

Derrick® V300 PMD® screen outperforms NOV® BRANDT® PXL and M-I SWACO® Duraflo™ XR™ on SE Asia offshore rig evaluation

“Derrick® Pyramid® screens are the most cost effective for drilling high density SBM systems by a large margin...the results of the trial were overwhelmingly in favor of Derrick Pyramid screens.”

–Operator Drilling Fluids Specialist



Technical representatives inspecting Derrick's Pyramid screens.



Operator drilling fluids specialist monitoring field test evaluation.

Objective

Determine which API 200 screen delivered the most cost effective performance for the operator based on screen life. The evaluation was a side-by-side comparison of the three different screen panels. Technical representatives from all three manufacturers were onsite for the evaluation to ensure fairness and accuracy of testing procedures. The test was coordinated and supervised by the senior drilling fluids specialist for the oil company.

Drilling Parameters

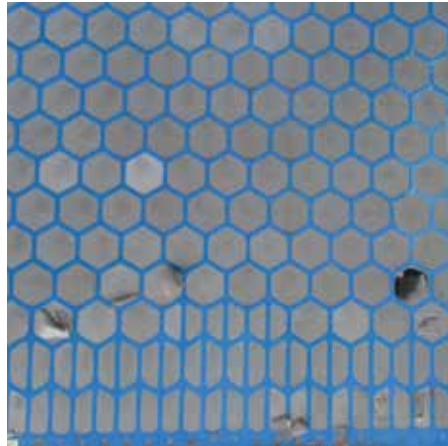
- 12.25" hole diameter with average ROP: 8 m/hr
- 16.7 PPG SBM, with circulating rate: 850-900 GPM

Test Parameters

- The performance of the rig's five BRANDT® VSM 300™ shakers was evaluated and the three best shakers were chosen for the screen test.
- Flow was equalized across the three test shakers.
- All shaker were equipped with API 60 mesh scalping screens.
- The primary deck of each test shaker was outfitted with a set of four new screens from each manufacturer/supplier. Life was evaluated on the two feed screens only.
- The test was repeated three times, rotating new screens to a different shaker for the second and third iteration.
- Life was recorded as percentage of screen area failure.



Derrick V300 PMD®



NOV® BRANDT PXL



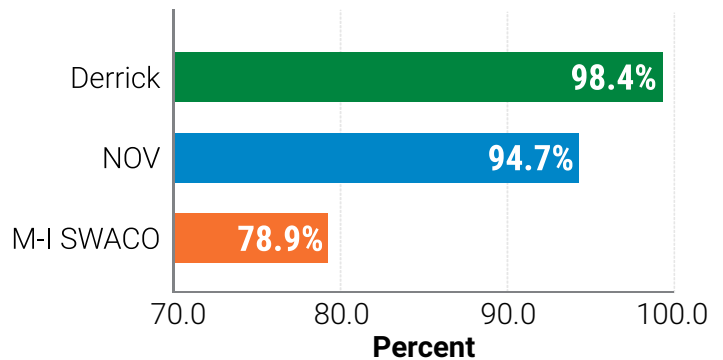
M-I SWACO® Duraflo™ XR™

Results

- Over the three test intervals, the Derrick V300 PMD screens averaged 98.4% undamaged screen area, while the NOV BRANDT PXL screens averaged 94.7% and the M-I SWACO Duraflo XR screens showed 78.9% undamaged screen area.
- The BRANDT PXL screen averaged over three times the wear of the Derrick screen, while the M-I SWACO XR screen averaged over thirteen times more wear than the Derrick screen.
- Operator stated that the competitor’s failure rates were too high and would result in significant amounts of drilled solids entering the active mud system.
- The Derrick PMD screens demonstrated the highest capacity since the flow rate could be accommodated with only three shakers fitted with PMD screens. With the competitor screens, five shakers were needed to handle the flow, therefore increasing the total number of screens in operation and relative costs.
- In this case, due to the extensive screen damage, the plug repair system for the BRANDT PXL and M-I SWACO XR screens did not provide any advantage.

Since the evaluation, the rig has standardized on Derrick PMD screens.

Average Undamaged Screen Area



Conclusion

The Derrick V300 Pyramid screen was the clear winner of the evaluation with the operator realizing reduced costs through greater capacity and longer lasting screens:

- **Increased fluid handling capacity due to patented Pyramid technology.**
 - o Fewer shakers required to process the rig circulating rate reducing screen-up requirements.
 - o Reduced environmental footprint due to Derrick’s ability to process flow with three shakers versus five competitor shakers.
- **Longer screen life.**
 - o Fewer screens required per well.
 - o Reduced dilution costs due to cleaner drilling fluid.

For more information, please contact your local Derrick sales representative.

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