

Fixed Cutter Drill Bits

Oculus™ automated dull grading

Innovative solutions for enhanced drill bit performance

FEATURES

Computer vision and machine learning

- Object identification
- Damage classification
- Damage severity measurements

Advanced analysis techniques

- Big data analytics
- Data stream integration
- Web-based visualization tools

BENEFITS

Cutter development

- Increased velocity of new PDC cutter technology deployment based on faster and more accurate problem identification

Cutter selection

- Optimized selection of existing cutter technologies to address application-specific challenges

Drill bit development

- Improved bit comparison and selection process provides statistical root cause evaluation and opportunities to validate design feature enhancements



Overview

Oculus™ is the first-of-its-kind automated dull grading system that utilizes computer vision and machine learning algorithms to capture precise dull data for every cutter on every Halliburton drill bit.

Accurate dull bit forensics has always been a key tenet to deliver superior drill bit performance. Engineers must fully understand the problem before they can develop the solution. Oculus transforms this critical process from one that is largely subjective into a data-driven approach. It increases the potential number of data points analyzed from single digits to potentially thousands of relevant offsets.

In addition to efficiently capturing dull data for every cutter, the Oculus system also provides modern analysis and visualization tools. Utilizing big data analytics techniques and cloud infrastructure, Halliburton can seamlessly correlate all relevant data streams and integrate them into the DatCI™ design process.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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