The FlexSTONE HT system was measured at 200 degC [392 degF] for one year. High-temperature, long-term testing indicates a stable cement system with no degradation of flexibility characteristics over a one-year period.

The FlexSTONE HT system provides superior mechanical properties at temperatures up to 250 degC [482 degF]. Its flexible nature and high stability make it optimal for HPHT environments.
Engineered designs

Many different stressors can negatively affect a cement sheath. It is important to understand them and mitigate their impact. The Young’s modulus, or flexibility, of the set cement is a key parameter used during stress analysis.

CemSTRESS* cement sheath stress analysis software models mechanical performance under changing well conditions, determining the optimal tailored Young’s modulus to suit the formation. With this information, the FlexSTONE HT system can be customized so that the Young’s modulus falls below the predicted level of stress that could induce failure.

Flexibility

The level of flexibility of the FlexSTONE HT system plays a critical role in the degree of expansion that can be obtained. FlexSTONE HT cements can reach linear expansion of up to 2%—an impossible goal with other cement systems. The system also makes use of the CemCRETE optimized particle-packing concept.

*Mark of Schlumberger
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