

Sediment Removal Svihow Reservoir

Application market	Construction
Market segment	Dewatering & Drainage
Pumped medium	River water with sediments
Pump product	Mobile Pump Betsy/SuperBetsy
Country	Czech Republic



Challenge

The Zeliwka river is a feeder of the Sazawa. On its way to the Vltava, it fills a reservoir at the Svihow dam, which is used to supply drinking water to the greater Prague area. In 2018, options for removing sediment from the reservoir were tested. Among other things, the sediments were to be lifted with a suction dredger, conveyed in a 1.7 km long plastic pipeline in two stages, first to a homogenization system and finally to the so-called Geotube dewatering system (see picture below) via a flocculation unit. A simple yet reliable pump solution was required to feed the water with a high concentration of solids, which also had to overcome a height difference of 40 meters. Once the sediment had been separated in the Geotube system, the water was to flow freely back into the reservoir.

Solution

A total of five mobile Hidrostat **SuperBetsy** pump units with integrated Screw Centrifugal Pumps were required for the entire system. Two units with diesel drive, connected in series and installed on a floating pontoon, for pumping the lake water to the homogenization tank. From there, one pump unit each with electric drive to the flocculation unit and finally to the Geotube system. In addition, a mobile pump with electric drive was used to support the process in the homogenization tank.

Benefits

Maximum availability thanks to the robust and clog-free Hidrostat Screw Centrifugal Pump. Low energy consumption combined with maximum pump performance thanks to the high efficiency pump. The great flexibility and small footprint of the mobile pumps allowed a compact installation of the entire system. The system has proven its worth and is now used regularly in other locations too.

Quantity of units sold	5 mobile pumps SuperBetsy, 2 with diesel drive and 3 with electric drive
Pump type	Various
Motor data	n/a
Material combination	Cast iron pump body, Hidrohard wear parts and stainless-steel impeller (Pump)
Duty point	Flow : 50 litres per second / Head : 40 meters
In operation since	from April to June 2018 (rental period)