

MEERKAT shaker demonstrates effective solids removal in California

“We have never seen a pile of solids this big in front of the shaker.”

Isaac Martinez, M-I SWACO Site Supervisor

THE PROBLEM

The competitor's shaker operating with OEM screens was unable to keep up with current solids loading. Lack of conveyance and screen blinding resulted in excessive fluid in the bin. Excessive solids bypassing screens are ending up in holding tanks.

THE SITUATION

The competitor shaker's inability to keep up with current production led to the customers to install coarser mesh screens on shaker to keep up with flow rates.

Solids bypassing shaker screen are ending up in holding tanks minimizing tank storage space and are reducing the centrifuge's ability to operate at higher feed rates.

Down time due to costly tank cleaning every three months to remove excessive solids build up from within holding tanks.

THE SOLUTION

The M-I SWACO MEERKAT was introduced in an effort to alleviate current production issues. The ability to adjust the deck angle proved itself on the very first day where extreme solid loading was present. The pretensioned screen design helped in maintaining even fluid distribution across all screens. This resulted in dryer solids falling into the bin. Furthermore, the installation of the Vent Hood helped in minimizing fluid splashing.



The Situation

The current competitor shakers operating with OEM screens were unable to keep up with current production demands. Due to the crown deck design, the shaker's inability to evenly distribute fluid across the screens resulted in excessive fluid loss over the end of the shaker. The inability to 'screen up' resulted in excessive solids bypassing the shaker and making their way into the fluid storage tanks. This resulted in expensive tank cleaning every three months, reduced fluid storage capacities and the inability to process at higher feed rates due to excessive solids loading on the M-I SWACO centrifuge.

The Solution

Upon examination of the process, it was determined that the M-I SWACO MEERKAT* shaker would alleviate the current production issues. The pretensioned screen design, along with the inclined screen decks, allows for optimized fluid handling. The adjustable deck angle enables the shaker to increase fluids handling capacity. And increased solids retention time allows the recovery of cleaner fluids and discard of more solids. In combination with two primary vibrator motors and one secondary vibrator motor on the dual-motion shaker, the MEERKAT shaker produces up to 7 G of vibration in Linear Mode or up to 6 G of vibration in Elliptical Mode. This allows the shaker to handle a

HIGHLIGHTS

- May 2010: M-I SWACO begins fabricating the stand and cuttings slide for the MEERKAT shaker.
- Engineering draws up designs and begins work on the M-I SWACO Vent Hood.
- MEERKAT package is assembled and tested in the Bakersfield, CA shop.
- MEERKAT package is delivered and installed in August 2010.
- A 50% increase in solids recovery is recorded from August to September.

wider spectrum of fluids and solids. The following package was assembled based on production demands, project economics.

MEERKAT Shaker Package:

- MEERKAT Shaker
- Vent Hood
- Shaker Stand with cuttings slide

The Results

Proven field knowledge from M-I SWACO on shakers and screens has proven that screening up and maintaining processing rates are possible. Additionally, operators were able to increase the M-I SWACO 518* centrifuge feed rate without compromising the quality of the processed fluids.



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