SHURE-Shear RTAI

The SHURE-Shear RTAI system encapsulates a blend of cutting-edge, patented technology, real-time monitoring, and smart learning/ AI features to significantly enhance drilling operations' efficiency and sustainability.

High Shear Cavitation

- Enables efficient mixing and blending of complex fluids.
- Improves the emulsification process.
- Reduces fluid viscosity before centrifuge entry.
- Optimizes solids separation.
- Benefits all fluids introduced to the wellbore environment.

Real-Time Monitoring

- Provides real-time data on critical drilling fluid parameters:
  - Low Gravity Solids (LGS)
  - High Gravity Solids (HGS)
  - Oil/Water Ratio (OWR)
  - Chlorides (Cl)
  - Alkalinity
  - Emulsion Stability
- Allows for better operational control and immediate adjustments.
- Systems engineering identifies real-time inter-relatedness between all individual workflows on the rig.

AI-Enhanced Learning

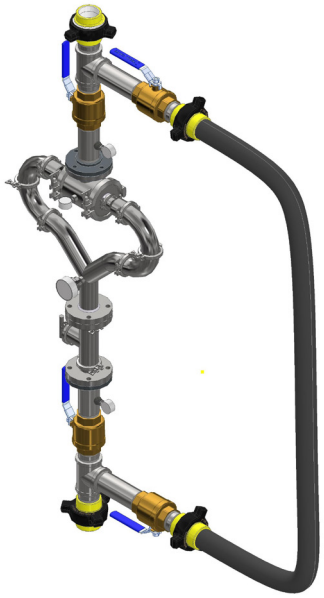
- Incorporates Artificial Intelligence (AI) for continuous improvement.
- System's performance enhances over time.
- Becomes smarter and more efficient in managing and optimizing drilling fluid properties with operation.
- Utilizes machine learning for programmed feedback loops to take action based on data.

Waste and Emission Reduction

- Improves solids removal.
- Minimizes fluid waste.
- Lowers the volume of waste generated.
- Reduces associated Stage 1, 2 & 3 greenhouse gas emissions.

Improved Centrifuge Performance

- High shear cavitation and real-time monitoring lead to a substantial increase in centrifuge efficiency.
- Enables finer cuts and enhances solids removal.
- A standard centrifuge achieves an approximate 10 micron cut point. SHURE-Shear RTAI offers potential to achieve a 5-7 micron cut point.



Cost Efficiency

- Enhanced solids and fluid management results in significant cost savings:
  - Retains more base oil
  - Reduces water waste
- Minimizes the need for costly disposal and replacement of drilling fluids.
- Lowered demand on rig generators and so decreased diesel consumption.

Enhanced Fluid Integrity

- Reduces drilling fluid content of:
  - Ultrafines
  - Colloidal particles
  - Micro-fines
  - Quartz
- Decreases equipment wear and erosion.
- Lessens the abrasiveness of the fluid.
- Extends the life of assets.

Ease of Integration

- Designed for seamless integration into existing operations.
- Enables a smooth transition and immediate realization of benefits.
- Systems Engineering approach facilitates the integration of individual workflows into a holistic deliverable.

By moving away from the traditional dump-and-dilute approach, SHURE-Shear RTAI presents a new pathway towards more sustainable, efficient, and economically sound drilling operations.

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