

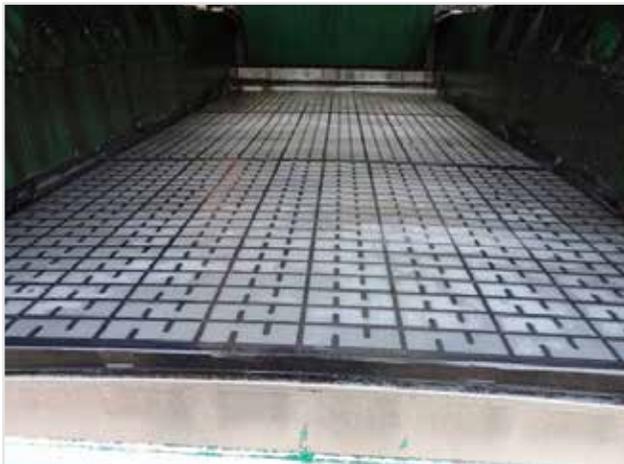
DURAFLO D500-C flat-panel replacement screen reduces screen replacements 60% vs. competitor's OEM screens in Southwest Oklahoma

Well Information

Location Eldorado, OK, USA
 Well type Spud - Production
 Depth 0 ft -9605 ft
 Hole size 8 3/4" Intermediate Section
 Fluid Type Water Based Mud, 8.8 PPG
 Date August 16, 2012 - September 16, 2012

The Situation

A rig in southwest Oklahoma was selected for head-to-head screen performance and efficiency testing of a competitor's corrugated screen versus patented DURAFLO D500-C[†] flat-panel replacement screen. The selected platform was equipped with two Derrick-brand D503[†] rig-owned shale shakers. After visual inspection, M-I SWACO ran a comprehensive motion analysis test on both shakers to evaluate the G-force and motion type using VSAT computer analysis. VSAT analysis showed an in-depth view of shaker performance in regard to accepted standards of operation. Additionally, shaker specifications were benchmarked and normalized for fair, unbiased screen comparison. VSAT analysis confirmed that both shakers were operating according to the manufacturer's specifications.



M-I SWACO DURAFLO D500-C flat-panel replacement screen



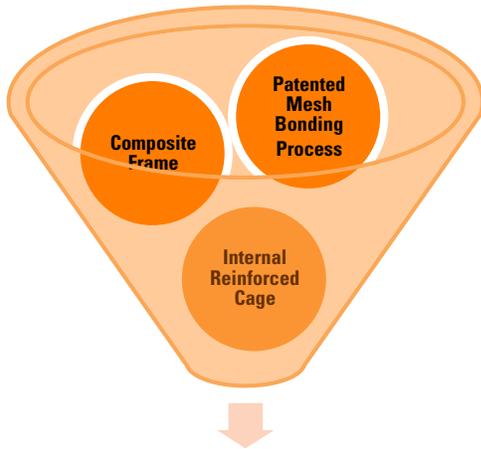
Competitor's Corrugated-Panel OEM Screen

The Solution

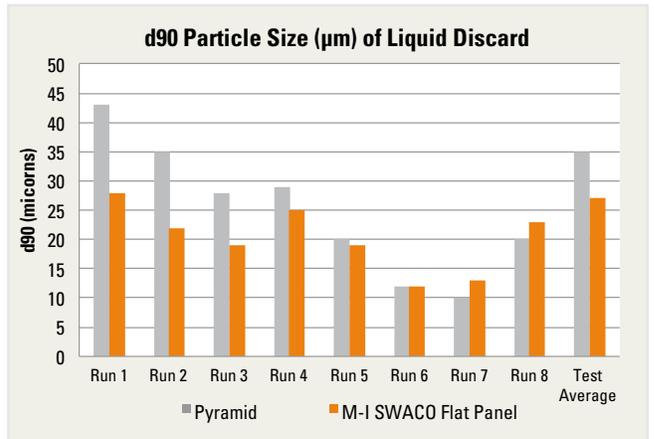
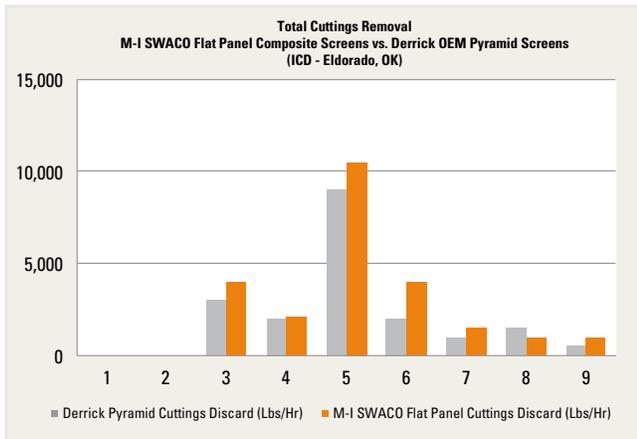
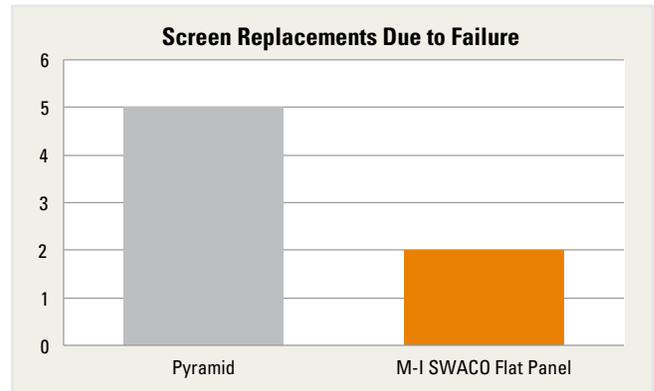
The rig, located in southwest Oklahoma was in spud phase, utilizing an 8.8 PPG WBM. Given the nature of the drilled formation, an API 140 version of the flat-panel screens in XR[†] mesh was recommended. These screens were tested in a side-by-side comparison with the competitor's corrugated-panel OEM screen, also bearing an API 140 designation. Testing proved the DURAFLO D500-C replacement screens provided better separation efficiency and screen life compared to the competitor's corrugated-panel design. Data also showed that the DURAFLO D500-C replacement screens were able to handle flow capacities similar to that of the competitor's OEM with better quality liquid returns.

The Results

The DURAFLO D500-C replacement screens proved to be more efficient in handling the 8¾" section with an average ROP of 66 ft/hr and average flow rate of 392 GPM using a low density 8.8 PPG WBM. While matching flow capacity and cuttings dryness, the DURAFLO D500-C replacement screens exhibited a discard rate of 130% greater than the competitor. Test data also showed that while DURAFLO D500-C replacement screens processed more solid cuttings, and maintained better separation efficiency. The quality of the liquid stream is a key performance indicator in screening efficiency. The DURAFLO D500-C replacement screens were shown to have processed finer solids as indicated by a particle size analysis of the liquid returns stream. The flat-panel design, which eliminates the "horseshoe effect" and solids bypass, allowed for a particle size reduction of 20% in the liquid returns, showing a cleaner mud being returned to the system. DURAFLO D500-C replacement screens discarded an order of magnitude of more lb. of cuttings/hour, as a testament to the durable, composite flat panel design, screen failure replacements were reduced 60%.



Screen Failure Replacements reduced 60% using DURAFLO D500-Composite Flat Panels



Questions? We'll be glad to answer them.

If you'd like to know more about the DURAFLO D500-C replacement screen and how it's performing for our other customers, please call the M-I SWACO office nearest you.

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P.O. Box 42842
Houston, Texas 77242-2842
www.miswaco.slb.com
Email: questions@miswaco.slb.com