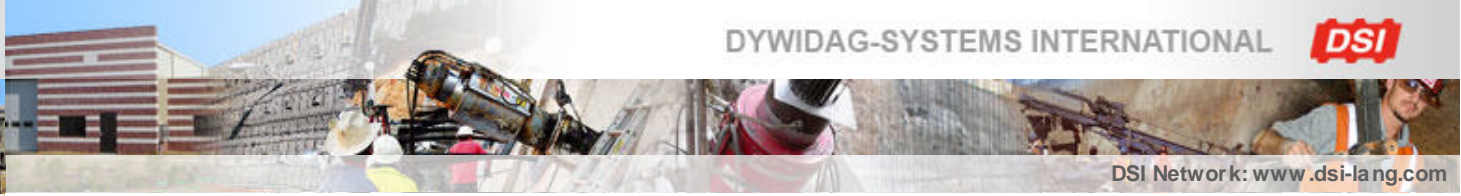




Miscellaneous



Reference Details :

Owner Lower Colorado River Authority (LCRA), Austin, TX, USA +++ **General Contractor** Nicholson Construction, Co., Bridgeville, PA, USA +++ **Consulting Engineers** Freese & Nichols, Austin, TX, USA

DSI Services Supply of DYWIDAG Multistrand Tie-Down Anchors for each dam:
Buchanan Dam: 5 and 22 x 0.6" strand anchors reaching down about 30.5 m; Inks Dam: 24 x 0.6" strand anchors, also about 30.5 m; Technical assistance.



DYWIDAG Strand Anchors tie down dams in Texas, USA

Buchanan Dam and Roy Inks Dam, part of the Highland Lakes Dams, Texas, USA

In the early 1990's the Lower Colorado River Authority (LCRA) and Freese and Nichols, Inc. completed a preliminary study that determined four of the six Highland Lakes Dams needed improvements to meet modern design standards. As a result of that study, the LCRA began a \$50 million, 15-year program to perform detailed investigations, design modernization improvements, and complete construction of improvements for the four dams.

DSI USA was involved in the improvement and modernization of the Buchanan Dam and the Roy Inks Dam both located about 50 miles northwest of Austin, Texas.

Risk analysis indicated for example that the flood wave resulting from a failure of high hazard over 60 years old Inks Dam would endanger human lives and would cause damages in excess of \$16 million dollars.

The Lower Colorado River Authority designed a system of anchors into its rehabilitation project for these dams. They consisted of hundreds of 5, 22 and 24 multistrand anchors using 0.6" strands.

The strands were grouted in corrugated HDPE sheathing, which was in turn grouted into the hole drilled through the dam into bedrock below. The tie-down anchors brought the factors of safety against overturning and sliding up to LCRA and COE (US Corps of Engineers) standards.

As a result of the team effort during design, and the successful partnering during construction, all of the challenges were overcome and the project was completed under budget and ahead of schedule. The stabilization works for Buchanan Dam and Inks Dam were completed in 2001.