



Chemically Cutting Oil Drilling Pipe

Cutting Oil Drilling Pipe with Bromine Trifluoride or Chlorine Trifluoride

ClF_3 and BrF_3 reaction with materials increases with increasing velocity. This efficiently cuts a thick oil well drilling pipe, saving thousands feet of pipe when a drill bit is stuck in rock and cannot be dislodged.



Jan 2015

BrF_3 Pipe Cutter

"chemical cutter" we call it, when the (attached at the well site) solid rocket fuel is activated will rupture the pressure plates and disperse the BrF_3 in a radial pattern at pressures great enough to instantly cut through the steel well liner, or pipe. The largest tool uses just under 1 liter of BrF_3 to do this, but most are under a $\frac{1}{2}$ liter. We send most of our tools, including the cutter, down the well on the end of what we call a "wireline". Basically a steel cable with 7 wires in the middle for power and communication with the tools.

Bromine Fluorides



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This tool will cut through tubing, casing, or drill pipe in a fraction of a second without damaging an adjacent string. The cut is flare-free, burr-free, and undistorted. This allows easy engagement of an overshot without having to dress the fishtop.

Benefits

Corrosive cutter provides an instantaneous cut, free of burrs or flares

Prevents damage to adjacent strings of tubing, casing, or drill pipe



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