XtremeStar fracturing fluid systems

Optimize stimulation in ultrahigh-temperature wells

Applications

- Hydraulic fracturing operations in ultrahigh-temperature wells
- Foamed fracturing treatments with CO_2 in low-pressure formations

Features and Benefits

- Rheologically stable for two hours or longer at high temperatures above 350°F
  - Eliminates the wasted water and expense of large-cooldown pads
  - Maintains good proppant transport throughout long stimulation operations in deep, hot wells
- Functions with low to moderate polymer loadings compared with conventional high-temperature fluids
  - Minimizes damage to proppant pack and formation
- Crosslink times are internally delayed and can be extended with a delay additive
  - Minimizes surface horsepower requirements
- Employs temperature-appropriate encapsulated breaker technology
  - Break delay can be custom designed to suit the application
  - Maximizes regained permeability and proppant pack conductivity (typically >70%)

The Baker Hughes **XtremeStar™ fracturing fluid** is a synthetic polymer, proprietary and patented, high-performance crosslinked system for ultrahigh-temperature hydraulic fracturing applications. A low-pH, zirconium-crosslinked copolymer system that utilizes fresh water for a base fluid. Clay control additives can be added to make it compatible with most formations. It can be energized or foamed with carbon dioxide (CO_2), making it particularly applicable in underpressured formations. Because its crosslink times can be adjusted, the system is ideal for fracturing deep formations.

Safety and handling

Before handling, storage, or use, review the Safety Data Sheet (SDS) for guidance.

References

SDS for system components.

Typical properties	
Typical temperature range	350 to +450°F (177 to +232°C)
Typical pH range	4.5 to 6