

Company

SSE
(Scottish and Southern Energy)

Project

Beannachran Dam, Scotland, UK

Application

Traveling water screen for smolt protection and debris removal

Solution

Hydrolox Series 6000 Flush Grid screen with 4" flights

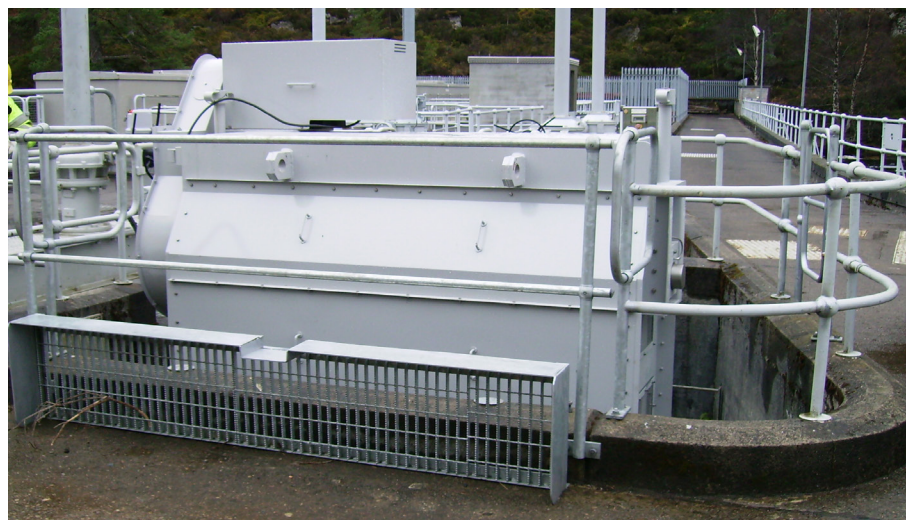
Results

- Eliminated complicated repair and maintenance procedures
- Improved fish protection and exclusion
- Improved cleaning operations
- Reduced approach velocity by one third
- Significant long-term cost savings

“Our steel band screen was expensive to maintain, and it caused a lot of problems. The Hydrolox screen has been a problem-solver. The downtime, expenses, and cleaning difficulties we experienced previously are no longer an issue. I would recommend Hydrolox screen technology to any power generation facility seeking to make their operations easier and more reliable.”

—Stephen Crooks, Project Engineer,
SSE

Hydrolox Screen Technology: Solving Problems for SSE



Background

Headquartered in Perth, Scotland, SSE (Scottish and Southern Energy) is the United Kingdom's leading renewable energy supplier and also a leading supplier of energy to Ireland. Its portfolio of offerings includes electricity through hydropower, thermal, and wind generation.

Challenge

To divert fish and debris at its power generation facility at Beannachran Dam (on the compensation water generation set), SSE had been using a traditional band screen that caused many problems. The screen required frequent repairs and maintenance due to the volatility of the screen panels, motor/gearbox assembly, and drive chain system, as well as the ineffectual screen wash system.

Repair procedures were complicated and often required some combination of cranes, teams of divers, planned outages, coordination of permits, or additional manpower. This caused SSE to incur not only hefty expenses, but also lost revenues, since no power could be generated during the time that these procedures were taking place.

Solution

In December 2012, SSE replaced the band screen with a Hydrolox Series 6000 Flush Grid screen. The screen, which came equipped with 4" flights for debris removal, measured 2.3 m x 10 m (7.5 ft x 32.8 ft) and had mesh openings of 7 mm x 6 mm (0.28 in x 0.24 in). SSE chose the Hydrolox solution because of the benefits—including enhanced fish protection and exclusion, reduced maintenance, and reduced downtime—promised by its design.

Results

The Hydrolox traveling water screen is delivering on its promise. The maintenance, repairs, and ensuing complications that the Beannachran plant previously experienced are now a thing of the past. The screen has maintained fish protection and exclusion, and its small mesh openings have helped reduce the approach velocity of water entering the screen by one third (from 0.3 m/s to 0.2 m/s). The Hydrolox screen's cleaning system has also improved cleaning and debris removal operations by providing more flexibility. Engineers at SSE have identified Hydrolox technology as a potential solution at other project sites.

For more information contact us at: U.S. 1-866-586-2825, Europe +800 3344 5544, or www.hydrolox.com