

Fish Friendly Sweet Water Inlet Station Goeree

Application market	Construction
Market segment	Dewatering & Drainage Flood Control
Pumped medium	Sweet water for irrigation
Pump product	Bedford Axial Column
Country	Netherlands



Challenge

The Haringvliet dam regulates the discharge of river water from the Rhine delta into the North Sea and connects at its southern end to the island of Goeree-Overflakkee. The huge dam is part of the famous Delta Plan, which was implemented to protect the Netherlands from flooding after the devastating floods of 1st February 1953. When the lock gates are opened, seawater also flows back into the delta and mixes with the fresh water. Fish also migrate directly into the flooded dike areas. The resulting brackish water cannot be used to irrigate the agricultural areas on the island of Goeree-Overflakkee.

Solution

In order to guarantee the access to fresh water needed for agriculture, a new water intake station was built on the mainland and in the freshwater areas of the delta. Two fish-friendly Bedford Axial Column Pumps, mounted in vertical tube chambers move the collected water to the island of Goeree-Overflakkee. The water is fed in via a one meter large siphon pipe. A canal system distributes the water to the agricultural areas.

Benefits

With optimized impeller geometry, a large free passage of 210 mm and low operating speed, three of the most important criteria for fish-friendly operation are met and a safe passage for the existing living fish is guaranteed. As additional function and further big advantage, the pumps can also be used for flood control in the event of heavy rainfall or upcoming flooding.

Quantity of units sold	2
Pump type	Bedford SAF 70.05.10
Motor data	85 kW / 10 pole / 50 Hz / 400 V
Material combination	Cast iron pump body and wear parts with bronze impeller
Duty point	Flow : 1'250 litres per second / Head : 2.5 meters at 500 rpm
In operation since	March 2018