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PRODUCT DESCRIPTION

Dual Shear Gun

High Pressure Shearing and Mixing unit

To make and obtain a good oil-based drilling fluid, a stable water-in-oil emulsion must be produced. Creation of a stable emulsion require exposure to a sufficiently high mixing energy. This mixing energy is usually provided by pumping through the drill bit or a shear unit. Most of today's shear units to not provide sufficient shear to make this stabile emulsion and circulation through the drill bit i snecessary.

Shearing through the drill bit increases the drilling time of the wells and increase wear on topside and downhole equipment. The most important property used to monitor Oil-based or Synthetic-based Invert-Emulsion Drilling Fluids is the electrical stability (ES). ES measure the needed electric potential to transmit a specified current through the ideally non-conduction fluid. Thus, ES relates to the stability of the emulsion and capabilities to wet additives.

There are many factors that can affect the degree of emulsification, such as suspended solids, viscosity profile, temperature, and pressure. In many cases large volumes of oil-based drilling fluids are mixed without proper and adequate shearing, causing the oil to separate and weight material setling (sagging). High mixing energy is also needed to produce applicable water-based drilling fluids.

High mixing energy reduces appearance of undissolved polymer agglomerations (fisheyes). By removal of fisheyes the waterbased fluids become stable, and all drilling fluid properties can be optimized.

The Jagtech™ Dual Shear Gun is a combined shearing and mixing device for oil, water or synthetic based fluids. The unit will assure maximum Electrical Stability and obtain a stabile emulsion with reduced sagging in addition to jet mixing in the area that the opposite jets from the nozzles are colliding. When the drilling fluid passes through the opposing high-pressure nozzles and collapse in the mixing chamber due to the sudden reduction in pressure, the droplets implode, generating dynamic shear and fine particle dispersion. For water-based drilling fluids the same processes will disperse chemicals and remove fisheyes.

VALUE:

QHSE

- Easy maintenance
- Easy installation
- Low noise and vibration
- Low pressure body and outlet

FUNCTIONALITY

- Customized outlets and inlets
- High pressure shearing
- Injection ports for additives
- Dual inlets / opposite inline jets
- Jet chaos mixing
- Changeable nozzle sizes
- WC lined or ceramic inner liner

EFFICIENCY

- Generating dynamic shear and fine particle dispersion
- High Energy Fluid Shearing and impact jet mixing
- Get homogenized MUD, from different qualities
- Obtain a stabile emulsion with reduced sagging
- Proven to increase ES value between 50 to over 100%
- Improved Rheology
- Shear and Mix at the same time
- More stable mud instantly

D.S.G
DUAL SHEAR GUN

PATENT:
NO 346707

We deliver innovative
and customer specified technologies
for the oil and gas industry.

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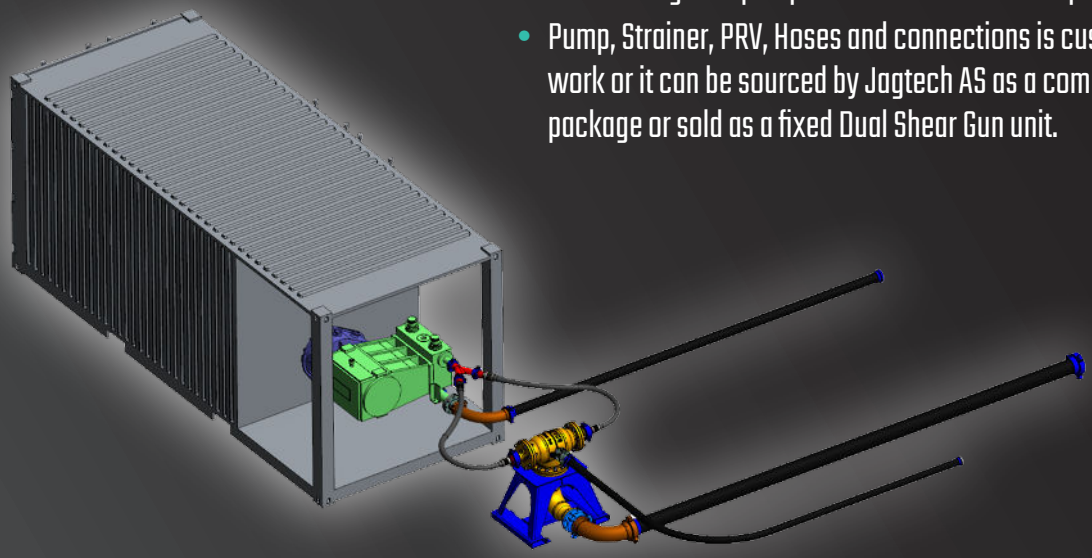
TYPICALLY SET UP:

- Dual Shear Gun is rented or sold as loose item
- Use existing mud pump or source external mud pump unit to operate.
- Pump, Strainer, PRV, Hoses and connections is customer scope of work or it can be sourced by Jagtech AS as a complete rental package or sold as a fixed Dual Shear Gun unit.



PRODUCT SPECIFICATION:

Size (l x h x w)	950 mm x 450 x 410
Weigt (kg)	Appr. 200
Max. Inlet pressure (bar)	750
Max. Flowrate (l/min)	1500
Outlet pressure (bar)	Atm.
Nozzle type	Smith/SLB N50 series
Exchangable nozzle sizes	7/32 in – 16/32 in
Inner liner material	WC clad st. / Ceramic
Material	Steel
Inlet	3 inch Hammer Union 15000 PSI
Outlet	Flanged 8 inch RF, #150 ANSI B16.5
Operating Conditions HP	1000/1500 l/min @ 100/150 bar
Operating Conditions LP	Please contact us for details

WARNINGS AND HAZARDS

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