Installation UPB-60A

Installation UPB-60A designed for round-trip operations and rotary table transmission in the process of production maintenance and well-workover of gas and oil wells as well as for drilling.

Installation designated for operation in moderate and cold (zone I2) climatic zones in compliance with State Standard 16350-80 of Russia, placement category – first, in accordance with State Standard 15150-69 of Russia.

Installation can be based on following models of chassis:

- KrAZ – 65053 (wheel arrangement 6x4)
- KrAZ – 63221 (wheel arrangement 6x6)
- MAN – 26.363 (wheel arrangement 6x4 or 6x6)
- MZKT – 80077 (wheel arrangement 6x6)
- BAZ – 695071 (wheel arrangement 8x8)
- BAZ – 690902 (wheel arrangement 8x8)

and other, by agreement with customer.

Design philosophy supporting safe and reliable operation on the drill site:

- loading winch fitted with diaphragm pneumatic friction clutch and doesn't need a complementary compressor;
- hydraulic and pneumatic systems assembled from hardware components of leading European suppliers, and have hier service life and more stable behavior;
- installation fitted with electronic clinometer for putting chassis in horizontal position and wind gauge with light and audible indication;
- composition of installation includes an overload limiter (electronic dynamometer) with function of warning about peak load reaching and emergency shutdown of drawworks compound transmission;
- racking platform doesn't need dismantling for transportation when rig is in transport position;
- drilling line drum fabricated with LEBUS grooves for even reeling;
- rigging with emergency drive is possible.

The whole set of installation capabilities provides complete concordance with specifications of Safety Regulations for oil and gas industry PB 08-624-03, 05.06.2003.

Under the agreement with a customer hoisting plant can be equipped with gearing for spinning-up/uncoupling of lifting and drilling pipes, sucker rods and boring execution (swivels, drilling rotors, kelly bars, elevators, elevator links, manual and mechanical spinning wrenches, hydraulic wrenches, spiders, pumping installations, mud cleaning facilities and so on.

Specifications

Characteristic	Unit	Hoisting unit UPB–60A	Hoisting unit UPB–60A 60/80
Load capacity - rated - maximum momentary load	kN (ton-force)	600 (60)	600 (60) 800 (80)
Depth of well remedial work (lifting pipes 14 kg/m)	M	3000	4000
Conditional drilling depth (drilling string 24 kg/m)	M	1500	2000
Maximum rate of development	km/h	50	50
Lump in transport position (chassis KRAZ) Mass distribution of hoisting plant in transport position - fore axle - back axle	Kg	28000 7100 20900	29000 7100 21900

Characteristic	Unit	Hoisting unit UPB–60A	Hoisting unit UPB–60A 60/80
Unit ground pressure	MPa	74	76
Overall dimension in transport position (on KRAZ chassis)	M	12,8x2,8x4,2	
Winch	Single-drum geared drawworks with oil-filled transmission drive, with lifting height limiter of travelling block, band brake and pneumatic single-disk friction clutch		
Drum tructive effort	kN (ton-force)	128 (13)	167 (17)
Hook speed in the round-trip process - for round-trip operations - for momentary load	M/sec	0,15..1,28 0,13	
Mast	Double-sectional, telescopic with open face and with remote raising arrangement system		
Mast height up to crown block	M	22,5 (24,0)	
Length of lifting stand	M	12/13/11	
Pitch of mast	degrees	5	
Block-and-tackle system	With gearing for binding and bypassing of immobile end of drill line		
Reeving of traveling block system		2x3	
Line diameter, State Standard 16853-88 of Russia	mm	25	
Crown block	Fourfold straddling block		
Hook block	Triplex uniaxial		
Maximum safe load	kN (ton-force)	800 (80)	
Racking platform Capacity of pipe setback ø89, L=12	pieces/M	280/3360	
Operated and fitting hydraulic system	Pump model – axial-piston 310.3.112		
Quantity	Pieces	2	
Maximum pressure in hydro clearer and auxiliary winch line	MPa(kgs/cm2)	11,8 (120)	
Maximum pressure in the line of drilling power tong (rotor) driver	Mpa(kgs/cm2)	19,6 (200)	

Characteristic	Unit	Hoisting unit URB–40
Maximum feeding	м3/sec (litre/min)	0,38 (380)
Pipeline	Supply by chassis pipeline	
Rated pressure	MPa(kgs/cm2)	1,18 (12)
Working lighting	dust-ignition-proof construction (220 V)	
Emergency lighting	dust-ignition-proof construction (24 V)	
Inclinometer (Device for putting unit in horizontal position)	Electronic	
Anemometer (Device for wind speed control)	Electronic	
Weight indicator with sensor	Electronic	
Accessory		
Operating platform (not load bearing)	Light, telescopic with variable height of installation. Equipped with ladders, railings and shelter	
Height of installation from ground level (adjustable)	mm	1000÷2500
Dimensions in operating position (length x width)	mm	from 2000 x 2500 to 3000 x 4000
Wellhead platform Distance from ground level to rotary base beams	M	1,5 ÷ 3,0
Static load	kN (ton-force)	785 (80)
Dimensions	M	4,0 × 3,0
Receiving gangway	Sled (sled-wheeled)	
Work load on two racks	ton	60