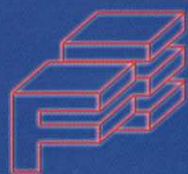


非旋转低扭减阻保护器 使用说明

Non-Rotating Low Torque and Drag Reducing Protector

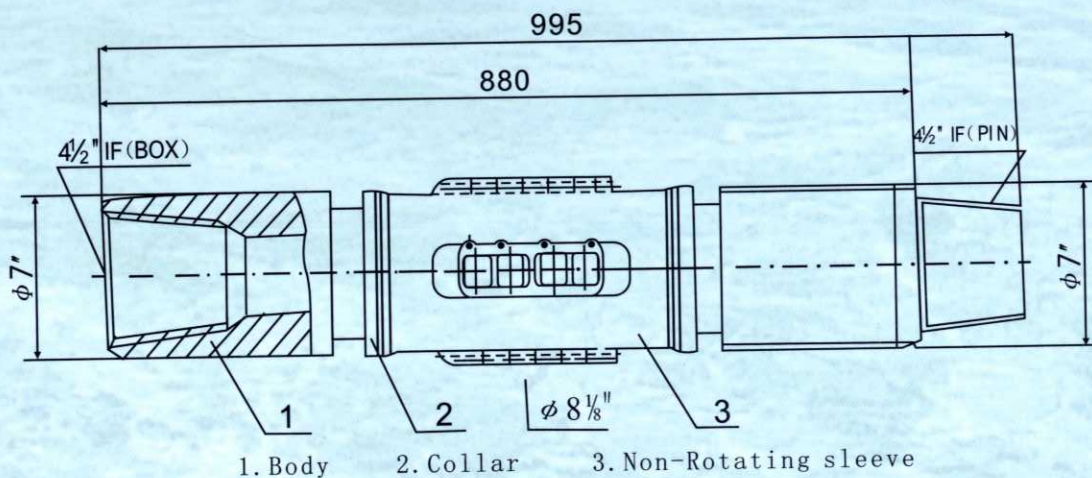


深圳远东石油工具有限公司
SHENZHEN FAR EAST OIL TOOLS LTD.

Non-Rotating Low Torque and Drag Reducing Protector

FE-818 pattern

The 8-1/8" Non-Rotating Low Torque and Drag Reducing Protector is manufactured by our company that combine with the structural feature of the same kind of imported products of the recent years.and through several experiment and improvement.Its structure figure showing below:



The body of rotating axle is one meter long heavy wall short drill pipe with 4-1/2" IF pin × box connections;the other part is non-rotary collar & sleeve .Its rotating axle is made of imported premium alloyed steel 4145H,nominal safe tensile load up to 320T.Sleeve and Roller are made of stainless steel,which has rust-less and stronger feature to ensure the tool either use in the casing or in the open hole interval.When drilling,the tool is recommended in certain interval to use to be connected between each drill pipe.

The tool is used easily between the drill pipes,in recent years the tool is quite often used as regular tools in the horizontal well,high-angle and extended reach well as well as lateral drilling.It shows from studies abroad ,the tool can reduce the frictional drag over 25% .Thus,it can protect casing,reduce drilling-string torsion and improve the speed of operation .

During the drifting and casing lining operation,roller and rolling orientation action make the running of drill string smoothly, safely and efficiently. The product has been used on the spot by WenChang team of Nanhai West.The users were very satisfied by its efficiency.

We will continue to improve our product and to supply our best service for all oil operators.

Specification: dimensions as above figure:

Total length	995mm	ID	$\Phi 2 \frac{7}{8}''$
Max OD of the tool:	$\Phi 8 \frac{1}{8}''$	Tensile load	320 Ton
Joint type	4-1/2"IF(box) 4-1/2"IF (pin)	Total weight	125kg

Material & mechanical performance:

1. Body	Made of imported premium alloyed steel 4145H	2. sleeve	Adoption of Japanese premium quality alloyed stainless steel SUS304
Chemical composition	C:0.42~0.49 Si:0.15~0.35	Chemical composition	C≤0.08; Si≤1.00; Mn≤2.00; P≤0.045;
	Mn:0.65~1.10 P≤0.035 S≤0.040		S≤0.030; Cr:18.0~20.00; Ni:8.00~10.50
	Cr:0.75~1.2 Mo:0.15~0.25 Cu≤0.35		
Mechanical performance	Tensile strength: ≥930Mpa	Mechanical performance	Tensile strength: ≥520Mpa
	Yield strength: ≥689Mpa Elongation rate(%)13		Yield strength: ≥205Mpa
	Charpy impact function (j): 54 MINI		Elongation percentage (%) ≥ 40
	Brinell hardness: HB 285~341		Brinell hardness: HB187

3.Collar: fiberglass enhancement flame retardant nylon66 imported from Germany, with features of preventive burning, oil resistance, wear-proof, good ductility and can be normally operated under 200°C.

4.Roller and its axle: Adoption of imported stainless steel 316 made in Japan. It has the feature of high tenacity, corrosion resisting and crack protection. 2 ends of Roller are designed as step shape, and assembled within the stainless steel sleeve; rolling axle adopted double spring pins to ensure its structure safety and the roller and rolling axle won't come off from steel sleeve at any condition.

NOTES:

The tool should be inspected entirely before using to ensure that each of spring pin, screw and axle pin, etc, not loose. After using, pay attention to check its wear. If too much wear on the roller and nylon sleeve, an immediate repair or redress should be taken before reuse.

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