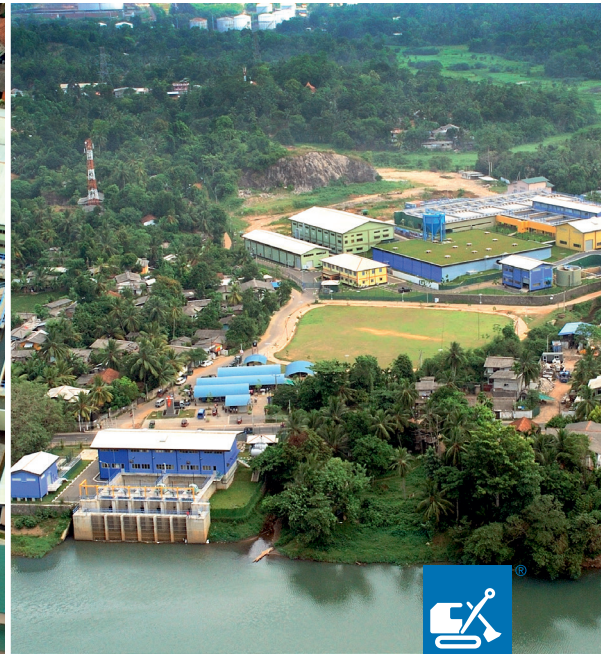


Kelani Right Bank Water Treatment Plant Project

Design and construction of a water treatment plant near Colombo, Sri Lanka



AARSLEFF

Aarsleff has designed and constructed a turnkey water treatment plant for the national water supply and drainage authorities in Colombo, Sri Lanka. The plant has a capacity of 182,000 m³ of potable water per day, and a layout for a future extension to 364,000 m³ of water per day has been prepared.

Raw water intake

We constructed a raw water intake of reinforced concrete with a capacity of 191,000 m³ of raw water per day next to the Kelani River. Our works included all electromechanical installations and SCADA installations. The intake is designed and constructed for a future capacity of 392,000 m³ of raw water per day. Two ductile iron transmission mains, each approx. 350 metres long and with a diameter of 1,200 millimetres, transfer the raw water from the water intake to the treatment plant.

Water treatment plant

We also constructed a water treatment plant with a capacity of 182,000 m³ of potable water per day including all electromechanical equipment and SCADA equipment. The plant was designed for a future extension of 364,000 m³ of water per day. Our different tasks included construction and instal-

lation of mixing chamber, flocculators, clarifiers, filters and sludge treatment plant. Furthermore, we constructed a water reservoir of reinforced concrete with a capacity of 10,000 m³ of treated water and a treated water pumping station with a capacity of 182,000 m³ of water per day and further extendable to 364,000 m³ per day including all electromechanical equipment and SCADA equipment and ductile iron transmission mains.

During the project, we also trained local staff in the operation of the plant.

Housing and salinity barrier

During our project in Colombo, we were also responsible for setting up staff houses, administration building, workshops, laboratory, chemical and chlorine stores etc. In addition, we made road and landscaping works. In order to prevent saline sea water to intrude the water intake, we constructed a salinity barrier across the Kelani River which is 100 metres wide. These works included shore protection, steel sheet piling, steel piles, scour protection, concrete raft passage and gate structure. During the project, we also trained local staff in the operation of the plant.



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Data

- 50,000 m³ of rock formation blasted and removed from the site
- 24,000 m³ of concrete
- 3,000 tons of reinforcement steel
- 4,300 m²/600 tons of steel sheet piling
- 120 tons of steel piles
- 20,000 m³ of backfilling material.

Project name

Kelani Right Bank Water Treatment Plant Project

Client

National Water Supply and Drainage Board

Type of contract

Design and build

Main contractor

Aarsleff-Salcon JV

Construction period

2008-2012

Contract value

EUR 53 million

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