

Flood Storage Pumps for Canary Wharf

Application market	Construction
Market segment	Dewatering & Drainage
Pumped medium	Flood Water
Pump product	Axial Column
Country	United Kingdom



Challenge

The new Crossrail station at the 500 million Pound Canary Wharf site required pumps for the flood storage facility. The new railway station, which opens in 2019, forms an artificial island in London's West India North Docks. It stands within a 475 meter length concrete box and extends up into five upper levels of mixed-use development known as Crossrail Place. The design of the Flood Storage Reservoir is such that it provides a landscape amenity to the area. This consists of a series of stepped terraced pools lying perpendicular to the dock. The pumping station is located in the lowest of the terraced pools and will empty it back into the dock. In a flood situation, the dock will weir into the Flood Storage Reservoir.

Solution

Hidrostral provided three of their Screw Centrifugal Axial Column Pumps, complete with IP58/IP68 submersible motors for the Flood Storage Reservoir Pumping Station. These compact low flow axial pumps will operate under normal conditions at a duty of 40 litres per second per pump rising to a combined discharge rate of 263 litres per second in a flood situation.

Benefits

Hidrostral pumps were the ideal solution for the project, as in addition to providing flood protection for the station they also complied with additional requirements in passing rags and other fibrous material to at least 100mm ball diameter. Each pump in the Hidrostral range incorporates the patented low shear single vane Screw Centrifugal impeller. The geometry of the impeller provides optimum hydraulic performance and very large open passages, ensuring that its ability to pass rags, fibers and other large objects is second to none.

Quantity of units sold	3
Pump type	E08A-HD1 + ENYT6
Motor data	4.0 kW / 6 pole / 50 Hz / 400 V / IP58/IP68 safe area Submersible
Material combination	Cast iron pump body and wear parts with ductile iron impeller
Duty point	Flow : 40 to 88 litres per second / Head : 2.0 meters per pump
In operation since	2014