

# THORDON SXL APPROVED FOR DEEP WELL PUMPS IN ARIZONA

Ensuring the water supply for residents of the driest desert in North America - the Sonora - isn't a task that Salt River Project (SRP) takes lightly. Through a system of reservoirs, canals, irrigation laterals and more than 250 deep wells, the organization delivers nearly 1.2 billion m<sup>3</sup> (1 million acre-feet) of water to central Arizona; a vast area that includes Phoenix and other surrounding cities, plus a myriad of towns and rural villages.

SRP is actually a combination of two cooperative entities: The Salt River Project Agricultural Improvement and Power District, a political subdivision of the State; and the Salt River Valley Water Users' Association, a private corporation.

"The organization is very careful when it comes to selecting components for its systems," says Mike Helfrich, President of Michael & Associates Inc., Thordon's distributor in Arizona. "Water is a huge issue in this State, and residents take quality, supply and conservation very seriously."

## Oil And Water Don't Mix

Traditionally, SRP uses oil-lubricated metal bearings in their deep well pumping applications. This material works fine, but has some distinct disadvantages. Unlike oil-lubricated metal bearings, Thordon SXL would not fail catastrophically. This is significant", says Helfrich, "because the cost of pulling a pump out of the ground for repairs averages US \$30,000 to \$80,000! Costly maintenance and repairs, particularly unscheduled maintenance, are a big concern".

In addition, there are environmental and esthetic issues. Minute amounts of oil from the pump bearings can potentially make its way into the water supply. The oil used is mineral oil and, therefore,

harmless. However, it could create an unsightly sheen if it were to find its way into the drinking glasses of Arizonians.

Fortunately, there is a solution. "We introduced the folks at SRP on the advantages of water- and product-lubricated Thordon SXL pump bearings in 2001," says Helfrich. "Three years ago they finally decided to put the product to the test."

## Putting Thordon To The Test

The initial project involved replacing the metal bearings in one of the deep well pumps with Thordon SXL in March 2002. SRP worked in tandem with Michael Helfrich's team and the engineers at Thordon on the new design.

Rather than completely re-configuring the well for open spider bearings, the project team converted the enclosed tube, oil drip system, so that the existing column and coupler bearings could be used.

The results in terms of performance? After three years and almost 20,000 hours of operation, the Thordon SXL bearings are still operating within specifications. There have been no problems. And no sign that the bearings need to be replaced.

In terms of water quality and environmental concerns, Thordon SXL uses water exclusively as a lubricant. Oil has been completely taken out of the equation. It's no longer an issue.

Tom Frost, Pump Specialist at SRP, added, "...we are impressed on how well the Thordon bearings have performed. The bearings in the well installed in 2002 have over 20,000 hours of run time and are still operating with no problems."



**Water Lubricated SXL Bearings Installed In SRP Deep Well Pump, Arizona, U.S.A.**

## Other Water Management Authorities

The performance of Thordon SXL in water supply applications has made other jurisdictions take notice.

The City of Scottsdale, for example, has specified Thordon SXL bearings for their re-charge wells and recently ordered 320 bearings. The City of El Paso has also installed Thordon SXL bearings for two water supply pumps for their new reverse osmosis system.

"Many water treatment facilities are switching from flocculating as a means to take contaminants out of the water to reverse osmosis," Helfrich points out. "But the membranes used in this process are very sensitive and cannot tolerate oil. That's what makes Thordon's oil-free bearings so attractive."

Oil and water don't mix. But oil-free Thordon SXL bearings and deep well pumping applications are fast becoming a perfect match. 