

连续油管作业设备

COILED TUBING UNITS

5/8" 连续油管作业设备 COILED TUBING UNIT

5/8" 连续油管作业设备是我公司为拓宽连续油管作业服务项目，提高国内连续油管技术而引进国外技术开发的一种作业设备。主要用于利用连续油管进行油套管开窗、深穿透及微井眼钻井等作业。本设备主要由高压泵橇总成、液压系统总成、操作系统总成、滚筒总成、注入头总成、防喷器、数据采集系统及一体式操作房总成等组成。

5/8in Coiled tubing (CT) unit is a type of oil well service unit introduced from abroad and then further developed to broaden CT downhole service scope and improve domestic CT technology. It is mainly used for services such as tubing and casing sidetrack, deep penetration and slim hole drilling. 5/8in CT unit is mainly composed of a skid mounted HP pump set, hydraulic system, operating system, a tubing reel, an injector, a BOP stack, data acquisition system and an integral cabin.

主要技术参数

Specifications for CT Unit

项 目 Item	参 数 Specification
最大容管量 (5/8" CT) Max.Tubing Capacity	3000m
高压泵机组 HP Pump Set	总长Length: < 5000mm; 总高 Height: < 1800mm; 总宽 Width: < 2000mm; 整体重量Total Weight: < 5000kg; 最大理论流量 Max. Theoretic Displacement: 120L/min; 最大工作压力Max. Working Pressure : 15000PSI; 柱塞Plunger: 硬质合金carbide; 轴承Bearing: 日本Japan NSK; 高压密封HP Seal: 进口Import; 柱塞直径Plunger Dia.: 32mm
发动机功率 Engine Power	50kw
注入头拉力Injector Pull	2.5t
设计温度 Ambient Temperature	-10℃~50℃

液压系统总成、操作系统总成、滚筒总成和数据采集系统均集成在一体式操作房内，作为橇装设备，集成度高，减少了运输设备。高压泵橇是地面供压设备，采用柴油发动机，通过传动轴带动柱塞直径为32mm的高压三缸卧式柱塞的连接方式，为井下作业提供高压大流量液体，设备最大理论流量120L/min，最大工作压力15000PSI，关键部件均采用进口件，设备可靠性高。液压系统用于控制滚筒旋转、排管器排管、注入头提升下注连续油管、注入头夹持连续油管及防喷器动作。液压关键部件采用进口产品。滚筒总成采用高度集成式设计，旋转驱动部件采用进口件，保证了良好的使用性能，滚筒提升能力可达2.5吨。注入头总成设计为带液压离合器连接式，能方便地实现自由下注和强制提升或下注，满足使用工艺的要求。35MPa的液控四闸板防喷器，能完全满足目前国内市场上井况的使用要求。最终方案需经甲方确定。

The hydraulic system, operating system, tubing reel and data acquisition system are integrated in one integral cabin. The skid mounted cabin spares the use of additional transport vehicles. Skid mounted HP pump set gets power from a diesel engine to move transmission shaft, which then drives HP horizontal triplex plungers of OD 32 mm to provide large displacement of high pressure fluid for downhole operation. Imported parts are adopted for key pump parts to secure high pump reliability. The hydraulic system serves to control rotation of tubing reel, CT winding by levelwind, CT POOH or RIH by injector, grip of injector on CT and open or close of BOP stack. The tubing reel adopts highly integrated design with rotating drive parts imported to ensure good performance. The lifting capacity of the tubing reel is up to 2.5 tons. Injector is designed with hydraulic clutches to realize easy operation of free RIH or forced RIH and POOH in case of need. Hydraulic Quad BOP of 35 MPa can surely