

Technical Data

The evolution of the Grit Faced Die



Examples of Grit power tong dies, special Grit jaw rollers and Grit elevator/slip dies

Proven in critical North Sea applications, the Grit Faced Die is rapidly becoming the die of choice for running CRA strings around the world. This technology, field proven in power tongs, now provides the industry with handling tool inserts for slips, elevators and safety clamps that are designed to protect CRA tubular strings.

This die technology was recognized at the 1998 Offshore Technology Conference in Houston, Texas where the company that introduced the concept to the industry was presented with a Special Meritorious Award for Engineering Innovation by editors of Petroleum Engineer International.

Running of chrome tubular is faster, safer and less tiring for tong operators when using Grit Dies because the operators do not have to replace disposable sheets of carbide paper/cloth every time a connection is made up - a requirement when using alternative "non-marking" systems.

Grit Dies enhance job safety by reducing operator fatigue and eliminating the need to reach inside the tong and or hydraulic backup to replace the carbide paper/cloth. The die can also reduce overall operating cost by reducing the time required to run casing and tubing strings.

Tests performed by an independent third party testing company have demonstrated that the marks left on tubulars when using Grit Dies are negligible. Lab tests showed the maximum penetration after very high torque applications was 0.004 inches, which is far better than the standard for penetration of chrome alloy set down by API and notably superior to "fine tooth" dies. In addition, the Grit Dies do not leave "in-line" impressions on the pipe, which can reduce mechanical strength and lead to premature corrosion or fatigue failures in tubular goods. The Grit Die print is random due to the nature of the gripping material, which is non-ferrous and chemically harmless to chrome alloy. Close visual examination will show it is difficult to distinguish the impressions left by the Grit Die from the normal pipe mill surface imperfections.

In summary - The Grit Die grips powerfully, leaves a very faint random print, does no damage to CRA, is very durable, is safer and faster to use than alternative non-marking systems and can be used in any pipe handling application suited to the standard die.