



Draft tube installation

LAO PDR – In 2012, ANDRITZ HYDRO received an order from CH. Karnchang (Lao) Company Ltd. for the supply of electro-mechanical equipment for the Xayaburi run-of-river hydropower station on the Mekong River. ANDRITZ HYDRO's scope of supply comprises the delivery of seven 175 MW Kaplan turbines (hydroelectric power production for EGAT, Thailand), and one 60 MW Kaplan turbine (hydroelectric power production for EDL, Lao PDR), as well as generators, governors, automation systems, and auxiliary equipment. With a planned capacity of 1,285 MW, HPP Xayaburi will produce more than 7,000 GWh/year of electricity, equivalent to about more than 3 mio. households.

The Mekong is one of the most biologically diverse rivers in the world. About 60 mio. people along the Mekong make their livelihood from the river and its fish population. Therefore specially designed fish-friendly turbines will be installed at HPP Xayaburi. They are characterized by fewer runner blades, lower rotational speed and a different operating scheme.

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A fish ladder with a specially designed fish lock system is also foreseen in order to allow migration of the fish upstream. One-

tenth of the total construction costs of the entire power plant are invested in this environmental requirement.

In times of increasing demand for ever more exceptional ecological performance, the release of even very small amounts of oil into river courses has to be avoided. With the objective of reducing the quantity of oil used in hydro turbines, ANDRITZ HYDRO

developed oil-free hubs and has applied them in numerous projects over many years. With such a design, the risk of oil leakage into the river water is significantly reduced while the blade seal arrangement prevents water exchange. The oil-free hub design has a major positive impact on the water quality and thus on the environment. For HPP Xayaburi, the use of the oil-free hub concept will save about 14,000 liters of oil per unit.

Navigation lock, spillway, intermediate block, powerhouse and fish ladder



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SITE REPORTS

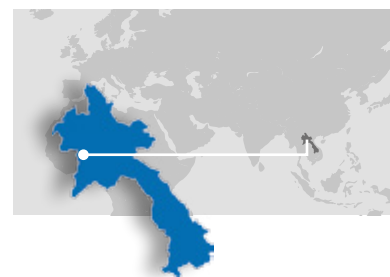
XAYABURI

THREE MILL





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Technical data:

Total output:	1,285 MW
Scope:	7 × 175 MW 1 × 60 MW
Voltage:	16 kV / 13.8 kV
Head:	39 m
Speed:	83.33 rpm / 150 rpm
Runner diameter:	8,600 mm 5,050 mm

Currently, the turbines and generators are in the manufacturing process. The powerhouse overhead cranes (2×380 tons and 2× 80 tons) have already been installed and are in operation. All eight turbine draft tubes have also been installed while the first four main transformers are currently being transported to the site. Start of commercial operation at HPP Xayaburi is scheduled for October 2019.

HPP Xayaburi is an important project on the mighty Mekong River and with its successful execution ANDRITZ HYDRO proves once again its leading position in the Lao hydropower market and the high quality of its state-of-the-art technology. ANDRITZ HYDRO is proud to contribute to the development of the huge hydropower potential of the country.

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UPDATE



Factory Acceptance Test (FAT)

Beginning of June 2017, the first runner at HPP Xayaburi has successfully completed the Factory Acceptance Test (FAT). To date, it is the largest and most powerful oil-free runner ever built.