

Key Drilling Tensile Shear Sub (KDTSS)

description

For offshore applications of any depth, the KDTSS is used when sticking occurs in the drilling bottom hole assembly. The KDTSS provides a desired tensile weak point in the drilling string and bottom hole assembly for easy abandonment.

run procedure

Install the Drilling Tensile Shear Sub into the pipe string where the desired weak point is wanted. When the pipe becomes stuck below the Drilling Tensile Shear Sub the pipe may be worked to try and free it. If the pipe is unable to be freed, an over pull can be applied to the tensile load of the Tensile Shear Ring, so that the Drilling Tensile Shear Sub will shear in two.

It should be noted that shock loads and jarring impacts will cause the Drilling Tensile Shear Sub to shear in two at a substantially lower load than the rating of the Tensile Shear Ring.

specifications

tool O.D.	6.500"
tool I.D.	2.25"
tool length	83.3"
material	AISI 4140 HT (285-341) bhn
minimum yield point + load to yield	Tensile Shear Ring, PN: 0760-650B-04 , in the tensile part groove at +/- 4% of tensile load rating. Maximum Tensile Shear Ring load rating is determined by the Yield of the 45 degree load face where the Tensile Shear Ring Transfers its load to the Torque Cylinder, where the Torque Cylinder's 45 degree load face will Yield at 441,000 lbs
load rating of various tensile shear rings	The Tensile Shear Rings should part in a range of +/- 4% of the Stated Shear Load. Note that differential pressure from the inside to the outside of the tool will vary the Stated Shear Load Range. The 9.59" sq/in piston area of the seal area will cause the shear ring to shear at 9,593 lbs lower than rated with a 1,000 psi higher internal pressure verses outside pressure. Also the scenario would be reversed for a 1,000 psi higher external pressure verses internal pressure
burst point + burst pressure	Bottom Sub, PN: 0760-650B-03, in o-ring groove inside stub acme pin connection at 22,890 psi
torsion weak point + load to yield	Clutch Sleeve, PN: 0760-650B-02, Stub Acme Box Connection at 39,608 ft/lbs
recommended make up torque	1 7/16-20 UNF x 3/4" Steel Allen Set Screw at 428 in/lbs

Unless otherwise stated, all the strength figures shown are the results of calculations based on the yield strength of the material used to manufacture this tool. The strength calculations are considered accurate within plus or minus 20% of the stated value, and should be used as a guideline only. They do not constitute a guarantee, actual or implied. When using the tool an appropriate allowance should be made as a safety factor. Impact loading will substantially reduce the above figures, so appropriate allowances should be made.

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