

Market

Hydroelectric Dam

Challenge

A 24-foot diameter penstock pipe had two joints that were raising concerns of exfiltration. Until this repair, the largest HydraTite seal was used on an 18-foot diameter pipe. There were low spots in the tunnel and sloping sections near the joints that complicated the task.

Engineered Solution

A HydraTech representative went to oversee the installation, to give instruction and guidance as needed to the crew of 5 installers. Rubber filler and cement were used to make a flush surface that would guarantee a water-tight seal. A two-story scaffolding had to be erected properly for installing the massive seal. A rope was used to hoist the top of the EPDM rubber up to the scaffolding. The center retaining band was constructed and the rubber was worked around the band to give the rubber shape. Then the next two bands were used to hold the rubber in place and ensure a water-tight seal. Finally, lap bars were installed over the seal for additional support.

Scope

The job consisted of the installation of 2 HydraTite Seals that were 24 feet in diameter, rubber, cement filler, two-story scaffolding, and lap bars.

Solution

The HydraTite Solution enables a trenchless repair at a fraction of the cost of alternatives. All of this work was completed during a scheduled outage for other repairs, which meant HydraTite's installation cause no additional downtime. The HydraTite seal proved to be an economical in situ repair solution making the operation of the penstock pipe more cost-effective.



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