







Proud Provider Of Full-Line Petroleum Equipment



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DISTRIBUTED POWER HYDRAULIC TRANSMISSION FRACTURING TRUCK



MAIN PERFORMANCE PARAMETERS

Product type	Model-2300	Model-2500 (5-shot)	Model-2500 (4-shot)
Max working pressure (MPa)	105-4"	124-4"	124-4"
Max output flowrate (L/min)	2718-4"	2718-4"	2718-4"
Max output horsepower (kw/hp)	1713 \ 2300	1905 \ 2555	1905 \ 2555
Overall dimension (length*width*height) (mm)	11438×2500×3800	12330×2500×3850	12330×2500×3850
Total weight (t)	40	45	43
High-pressure manifold (MPa)	105	140/105	140/105
Bench engine power hp (kw)	4×600 (5×447) @2100	5×600 (4×447) @2100	4×768 (4×565) @1900
HP manifold system (MPa)	105	105 or 140	105 or 140

PRESSURE AND DISPLACEMENT PARAMETERS

Stroke		Sany distributed fracturir splacement L.mi	ng truck		Model-2500 Sany distributed power hydraulic transmission fracturing truck Displacement L.min-1/ pressure MPa					
number	3.75" Plunger	4" Plunger	4.5" Plunger	5" Plunger	3.75" Plunger	4" Plunger	4.5" Plunger	5" Plunger		
3	22/120	25/105	31/85	39/67	22/140	25/124	31/96	39/78		
65	471/120	535/105	678/85	837/67	471/140	535/124	678/96	837 /78		
85	615/120	700/105	886/85	1094/67	615/140	700/124	886/96	1094/78		
105	760/120	865/105	1095/85	1351/67	760/140	865/124	1095/96	1351/78		
125	905/114	1030/100	1303/79	1609/64	905/126	1030/111	1303/88	1609 /71		
160	1158/89	1318/78	1668/62	2059/50	1158/99	1318/87	1668/69	2059/56		
195	1412/73	1606/64	2033/51	2510/41	1412/81	1606/71	2033/56	2510/46		
240	1737/59	1977/52	2502/41	3089/33	1737/66	1977/58	2502/46	3089/37		
300	2172/47	2471/42	3127/33	3861/27	2172/53	2471/46	3127/37	3861/30		
330	2389/43	2718/38	3440/30	4247/24	2389/48	2718/42	3440/33	4247/27		

FIVE MAJOR TECHNOLOGICAL BREAKTHROUGHS BRING NINE CORE STRENGTHS

- Single power source replaced by multi-power source;
- Mechanical drive replaced by hydraulic drive;
- Horizontal handing replaced by longitudinal handing;
- Universal chassis replaced by Sany oilfield chassis:
- Limited gear control replaced by stepless speed regulation control.

SAFER

◆Increasing primary hydraulic protection on the traditional mechanical and electrical protection measures, safer and more reliable

SMARTER

◆ Stepless speed regulation control, online monitoring and automatic maintenance tips etc. to effectively reduce the personnel's working intensity

GREENER

◆ Noise reduction by 11%, vibration reduction by 50%, improving environmental friendliness

BETTER MOBILITY

◆Height reduction by 300mm, Sany 8x8 or 8x6 chassis, climbing gradient 54.3%, improving mobility

FASTER DELIVERY

◆ Short procurement period of the components such as engine, chassis, etc. to shorten the manufacturing period and realize faster delivery to the customer

LOW SERVIVE COST

◆Using the general engines and hydraulic components on the market, canceling the transmission, remarkably reducing maintenance threshold, saving maintenance cost, and shortening maintenance period

BETTER SECURITY

 Mutual backup of multiple engines. If a single engine fails, the output power of other engines can be increased to ensure continuous operation.

HIGHER EFFICIENCY

◆Taking 4" plunger as an example, maximum displacement 2718L/min, and displacement regulation range 25~2718L/min, which are increased by 10% and 32% respectively in comparison with the traditional fracturing truck, thus increasing the operation scope

HIGHER QUALITY

- ◆Change of transverse layout of the main pump into longitudinal layout to reduce 93% transverse torsional vibration (the main source of whole truck vibration:
- ◆Distributed layout of engine to reduce the concentrated load on aylas and girders:
- ◆The fracturing truck's special chassis self-manufactured by Sany, without better degree of fitting between main and auxiliary girders
- ♦ Jointly increasing the whole truck's service life by over 9%



HYDRAULIC TRANSMISSION 1800 FRACTURING SKID





MAIN PERFORMANCE PARAMETERS

Item	Value
Max working pressure Mpa (psi)	105 (15000)
Max output flowrate L/min (GPM)	4" -1631 (430)
Max output horsepower (kw\hp)	1043 \1400
Overall dimension of power skid (length*width*height) (mm)	4750×2438×2595
Overall dimension of pump skid (length*width*height) (mm)	3032×2438×2395
Equipment weight (kg)	12500+8500
Installed capacity hp(kw)	1800 (1341)
HP manifold system (MPa)	105

PRESSURE AND DISPLACEMENT PARAMETERS

		Displacem	nent L/min		Pressure MPa				
Stroke number	3.75"	4"	4.5"	5"	0.75" Di	4"	4.5"	5"	
	Plunger	Plunger	Plunger	Plunger	3.75" Plunger	Plunger	Plunger	Plunger	
3	13	15	19	23	117	105	82	66	
67	291	331	419	517	117	105	82	66	
84	365	415	525	649	117	105	82	66	
105	456	519	657	811	117	105	82	66	
124	539	613	776	958	116	102	81	65	
156	678	771	976	1205	95	81	64	52	
194	843	959	1213	1498	74	65	52	42	
239	1038	1181	1495	1846	60	53	42	34	
300	1303	1483	1876	2317	48	42	33	27	
330	1433	1631	2064	2548	44	38	30	25	

2000 HHP FRACTURING TRUCK Model-2000/2300/2500



Model	Model-2000	Model-2300	Model-2500
	3.5" - 140 (20000)	3.5" - 140 (20000)	3.75" - 140 (20000)
Max working pressure Mpa (psi)	4" - 105 (15000)	4" - 105 (15000)	4" - 124 (17714)
	3.5" - 1886(498)	3.5" - 1 886 (498)	3.75" - 2172 (459)
Max output flowrate L/min(GPM)	4"- 2463(651)	4" - 2463 (651)	4" - 2471 (653)
Max output horsepower (kw\hp)	1490 (2000)	1700 (2300)	1860(2500)
Overall dimension of the whole truck (length*width*height) (mm)	11022×2499×3905	11120×2500×4000	12100×2500×4000
Total weight (kg)	36600	38000	44000
Engine power hp(kW)	2250 (1680) / 1900rpm	2500 (1864) @1900rpm	3000 (2235) / 1900rpm
HP manifold system (MPa)	105 or 140	105 or 140	105 or 140

POWER AND DISPLACEMENT PARAMETER OF MODEL-2000 FRACTURING TRUCK

POWER AND DISPLACEMENT PARAMETER OF MODEL-2300 FRACTURING TRUCK

	tra D	S	D	Displacen	nent L/mi	in		Pressu	re MPa			tra	S	[Displacen	nent L/mi	n		Pressu	re MPa	a
Gear	Drive ratio of the transmission case	Stroke number 1/min	3.5" Plunger	4" Plunger	5" Plunger	6" Plunger	3.5" Plunger	4" Plunger	5" Plunger	6" Plunger	Gear	Drive ratio of the transmission case	Stroke number 1/min	3.5" Plunger	4" Plunger	5" Plunger	6" Plunger	3.5" Plunger	4" Plunger	5" Plunger	6" Plunger
1	3.75	80	503	657	1026	1478	140	105	68	47	1	6.25	48	302	394	616	887	140	105	67	47
2	2.69	111	701	916	1431	2061	128	98	62	43	2	4.59	65	411	537	838	1207	140	105	67	47
3	2.2	136	857	1120	1750	2519	104	80	51	35	3	3.38	88	558	729	1139	1640	140	105	67	47
4	1.77	169	1066	1392	2175	3132	84	64	41	29	4	2.48	121	760	993	1552	2235	136	104	66	46
5	1.58	189	1194	1559	2436	3508	75	57	37	25	5	1.83	163	1031	1346	2103	3029	100	77	49	34
6	1.27	235	1485	1940	3031	4364	60	46	29	20	6	1.36	220	1387	1811	2830	4075	74	57	36	25
7	1	299	1886	2463	3849	5543	47	36	23	16	7	1	299	1886	2463	3849	5543	55	42	27	19

POWER AND DISPLACEMENT PARAMETER OF MODEL-2500 HHP FRACTURING TRUCK

	Drive ratio of			Disp	olacement L	/min			Р	ressure MP	'a	
Gear	the transmission case	Stroke number 1/min	3.75" Plunger	4" Plunger	4.5" Plunger	5" Plunger	6.75" Plunger	3.75" Plunger	4" Plunger	4.5" Plunger	5" Plunger	6.75" Plunger
1	4.47	67	486	553	700	864	1574	140	124	96	78	43
2	3.57	84	608	692	876	1082	1971	140	124	96	78	43
3	2.85	105	762	867	1097	1355	2469	140	124	96	78	43
4	2.41	124	901	1025	1298	1602	2919	124	109	86	70	38
5	1.92	156	1131	1287	1629	2011	3665	99	87	69	56	31
6	1.54	195	1410	1605	2031	2507	4569	79	70	55	45	24
7	1.25	240	1738	1977	2502	3089	5629	64	57	45	36	20
8	1	300	2172	2471	3457	3861	7037	51	45	32	29	16



TWIN ENGINE&PUMP BLENDER TRUCK



MAIN PERFORMANCE PARAMETERS

ltem	Value
Installed power (HP)	700
Max clean water displacement /(m3/min)	16
Max working pressure (MPa)	0.5
Max sand conveying capacity (m3/h)	360
Mixing sand tank volume (m3)	1.5
Dry additive system displacement (L/min)	10, 50
Liquid additive system displacement (L/min)	15, 68, 170, 480
Total weight (t)	31
Overall dimension (length*width*height) mm	12800×2500×4100

PRODUCT CONFIGURATION

No.	Component name	Recommended	Optional
1	Chassis	SANY 8x8	MAN 8x8/BENZ 8x8
2	Engine	CUMMINS/MTU	-
3	Transfer case	STIEBLE	TWIN DISC
4	Suction water pump	BOSHAN	MISSION
5	Discharge pump	MISSION	-
6	Liquid additive system	CAT/ROPER	-
7	Butterfly valve	FMC	SPM

150 BBL BLENDER TRUCK



MAIN PERFORMANCE PARAMETERS

Item	Value
Product model	SYHSC16
Installed power (HP)	960
Max clean water displacement /(m³/min)	24
Max working pressure (MPa)	0.7
Max sand conveying capacity (m³/h)	360
Liquid sand liquid density (kg/m³)	2400
Mixing sand tank volume (m3)	1.5
Dry additive system displacement (L/min)	10,50
Liquid additive system displacement (L/min)	15,68,170,480
Chassis	41.440 8×6
Total weight (t)	31

PRODUCT CONFIGURATION

Standard configuration	Optional configuration
·	·
Chassis MAN	SANY, BENZ
Engine SANY, CUMMINS	MTU, CAT
Mixing system	Acid-resistant mixing system
Double-suction and double-discharge manifold system	Acid-resistant double-suction and double-discharge manifold system
Software calculation density	General measurement with non-radioactive densimeter
Liquid additive system number (4)	Customized number of liquid additive systems
Dry additive system number (2)	Dry additive system number



1000K LIQUID NITROGEN PUMP TRUCK



MAIN PERFORMANCE PARAMETERS

Value
105(15000)
2"-467(123.4)
19501 (689198)
11600×2500×3880
31000
782 (1050) @2100rpm
105

PRODUCT CONFIGURATION

	FRODUCT CONFIGURATION					
No.	Component name	Recommended configuration	Optional high configuration			
1	Chassis	BENZ、SANY	MAN			
2	Engine	MTU/DDC / CUMMINS	CAT			
3	Transfer case	TWIN DISC	STIEBEL			
4	Liquid nitrogen plunger pump	ACD				
5	Evaporator	SANY	CRYOQUIP			
6	Hydraulic system	REXROTH	DANFOSS			
7	Low temperature, high pressure manifold	SANY				
8	Liquid nitrogen tank	SANY				

PRESSURE AND DISPLACEMENT PARAMETERS

	2" col	d end	2.52" c	old end	2.7" cc	old end	2.875" (cold end	3.25	cold end
Large pump rpm	Flow rate L/min	Pressure/ MPa	Flow rate L/min	Pressure / MPa						
100	49.2	103.4	78.1	80.0	89.7	68.9	101.7	62.0	130.0	48.2
200	98.5	103.4	156.3	80.0	179.4	68.9	203.5	62.0	260.0	48.2
300	147.7	103.4	234.4	80.0	269.2	68.9	305.2	62.0	390.0	48.2
400	196.9	103.4	312.5	80.0	358.9	68.9	406.9	62.0	520.0	48.2
500	246.1	103.4	390.7	80.0	448.6	68.9	508.6	62	650.0	48.2
600	295.4	103.4	468.8	68.5	538.3	59.3	610.4	52.1	780.0	40.3
700	344.6	94.2	547.0	58.7	628.0	50.9	712.1	44.6	910.0	34.5
800	393.8	82.5	625.1	51.3	717.8	52.6	813.8	52.6	1040.0	52.6
900	443.1	73.3	703.2	45.6	807.5	39.6	915.5	34.7	1170.0	26.8
950	467.7	69.4	742.3	43.2	852.3	37.5	966.4	32.9	1235.0	25.4

INSTRUMENT TRUCK WITH SANY 6×4 CHASSIS



Model	Major configurations				
Wodel	Name		Features		
	Chassis	SYM1255T1D 6×4	Sany chassis, imported large power engine, more smooth driving		
	Chamber	XYQ5160	Aluminum frame structure, side-set engine, large internal use space		
SYN5160XYQ	Control system	SYYQ14Q	Control system self-developed by Sany, compatible with different brands of fracturing equipment		
01140100X1Q	Generator	Kubota J116	Generator brand applied most widely in the petroleum system		
	UPS	SY-UPS3_V1.0	UPS's continuous working time over12 hours		
	Hardware System	Advantech computer system	19" ultra-large touch screen, high-configuration truck-mounted industrial computer		



MANIFOLD TRUCK



MAIN PERFORMANCE PARAMETERS OF 105MPA MANIFOLD TRUCK

Fracturing manifold truck			
Max working pressure MPa(psi)	105(15000)	Max lifting moment (kN·m)	300
High pressure central manifold specification (")	3"	Max flow rate of hydraulic system (L/min)	95
High pressure branch pipe specification (")	3"	Rated pressure of hydraulic system (Mpa)	28
Fracturing truck number (piece)	8 - 12	Max lifting amplitude (mm)	9000
Max lifting mass (t)	12	Gross mass (t)	31
Overall dimension (length*width*height) (mm)		11900×2500×3700	

MAIN PERFORMANCE PARAMETERS OF TRUCK CRANE

Truck crane		Sany Palfinger SPS30000	
Max lifting load/ amplitude (Kg/m)	12000/2.5	Rear outrigger span optional (m)	4.8
Max lifting moment (T·m)	30	Max lifting height (m)	17.1
Boom form	Hydraulic drive, synchronously telescopic	Max working amplitude (m)	15
Boom section number	4	Rated pressure of hydraulic system (Mpa)	28
Whole-travel stretching time of boom (s)	27/23.3	Oil tank volume (L)	180
Amplitude variation range (°)	0-75	Dead weight (Kg)	4500
Front outrigger span (m)	5.6	Installation space (mm)	1350
Rotating angle (°)		360° full rotation	

CEMENTING TRUCK



MAIN PERFORMANCE PARAMETERS OF CEMENTING TRUCK

Sany GJ600 dual-engine dual-pump				
Max working pressure (MPa)	97.5 (3" plunger)	Water tank capacity (m3)	2×2	
Max working displacement (L/min)	4200 (4.5" plunger)	Mud tank capacity (m3)	2	
Overall dimension (mm)	11000×2500×3900	Cement slurry density (g/cm3)	$1\sim 2.5$	
Gross mass (kg)	33756	Chassis	MAN 41440(8×6)	
Installed capacity (kW)	447×2+327	Large pump	Sany 600 long pump	

MAIN PERFORMANCE PARAMETERS OF LARGE PUMP OF CEMENTING TRUCK

Stro	ke number	50	120	200	300	450	50	120	200	300	450
Plunger diameter	Displacement per revolution L/min		Displac	ement GMI	P L/min			Pre	ssure psi M	1pa	
3"	2.085	28	66	110	165	248	14141	14098	8456	5642	3756
76.2	2.005	104	250	417	625	938	97.5	97.2	58.3	38.9	25.9
3.5"	2.838	37	90	150	225	337	10399	10341	6208	4148	2756
88.9	2.030	142	341	568	851	1277	71.7	71.3	42.8	28.6	19
4"	3.707	49	118	196	294	441	7962	7919	4757	3176	2118
101.6	3.707	185	445	741	1112	1668	54.9	54.6	32.8	21.9	14.6
4.5"	4.691	62	149	248	372	558	6295	6266	3756	2509	1668
114.3	4.691	235	563	938	1407	2111	43.4	43.2	25.9	17.3	11.5



HIGH ALTITUDE AUTOMATED PIPE-RACKING **SYSTEM**

- 1) Unattended operation on racking platform
- 2) Servo control, preset route, one-key operation;
- 3) Multi-dimensional real time monitoring, precise operation control;
- 4) Multi-mutual locking, safe and reliable
- 5) Fault self-diagnosis and analysis
- 6) Convenient transportation of workover manipulator, auto-folding of boom without dismantling

MAIN PERFORMANCE PARAMETERS

Model Technical parameters	SPX073C	SPX073D	SPX178	SPX178B	SPX178C	SPX254
Applicable machine model	Model-650 workover rig	Model-550 workover rig	Model-30 drilling rig (telescopic derrick)	Model-30 skid- mounted drilling rig	Model-50 skid- mounted drilling rig	Model-70 skid- mounted drilling rig
Applicable pipe diameter	2 3/8"、2 7/8"、 3 1/2"	2 3/8"、2 7/8"、 3 1/2"	5" drill pipe 7" drill collar	5" drill pipe 7" drill collar	5" drill pipe 7" drill collar	5 1/2" drill pipe 7"~ 10" drill collar
Applicable stand form	Two-section stand	Two-section stand	Two-section stand	Three-section stand	Three-section stand	Three-section stand
Rotating angle	±90°	±90°	±90°	±90°	±90°	±90°
Moving velocity (m/s)	0.2	0.2	0.2	0.2	0.2	0.2
Position accuracy (mm)	±3	±3	±5	±5	±5	±5
Action period (s)	< 80	< 80	≤ 100	≤ 100	≤ 100	≤ 100
Weight (kg)	1750	1750	2900	3640	5360	5660
Overall dimension (length*width*height) (mm)	4350×2860 ×1890	4350×2860 ×1890	5120×3100 ×2355	5500×3000 ×2200	7100×3000 ×2200	7200×3100 ×2355
Remark	Telescopic monkey walk	Fixed monkey walk				

· There may be discrepancies between the actual product and the picture, and the product parameters can be customized and designed as required by the customer.

DRILLING(WORKOVER) POWER ELEVATOR

- 1) Full hydraulic drive, automatic control of door opening and closing, and turnover action
- · Extensive adaptability, adaptive to different diameters of drill pipe, tubing and drill collar by
- 3) Good safety, multiple protections such as mechanical self-lock, hydraulic self-lock, and combined electrical and hydraulic self-lock to ensure operation safety

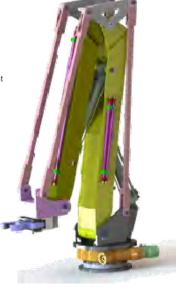


Model Technical parameters	SCD100	YCKF7-18-150
Rated load (st)	100	150
Rated operating pressure (MPa)	14	14
Turnover form	Single-side turnover	Single-side turnover
Turnover angle (°)	0 - 90	0 - 90
Applicable drill pipe specification (in)	2 -7/8" drill pipe (The liner body can be replaced as needed to be adaptive to different drill pipe and tubing.)	5" drill pipe (The liner body can be replaced as needed to be adaptive to different drill pipe and tubing.)
Weight (kg)	150	280
Operating temperature (°C)	-30 \sim +50	-30 ∼ + 50



LOW ALTITUDE AUTOMATED PIPE-RACKING

- 1) Preset intelligent route, one-key remote operation;
- 2) Intelligent positioning, precise and reliable enclosed loop control system;
- · Large scope of application of pipe diameter, 4-20" tubular
- · Patented technology of automatic translocation with manipulator, high pipe holding efficiency;
- · Artificial recovery without need for dismantling, convenient movement and installation;
- · Special technology, compact structure and good rigidity.

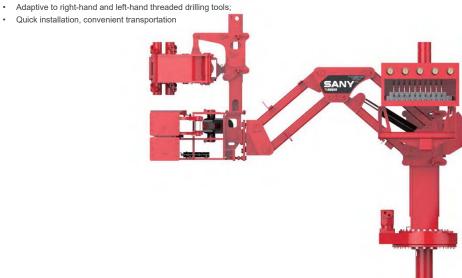


MAIN PERFORMANCE PARAMETERS

Model Technical parameters	Drilling ZTJXS 508	Workover ZTJXS 73
Applicable pipe diameter	4-5" drill pipe, 7-9 3/4" drill collar, 5" kelly 20" casing	2 3/8"、2 7/8"、3 1/2"
Pipe holding force	8500N	4500N
Operation mode	Remote control automation	Remote control automation
Rotating angle	±360°	±90°
Operation radius	3m	3m
Moving velocity (m/s)	0.2	0.2
Position accuracy (mm)	±3	±3
Action period (s)	<100	≤ 80
Weight (kg)	2000	1500
Overall dimension (length*width*height) (mm)	550×550×2754	500×500×2754

HYDRAULIC IRON ROUGHNECK

- 1) Industrially original low pressure large torque technology;
- One-key make-up and break-out, automatic fast centralizing;
- · Large stabbing angle, fast spinning speed;
- · Real time monitoring, automatic memory
- · Parameter presetting, remote operation and control
- · Concurrently considering wellhead, rat hole operation;



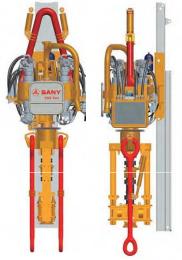
Model Technical parameters	Workover SIR025	Drilling SIR100
Pipe diameter range	2 3/8 " ~ 5 1/2 "	2 7/8''~ 10''
Max make-up torque (KNm)	25	110
Max break-out torque (KNm)	25	110
Spinning speed (r/min)	75	75
Stabbing angle (°)	±30	±30
Horizontal travel (m)	1.2	1.525
Lifting height (m)	0.7	0.915

^{*} There may be discrepancies between the actual product and the picture, and the product parameters can be customized and designed as required by the customer.



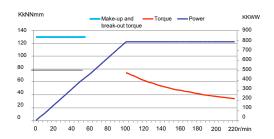
FULL-HYDRAULIC TOP DRIVE

- 1) No strong current of the TDS's main body, safe and explosion proof;
- No-load started, instantaneous provision of large torque, easy unfreezing;
- Four-point driven, uniform force, long service life of gear box, strong power;
- Dual-arm backup tongs, symmetrical loads, provision of higher breakout torque for convenience of stabbing; damage-free clamping to protect drill pipe;
- 5) Hydraulic brake without spark generation, safe and reliable



MAIN PERFORMANCE PARAMETERS

Model Technical parameters	SYDQ70Y-500		
Drive mode	Hydraulic drive		
Drilling depth (m) (4-1/2" drill pipe)	7000		
Max load (kN)	4500		
Power supply	380VAC / 600VAC optional		
Rated power (kW)	950		
Rotation speed range (r/min)	0~220		
Continuous working torque (kNm)	80		
Max break-out torque (kNm)	130		
Clamping range of backup tongs (mm)	86-220		
Rated pressure of IBOP (Mpa)	70		
Main shaft passage (mm)	₽ 75		
Circulating pressure (Mpa)	35		
Working height (mm) (108" link)	5760		
Main body weight (t)	12		
Distance between the main shaft center and the slide guide center (mm)	762		
Overall dimension of the main body (mm)	5462×2150×1577		



POWER CAT-WALK WITH DRILL PIPE BOX

- 1) Unique variable-linkage lifting, more extensive adaptability
- 2) Easy expansion of drill pipe capacity, easily coping with deep well operation;
- 3) Able to both lift and run (kelly) drill pipe and run waste tubing;
- 4) Intelligent storage and getting of drill pipe, without need for labor;
- 5) Transportation and hoisting weight ≤ 17t, adaptive to loose and soft roads;
- 6) Convenient movement, one cat for multiple wells



Model Technical parameters	SCWD4530
Applicable well depth (m)	1000~3100
Applicable drill floor height (m)	2.7, 3.7, 4.5/ three gears
Setback area capacity (pcs)	80×4
Applicable drill pipe specification (in)	2-7/8"
Length*width*height (mm)	15750×3000×3900
Single-truck weight (t)	≤ 17

^{*} There may be discrepancies between the actual product and the picture, and the product parameters can be customized and designed as required by the customer.

INTELLIGENT SMALL WORKOVER

Safe

Unattended wellhead operation to eliminate hidden safety trouble

◆ Intelligent

SYMC integrated control, one-key operation

Cost reduction

Completely replacing manual work to reduce cost by 60%

♦ Efficiency increasing

Shortening operation time and increasing efficiency by 25%

Fast and convenient

Integrated installation and integral transportation

Environmental protection

Integrated oil sludge recovery and cleaning equipment to achieve cleaner production



MAIN PERFORMANCE PARAMETERS OF INTELLIGENT SMALL WORKOVER

Model	SYXJ700ZNJ/SYXJ700ZNJD/SYXJ700ZNZ
Max hook load (kN)	700
Max working pressure (MPa)	14
Applicable tubing mm (in)	Φ73 (27/8) and Φ89 (31/2)
Operating environment temperature (°C)	- 35 - 50
Max travel of manipulator mm (in)	2159 (85)
Rated torque N.M	3000
Platform height range mm	1400 - 2600
Max pipe retrieval and sending time of cat-walk s	90

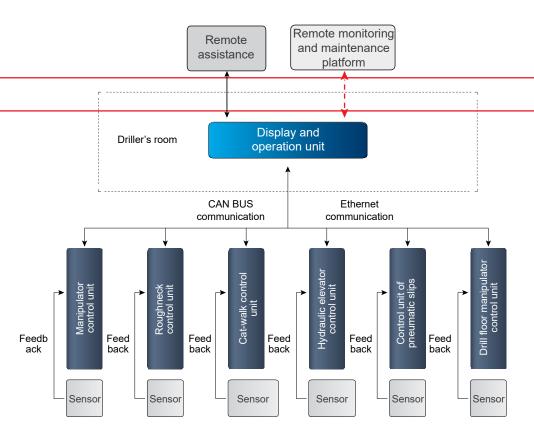
MODEL AND PARAMETERS OF INTELLIGENT SMALL WORKOVER

Index		SYXJ700ZNJ	SYXJ700ZNJD	SYXJ700ZNZ			
Name		Intelligent small workover 1.0	Intelligent small workover 2.0	Intelligent small workover 3.0			
⊳	×		Hydraulic elevator	√	√	$\sqrt{\text{(functions including)}}$	
com	Wellhead		Pipe holding manipulator	√	√	$\sqrt{\text{(functions including)}}$	
plete				Mobile multi-function tongs	√	√	$\sqrt{\text{(functions including)}}$
set o	surface	ırface	Working platform	√	√	$\sqrt{\text{(functions including)}}$	
t of intell machine			Wellhead tools	√	√	$\sqrt{\text{(functions including)}}$	
ellige	A complete set of intelligent all-in- one Nelline ad suffice automation Wellhead automation Wellhead automation Wellhead tools Hydraulic cat-walk Pipe holding manipulator Mobile multi-function tongs Working platform Wellhead tools Hydraulic cat-walk Pipe string box Intelligent principal machine			√	$\sqrt{\text{(functions including)}}$		
nt all				√	√ (functions including)		
Intelligent principal machine				√			
Auxiliary Equipment				√			



IOT INTELLIGENT CONTROL SYSTEM

- 1) Ethernet and industrial CAN bus technology, timely and reliable data transmission;
- 2) Intelligent anti-collision/ sticking prevention/ sliding drilling prevention system, multi-safety protection;
- 3) Integrated control, synergetic integral operation
- * There may be discrepancies between the actual product and the picture, and the product parameters can be customized and designed as required by the customer.



INTEGRATED INTELLIGENT DRILLING AND REPAIRING MACHINE

The Company can provide drilling rigs and workover rigs with the drilling depth of 2000-12000m, including truck-mounted, skid-mounted and integral ones. In addition, as needed by users, the Company can provide normal temperature or low temperature drilling rigs meeting the environmental needs including land, shoal, desert, hill, etc.



MORE INTELLIGENT

Can be organically integrated with iron roughneck, pipe arrangement manipulator, power cat-walk and intelligent control system to realize intelligent drilling and workover and increase operation efficiency by 12%

◆ LARGE DRILLING DEPTH

Nominal drilling depth (4 1/2" drill pipe) up to 3000m, heavy repair (3 1/2" drill pipe) up to 6500m

EASY PASSING

14 ×8 chassis with good trafficability and cross country capacity

♦ HIGH INTEGRATION

Main components are mounted on the chassis truck, with high integration degree and integrated control of the driller's room; wellhead automation tools are optional.

◆ EASY MOVEMENT AND TRANSPORTATION

Large components such as derrick, drawworks, etc. can be transported together with the truck, and the transportability is good.

◆ GREEN AND ENVIRONMENT-FRIENDLY

Main key components use those of international well-known brands; dual GB-IV engines, more environment-friendly, more reliable performance

Item	Value
Drilling depth (41/2" drill pipe) (m)	3000
Max. hook load (kN)	1800
Rated power of the drawworks (hp)	750
Effective height of the derrick (m)	38
Chassis drive mode	14 x 8



SKID-MOUNTED DRILLING RIG

- The design conforms to GB/T 23505 Petroleum Drilling Rig and Workover Rig, and main auxiliary components conform to API specifications;
- The general layout is reasonable and dismantling and installation are safe and quick and conform to expressway transportation requirements;
- ◆ The product is resistant to explosion, leakage, corrosion, moisture, cold, high temperature, sand, etc.;
- ♦ Multiple driving forms such as combined mechanical and electrical driving, electrical driving, etc.;
- Front-opening K-shaped derrick, low position installation, integral lifting;
- Substructure with parallelogram structure, lifted by use of drawworks power, safe, fast and convenient



MODELS AND PARAMETERS OF 4000M (1000HP) SERIES DRILLING RIGS

Model		ZJ40/2250D	ZJ40/2250DB
B. W. J. H. ()	4½" φ114mm drill pipe	2500 - 4000	2500 - 4000
Drilling depth (m)	5" φ127mm drill pipe	2000 - 3200	2000 - 3200
Max. hook load (kN)		2250	2250
Drawworks power kW(hp)		735 (1000)	735 (1000)
Max rope system of lifting system		5 x 6	5 x 6
Rotary table opening diameter mm(in)		698.5 (27 - 1/2)	698.5 (27 - 1/2)
Mud pump power kW (hp)		956 (1300)	956 (1300)
Mud pump number		2	2
Drill floor height (m)		6, 7.5	6, 7.5

MODELS AND PARAMETERS OF 5000M (1500HP) SERIES DRILLING RIGS

Model		ZJ50/3150D	ZJ50/3150DB
Drilling depth (m)	4½" φ114mm drill pipe	3500 - 5000	3500 - 5000
Drilling deput (III)	5" φ127mm drill pipe	2800 - 4500	2800 - 4500
Max. hook load (kN)		3150	3150
Drawworks power kW(hp)		1100 (1500)	1100 (1500)
Max rope system of lifting system		6x7	6x7
Rotary table opening diameter mm (in)		952.5 (37 - 1/2)	952.5 (37 - 1/2)
Mud pump power kW (hp)		1180 (1600)	1180 (1600)
Mud pump number		2	2
Drill floor height (m)		7.5, 9	7.5, 9

MODELS AND PARAMETERS OF 7000M (2000HP) SERIES DRILLING

Model		ZJ70/4500D	ZJ70/4500DB
Drilling depth (m)	4½" φ114mm drill pipe	4500 - 7000	4500 - 7000
Drining doput (III)	5" φ127mm drill pipe	4000 - 6000	4000 - 6000
Max. hook load (kN)		4500	4500
Drawworks power kW(hp)		1470 (2000)	1470 (2000)
Max rope system of lifting system		6x7	6x7
Rotary table opening diameter mm(in)		952.5 (37 - 1/2)	952.5 (37 - 1/2)
Mud pump power kW (hp)		1180 (1600)	1180 (1600)
Mud pump number		3	3
Drill floor height (m)		9, 10.5	9, 10.5

TRUCK-MOUNTED DRILLING RIG



The whole rig has reasonable structure, high integration degree and small floor area;

Adoption of engines and transmissions of international well-known brands with reliable power transmission; centralized control with electrical, pneumatic and hydraulic control systems;

Adoption of heavy-duty 8×6, 10×8, 12×8, 14×8 and 14×10 driving chassis fitted with hydraulic power assisted steering system, having good trafficability, cross country capacity and stability;

The drawworks and rotary table can use the electrical drive mode; the main brake uses a band brake or a hydraulic disc brake; the auxiliary brake uses a pneumatic water-cooled push disc brake or a hydromatic brake;

The rotary table transmission box can realizes forward and reverse gears.

Adaptive to right-hand and left-hand threaded drill pipe rotation operation; fitted with a reactive torque release device to ensure that drill pipe deformation can be safely released;

Two-section telescopic type front-opened and front-inclined mast or vertical two-section telescopic derrick, hydraulically lifted and telescopic; can be fitted with iron roughneck, pipe arrangement manipulator and power catwalk to reduce operators on the platform (optional)

Model	ZJ30/1800CZ	ZJ20/1580CZ	
Drilling depth (m) (4-1/2" drill pipe)	1600 - 3000	1200 - 2000	
Heavy repair well depth (m) (3-1/2" drill pipe)	6500	5500	
Max. hook load (kN)	1800	1580	
Hook speed (m/s)	0.2 ^	~ 1.4	
Derrick height (m)	36/38	35	
Derrick form	Mast/vertical	Mast	
Engine power (kW)	2×403	470	
Hydraulic transmission box	2×M5620AR	M6620AR	
Transmission mode	Hydraulic + mechanical		
Traveling system	6×5	5×4	
Diameter of main drilling line (mm)	φ32	φ29	
Traveling block hook model	YG180	YG160	
Swivel model	SL225	SL160	
Rotary table model	ZP205/ZP275	ZP175	
Chassis model	XD70/14×8	XD60/12×8	
Approach angle/ departure angle	26° /18°	26° /18°	
Min road clearance (mm)	3:	11	
Max gradeability	26%	26%	
Minimum turning diameter (m)	41	38	
Outside transport dimension (m)	22.3×3.0×4.5	20.5×2.9×4.4	
Mass of the principal unit (kg)	80000	65000	
Mass of accessories (kg)	~ 32000	~ 24000	



WORKOVER RIG

Environmental protection

Intelligent

High efficiency Energy saving



MAIN PERFORMANCE PARAMETERS OF WORKOVER RIG

Product model	XJ700	XJ900	XJ1350	XJ1800
Nominal minor repair well depth (2 7/8"EUE tubing) (m)	3200	4000	7000	1
Nominal heavy repair well depth (2 7/8" drill pipe) (m)	2000	3200	5800	8000
Drilling depth (4-1/2" drill pipe) (m)			2000	3000
Max. hook load (kN)	700	900	1350	1800
Rated hook load (kN)	400	600	1000	1500
Engine model	T- 3A929 or WD615.68	C9	C15	C15×2
Engine power (kW)	210 or 226	261	403	403×2
Hydraulic transmission box model			M5620AR	M5620AR
Transmission form		Hydraulic + me	echanical	
Derrick height (m)	18.21	29.31	33.35	36.38
Line number of the traveling system	4×3	4×3	5×4	5×4/6×5
Diameter of main drilling line (mm)	22	26	26	29/32
Hook speed (m/s)	$0.2 \sim 1.4$	$0.2 \sim 1.75$	$0.2 \sim 1.4$	$0.2 \sim 1.3$
Approach angle/ departure angle	18° /12°	23° /16°		
Chassis model/ drive mode			XD50/10×8	XD70/14×8
Minimum road clearance (mm)	311	340	311	311
Max gradeability	26%	30%	26%	26%
Min turning diameter (m)	33	28	33	41
Rotary table model	ZP70	ZP90	ZP135	ZP205 / ZP275
Traveling block hook model	YG70	YG90	YG135	YG180
Swivel model	SL70	SL110	SL135	SL225
Outside transport dimension (m)	11.6×2.5×4.0	16.7×2.8×4.1	18.8×2.9×4.3	22.5×3.0×4.5
Mass of the principal unit (kg)	34000	42000	58000	76000

MAIN PERFORMANCE PARAMETERS OF GRID POWERED WORKOVER RIG

Indexes	Parameters
Nominal workover depth (m)	3200(φ73 EUE tubing)
Max. static hook load (kN)	700
Derrick height (m)	18
Hook lifting speed (m/s)	0 ~ 1.2
Chassis drive mode	6×6
Total weight (kg)	31500
Overall dimension (mm)	12500×2500×4100



ZERO DISCHARGE OF DRILLING MUD SYSTEM

- Ecological and environmental protection, zero pollution, zero discharge
- Online monitoring
- Intelligent

- Modularity
- ◆ More economic
- High efficiency



MAIN PERFORMANCE PARAMETERS

Indexes	Parameters	Remark
DS (standard treatment capacity) (kg/h)	800	Effective treatment capacity of dry sludge
Max treatment flow rate (m3/h)	25	Concentration≤ 25%, single module
Solid water content	60% 80%	Filter press series
Liquid phase density	≤ 1.02	Liquid phase density
Total power (kW)	100	Max power, service power 40KW
Primary treatment skid (mm)	9600X2000X2000	Primary treatment skid module
Mixing skid (mm)	9600X2000X2000	Agent mixing skid module
Storage tank (mm)	8000X2000X1500	Liquid phase storage skid module
Remote operation skid (mm)	6000X2400X2000	Remote operation room skid
Temporary storage tank (mm)	6113X2357X2805	Temporary storage tank module
Filter press skid (mm)	9600X2500X3500	Filter press module
Total weight (kg)	20000	Total weight of the unit

INTEGRAL PUP JOINTS



Operating pressure MPa/PSI	Size/inch	Operation type	Connection form
70/10,000	2"/3"/4"	Standard	FIG1002 union
105/15,000	2"/3"/4"	Standard	FIG1502 union
140/20,000	2"/3"	Standard	FIG2002 union

Note: 1. 3" 105MPa straight pipes including two specifications 2. The operating pressure refers to the non-impaction cold operating such as ID 65mm and 69.8mm;

SWIVEL JOINTS









Operating pressure MPa/PSI	Size/inch	Operation type	Connection form
70/10,000	2"/3"/4"	Standard	FIG1002 union
105/15,000	2"/3"/4"	Standard	FIG1502 union
140/20,000	2"/3"	Standard	FIG2002 union

CHECK VALVE





Operating pressure MPa/PSI	Size/inch	Operation type	Connection form
70/10,000	2"/3"/4"	Standard	FIG1002 union
105/15,000	2"/3"/4"	Standard	FIG1502 union
140/20,000	2"/3"	Standard	FIG2002 union

RELIEF VALVE



Operating pressure MPa/PSI	Size/inch	Operation type	Connection form
105/15,000	2"	Standard	FIG1502 union
140/20,000	2"	Standard	FIG2002 union

pressure (the same below).

INTEGRAL JOINTS









Operating pressure MPa/PSI	Size/inch	Operation type	Connection form
70/10,000	2"/3"/4"	Standard	FIG1002 union
105/15,000	2"/3"/4"	Standard	FIG1502 union
140/20,000	2"/3"	Standard	FIG2002 union

PLUG VALVE





Operating pressure MPa/PSI	Size/inch	Execution mechanism	Operation type	Connection form
70/10,000	2"/3"/4"	Manual	Standard	FIG1002 union
	1×2"	Manual		
	2×2"	Manual		
105/15,000	2×3"	Manual	Standard	FIG1502 union
	3×3″	Manual/ worm-gear box		
	4×4"	Manual/ worm-gear box		
140/20,000	2×2"	Manual	Standard	FIG2002 union
	3×3"	Manual/ worm-gear box	Staridard	FIG2002 Union

LONG RADIUS HOSES



Operating pressure	Nominal drift	Spread length/m	Operation type	Connection form
MPa/PSI	diameter/inch	Spread length/m	Operation type	Connection form
70/10,000	2"/3"/4"		Standard	FIG1002 union
105/15,000	2"/3"/4"	3.6/4.6/5.6	Standard	FIG1502 union
140/20,000	2"/3"	3.0/4.0/5.0	Standard	FIG2002 union

HIGH PRESSURE MANIFOLDS



Operating pressure MPa/PSI	Size/inch	Nominal drift diameter of the low pressure part/inch	Number of high pressure interfaces	Operation type		
105/15,000				Standard		
140/20,000	2"/3"	8"~ 12"	4~16	Standard		

FLUID CYLINDER





Component	Typical materials	Average service life of products on the market	Tested service life of Sany's products	Improvement measures
Eluid ovlinder	30CrNi2.5MoV	200 hours (at home)	More than 250 hours	Improve material composition and heat treatment mode; Improve the internal structure of the fluid
Fluid cylinder 300	30011112.311100	300 hours (abroad)	More than 250 hours	cylinder and use a slotless structure. This structure has applied for patent;

PLUNGER



Component	Typical materials	Average service life of products on the market		ervice life of products	Improvement measures
Plunger	40Cr	120 hours	160 -	180 hours	Special ceramics sprayed surface

VALVE BODY / VALVE SEAT







Component	Typical materials	Average service life of products on the market	Tested service life of Sany's products	Improvement measures
Valve body\ valve seat	20CrNiMoH	20 hours	25- 30 hours	Adoption of the wear-resistant hot-cladding metal surface to increase service life Integral die forging of the valve body, better structure consistency without cracking
Valve rubber	Polyurethane	5-6hr continuous operation	8-10hr continuous operation	The formula-improved imported PU materials are used, and they have unique molecular structure after processing with special technology. Tearing resistance and wear resistance are increased while increasing hardness.

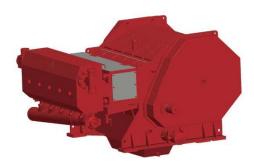


MECHANICALLY DRIVEN FRACTURING PUMP



FEATURES OF THE FRACTURING PUMP WITH CONVENTIONAL STRUCTURE:

- ♦ More stable and reliable performance: exchangeable with products of other manufactures on the market
- ◆Compact structure to save space; smaller weight, better integral rigidity Verified by one million times of tests; applicable to continuous fracturing operations



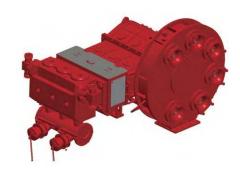
FEATURES OF THE INTEGRATED FRACTURING PUMP:

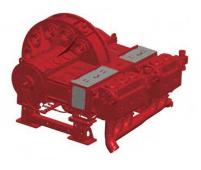
- ♦Integrated design of the pump, base and power end lube oil tank, compact structure, smaller weight, better rigidity
- ◆The internal connections of the power end all use NORD-LOCK anti-loosening technology. More reliable antiloosening, more convenient maintenance Verified by one million times of tests; applicable to continuous fracturing operations

HYDRAULICALLY DRIVE FRACTURING PUMP

FEATURES OF HYDRAULIC DRIVE FRACTURING PUMP:

- ◆SANY's unique design, full hydraulic drive, without gear limitation;
- ♦ Modular design, compact structure, convenient maintenance
- ♦ Hydraulic drive; verified by one million times of tests; applicable to multiple wellhead operations





Triplex pump

Five-cylinder pump

MAIN PERFORMANCE PARAMETERS

Item	SYQP2500	SYQP2800
Braking power (five-cylinder)	1866kW (2500HP)	2086KW (2800HP)
Max working pressure (MPa)	140 (3.5")	140 (3.75 ")
Max linkage load (kN)	872	1020
Transmission ratio	6.353:1	6.333:1
Stroke	8"/203.2mm	8"/203.2mm
Max stroke number	330rpm	330rpm
	2191×1959×1113 (conventional pump)	2285×2199×1182 (conventional pump)
Size (mm)	2191×1959×1521 (integrated pump)	2285×2199×1687 (integrated pump)
	7110 (conventional pump)	8900 (conventional pump)
Weight (kg)	7540 (integrated pump)	9400 (integrated pump)

Item	SYTH1800	SYQH2500	SYQH2800
Braking power	1342kW (1800HP)	1866kW (2500HP)	2086kW (2800HP)
Max working pressure (MPa)	140 (3.5 ")	140 (3.5 ")	140 (3.75 ")
Max linkage load (kN)	872	872	1020
Stroke/ max stroke number	8"/203.2mm	8"/203.2mm	8"/203.2mm
Rated speed	330rpm	330rpm	330rpm
Size (mm)	2553×1546×1608	2423×2208×1592	3217×2442×1694
Weight (kg)	5064	8557	11067

• DONGYING, SHANDONG



OPERATION CASE OF HYDRAULIC TRANSMISSION FRACTURING TRUCK

From Jul. 2015 to now, the fracturing truck has completed the operations of over 30 wells in Shengli Oilfield, Dongying, and no fault of startup and shutdown has occurred, thus fully showing the performance required by large displacement and high sand ratio (max sand ratio 90%) operations and winning high praise from customers.

• GUJIAO, SHANXI





OPERATION CASE OF HYDRAULIC TRANSMISSION FRACTURING TRUCK

On Oct. 28, 2016, Sany model-2500 hydraulic fracturing truck participated in CBM production in Changqing Oilfield. The operation pressure was 20 \sim 35MPa, the single-machine displacement 1.0 \sim 1.5m3 and the single-time operation time 80 ~ 150min. Up to now, the fracturing truck has completed operations of totally 6 wells, and has withstood tests by complex road conditions and frost weather. Challenges are still continuing....

• QINGYANG, GANSU









OPERATION CASE OF MODEL-2000 FRACTURING TRUCK UNIT

In Nov. 2013, Sany model-2000 fracturing truck unit was not out of order under low temperature environmental conditions and severe operating conditions for 18 days. Extended reach horizontal well operations with the fracturing truck unit were completed in

advance. In the operation period, the sand output quantity was 400m3, the liquid quantity 6000m3, the displacement 6m3, and the pressure 25-55Mpa, completely reaching the technical requirements of site operations.

SULIGE, INNER MONGOLIA











OPERATION CASES OF MODEL-2500 FRACTURING TRUCK UNIT

In mid August 2014, Sany model-2500 fracturing truck unit was used in high pressure large gas well fracturing operations in Sulige Gas Field in Uxin Banner, Inner Mongolia, challenging the most complex large-scale fracturing operation project with "10000m3 fluids and 1000m3 sands) in China's largest integral gas field. The truck unit was not shut down without pump stoppage and displacement of pump consumables and ran continuously for over 16 hours, showing stable operation and high efficiency.

YIBIN, SICHUAN



OPERATION CASE OF THE HIGH PRESSURE MANIFOLD

Well YS108-H3#, located at Shangluo Town, Gong County, Yibin City, Sichuan, has 3 wellhead and totally 55 fracturing intervals, with the depth of over 3000m mostly. Our company provided one 1m straight pipe, one check valve and one manifold tee (bifurcation blocked), and sand-free frac fluids (containing friction reducers) were pumped. The pressure was around 60MPa and the flow rate 0.8m3/min. The high pressure manifold ran safely for 240 hours without anomaly.

• FULING, CHONGQING









OPERATION CASE OF THE FRACTURING SKID

In Jul. 2016, the world first hydraulically-driven fracturing skid favorably completed the operation of supplying fluids to bridge plug drilling with coiled tubing at Jiaoshiba shale gas well site in Fuling, Chongqing.

The fracturing skid ran without fault continuously for 5 days and nights and favorably completed the operation, winning high praise from the customer.

In order to reduce the cost of oilfields and increase their efficiency, Sany has overcome difficulties and developed the full hydraulic drive fracturing skid. It is the domestic original technology and has absolute advantages in cost performance.

• DAQING OILFIELD, HEILONGJIANG





SUCCESSFUL APPLICATION OF SANY HIGH ALTITUDE AUTOMATED PIPE-RACKING/HYDRAULIC IRON ROUGHNECK IN DAQING OILFIELD

107# workover rig with the honorary titles such as "Vanguard Crew" and "National Advanced Grassroots Party Organization" successfully applied Sany workover roughneck; 111# workover crew with the honorary title "Daqing Meritorious Crew" successfully applied Sany full hydraulic workover iron roughneck, thus greatly succeeding in automation, intelligence and personnel reduction. This has also blown the clarion to comprehensive upgrading of workover equipment in the petroleum industry.

• DAQING OILFIELD, HEILONGJIANG







APPLICATION OF SANY INTELLIGENT SMALL WORKOVER (WELLHEAD AUTOMATION SYSTEM) IN NO.3 OIL PRODUCTION PLANT, DAQING OILFIELD

From Jun. to Sept. 2016, the intelligent small workover was used in staged operation in No.3 Oil Production Plant, Daging Oilfield. In this period, the equipment realized automatic receiving, sending, lifting and running of tubing, automatic make-up and break-out of pipe string, etc. very well and achieved the purpose of unattended and intelligent platform and safe operation.

ZHONGYUAN OILFIELD





APPLICATION OF SANY HIGH ALTITUDE AUTOMATED PIPE-RACKING/HYDRAULIC IRON ROUGHNECK IN DOWNHOLE SERVICE COMPANY, ZHONGYUAN OILFIELD

In 2016, Sany high altitude automated pipe-racking and hydraulic iron roughneck were successfully applied in Downhole Service Company, Zhongyuan Oilfield.

