

Sand-Tolerant Pump

Extends pump runtime, reduces workover costs, and optimizes production in sandy, rod-pumped wells

Applications

- Sandy, rod-pumped wells

Features and Benefits

- The rod pump moves sand upward through the pump and away from the plunger/barrel interface, which extends run time and reduces the frequency of workovers along with the associated costs, downtime, and production losses.
- The outside of the wiper assembly creates a barrier that keeps sand out of the plunger/barrel interface by continually wiping the inside of the barrel while the pump produces the sandy fluid to the surface.
- The filter coupling enables only clean produced fluid to pass through the equalization ports to the plunger/barrel interface, which provides the necessary lubrication for the pump as the plunger moves up and down.
- The tool replaces current rod pumps without modification or adaptors.
- The filter coupling features an internal screen that moves with the plunger, which enables the filters to be cleaned by the sweeping action of the fluid on the downstroke.

Tool Description

The Weatherford sand-tolerant pump (STP) mitigates damage to the plunger/barrel interface through use of a patented design, including a unique wiper assembly and filter coupling. These features lubricate the plunger/barrel interface and prevent damaging solids from entering this critical area. As STP screens filter damaging solids away from the plunger/barrel interface, the sweeping action of the fluid cleans the filters on each downstroke and keeps sand suspended in the production fluid.

By simply preventing damaging solids from wearing moving parts, the STP can extend equipment life and reduce the frequency of workovers along with the associated costs, downtime, and production losses. Based on an extensive field study, the STP has been shown to increase run life by 450% on average when compared to conventional rod pumps.

The STP is available in most standard API pump sizes and operates in a variety of well conditions with no negative effect on pump performance.

Specifications

API Pump Sizes

Tubing Size (in.)	Pump Type
1-1/4	RH, RW
1-1/2	RH, RW
1-3/4	RH, TH
2	RH, RW
2-1/4	RX, TH
2-3/4	TH



The Weatherford sand-tolerant pump uses a unique wiper assembly and filter coupling to protect the plunger/barrel interface from damaging solids.

