind in Africa. After the commissioning in 2016, Voith was awarded by the plant operator South African state energy company Eskom to train local staff to operate and maintain the new plant. Voith started in the middle of 2017 the largest HydroSchool training program for hydropower plant operators in its history. Since then, the company has been training around 70 Eskom employees, from technicians through to managers, to fulfil their individual responsibilities. The project will be finished by the middle of next year.

“At the Ingula training, we have to consider many different target groups with a wide range of training objectives”, says Maren Henkes, Customer

Training Manager at Voith Hydro. "We are happy that we successfully accomplish this challenge within a really short preparation time. Our customer benefits from a customized training concept which fits best to its needs". The comprehensive training program covers almost 20 different courses – starting from a general plant overview to specific system training courses like for example the oil-handling system of the pumped storage plant. More than 15 Voith instructors from Africa, Europe and Asia are involved.

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Ingula is the first new pumped storage project in South Africa for over 25 years. The complete electro-mechanical equipment was supplied by Voith. Now, the four pumped storage units at Ingula help to significantly stabilize the electricity network of South Africa.

Mount Coffee, Liberia

Already in 2016, Voith trained 20 employees from the Liberian electricity provider Liberia Electricity Corporation (LEC) for the Mount Coffee hydropower plant operation, which began feeding power into the grid by early 2017 following an enhancing modernization. Voith helped its customer to acquire the knowledge it needs for a long-term, efficient and safe operation of its plant.

"Voith is supporting the premise that technological construction and training is being done simultaneously in order to support both Africa's economic and social development, in addition to reducing worldwide emissions. Cooperation with the Liberia Electricity Corporation on the Mount Coffee hydropower plant is a great example of this model," says Heike Bergmann, Senior Vice President Sales Africa at Voith Hydro.

Following extensive upgrades, the Mount Coffee hydropower plant went into operation in the beginning of 2017. Voith played a major role in this project, supplying new Francis turbines, generators, the control technology and the electrical and mechanical power plant equipment. It makes a crucial contribution to Liberia's economic transformation and delivering a sustainable progress for the population of the West African country.

Tanzania - German Hydro Development Days

In the East African country Tanzania, Voith took part at the German Hydro Development Days in October 2017. The event provided professional and technical capacities to companies in the Tanzanian hydropower sector and political decision-makers. Voith trained the participants in the planning and

construction of small hydropower plants, taking particular account of the requirements for decentralized power generation in Africa. Topics were for example the selection of the right electro-mechanical equipment and the enabling of low-pitch potentials using compact, robust technologies.

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The German Hydro Development Days took place as part of the Export Initiative Energy of the German Federal Ministry of Economics and Energy (BMWi). Facilitator is the German Association for International Cooperation (GIZ). The goal is to establish and strengthen German-Tanzanian business partnerships.

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Hydropower potential in Africa

The overall hydropower potential in Africa is considerable: On the entire continent the technically feasible development potential of hydropower is estimated at more than 470 GW. However, the current installed capacity in Africa is only around 31 GW, giving Africa the world's highest percentage of hydropower potential that has not yet been harnessed.

The importance of Hydropower

Renewable energy is undoubtedly the most sustainable answer to the rise in energy demand. Hydropower plays a key role in sustainable and environmentally friendly power generation and is the leading renewable source of electricity generation globally. Worldwide it makes an indispensable contribution to a stable power supply and thus to economic and social development – both in industrialized countries and in regions seeing strong growth. Since the early days of hydropower exploitation, Voith has been a leading supplier of this technology and is constantly refining and improving it.

About Voith

For 150 years, Voith's technologies have been inspiring customers, business partners and employees worldwide. Founded in 1867, Voith today has around 19,000 employees, sales of €4.3 billion and locations in more than 60 countries worldwide and is thus one of the largest family-owned companies in Europe. Being a technology leader, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive.



Caption 1: Hands on training at Ingula pumped storage plant in South Africa.



Caption 2: Part of the training for the staff of the Liberia Electricity Corporation (LEC): Gaining an insight into Voith's „Brunnenmühle“, Research and Development Center for generator and turbine technology.

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