

Hydrolox™ Screen Achieves Longer Life and Reduced Maintenance in Highly Abrasive Application

–Yakima, Washington

Background

After experiencing a drought year, the United States Bureau of Reclamation (USBR) at the Okanogan Irrigation District sought to install a water screen at Shell Rock station in order to activate the pumping site. The environment at Shell Rock is highly abrasive, due to its location on the outside bend of the Okanogan River. During a drought, the water in the river is sediment-laden and full of debris.

Problem

Initially, a steel mesh screen was installed in the application, but it lasted only one and a half years due to frequent problems:

- Sediment build-up under the screen inhibited sprocket tracking.
- Debris was frequently carried over the screen, entering irrigation water pumps and flowing downstream.
- The screen was driven by two sprockets on the ends and sagged in the center, leading to uneven wear.

Solution

Working with Hydrolox representatives, the USBR built a frame to accommodate the Hydrolox Series 1800 traveling engineered polymer screen—an answer to their steel screen problems:

- The Hydrolox screen features a sprocket-driven positive drive system, which eliminates uneven wear and mistracking.

- The smooth polymer surface of the Hydrolox screen allows debris to be easily washed away. Also, a spray bar was installed on the front side of the new screen to help eliminate debris carryover.
- The Hydrolox screen mesh extends the life of the screen with non-corrosive, abrasion-resistant screen material.
- Elimination of submerged foot sprockets reduces operations and maintenance.

And, the innovative design of Hydrolox engineered polymer screens offers additional advantages:

- Compliance with the National Oceanic & Atmospheric Administration's fish-screening criteria for anadromous species
- Screens last up to four times the life of steel screens

Results

Three years after installation, Hydrolox performed a wear analysis of the screen's modules. The results predicted the screen to last at least another two years in the highly abrasive environment, achieving a service life of 3-5 times longer than the steel screen. Since the initial installation of the Hydrolox screen, the USBR reports a 60%-70% reduction in operations and maintenance. Debris carryover has also been eliminated.

Mark Briggs of the USBR reports that the success of the installation was due in large part to the successful partnership between Hydrolox and



Hydrolox screen as installed at Shell Rock pumping station in the Okanogan Irrigation District.

the USBR: “The support Hydrolox gave was tremendous. That’s what helped it work out as smoothly as it did—Hydrolox helped us make sure the spacing and the back support were the right dimensions.”

And because the Hydrolox screen is supported all the way across the mesh, Briggs says, problems associated with sediment build-up and uneven wear are diminished. “It doesn’t sag like the other screens...and as far as holding up in highly corrosive waters—it definitely shows an improvement.”

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