A SCARCE COMMODI

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At its zenith, the sun is a ball of fire in the sky. Scorching heat hangs over the fields and the horizon shimmers in the distance. A few droplets of water splash onto the parched ground and evaporate immediately. A hand shakes the water hose in desperation, but the trickle of water, which has been getting steadily weaker, has finally dried up. Once again, there is no water. Davinder wipes the sweat from his brow and looks toward the sky in despair. Brilliant sunshine, unbearable heat, and not a single raincloud in sight. His parents named him after the Indian god of rain and storms. A cruel irony, because it won't help him water his crops. Davinder shares his fate with many farmers in India – two thirds of the agricultural land is dependent on the monsoon or regular rainfall, only one third has reliable irrigation to provide water for people, livestock and farming.

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NEW PROJECTS

KALESHWARAM

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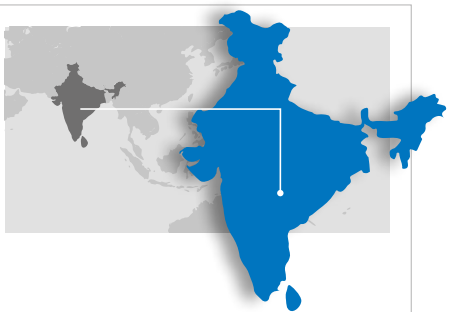

Kaleshwaram | India

Technical data Pump station #1:

11 vertical volute pumps	
Head:	40 m
Flow rate:	60 m^3/s
Efficiency:	up to 90%

Technical data Pump station #2:

8 vertical volute pumps	
Head:	25.9 m
Flow rate:	83 m^3/s
Efficiency:	up to 90%

Technical data Pump station #12:

8 vertical volute pumps	
Head:	107 m
Flow rate:	31.1 m^3/s
Efficiency:	up to 90%

INDIA – Over recent years India, especially Telangana State, has been hit by extremely high temperatures creating problems for irrigation and crops, diminishing economic development and causing human tragedies. In 2016, about 1.4 million farmers left this region.

With a series of irrigation projects in the overarching Jala Yagnam project, the local government has undertaken measures to solve the irrigation problem for about 3.3 million ha of agricultural land. The Kaleshwaram project is one of the largest sub-projects, designed to store about 4.7 trillion liters of water in order to irrigate 740,000 ha. This project comprises a dam and several pumping stations with reservoirs. Water is transported over a height of 500 m and a distance of 200 km. It is the first multi-stage lift irrigation project of this magnitude and complexity in India. It also contains the longest water transport tunnel in Asia, extending over a distance of 81 km connecting the dam to a reservoir. An irrigation project of this kind is unique, not just in India, but worldwide.

"The traditional name Jala Yagnam translates as worship of water or sacred water."

ANDRITZ was awarded the contract with a partner who is supplying the motors. ANDRITZ will manufacture 27 vertical volute pumps for three pumping stations, each with an efficiency of up to 90%. A special feature of these pumps is that they are similar to turbines due to their impressive size, with a Francis impeller of 3.5 m, a total weight of 130 t up to 200 t per pump, and an spiral outlet diameter of 5.5 m, large enough to park a truck comfortably.

Besides the design and delivery of the pumps and spare parts, installation and commissioning will also be supervised by ANDRITZ. Completion of the entire project is scheduled by the gouverment of Telangana for June 2018. Great hopes are being pinned on the success of this important infrastructure project. Harnessing sufficient water reserves for reliable irrigation of agricultural land will improve the lives of the people of India's most populous state.

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