



CNPC BEM

Bohai Equipment New Century Machinery Manufacturing CO., LTD
Address: Xingfu Road, Dagang Oilfield, Binhai New Area, Tianjin, P.R.China
P.C.: 300280
TEL: 86-22-25965585
FAX: 86-22-25965518



**BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD**



TIANJIN · CHINA



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD

Introduction of Company

Bohai Equipment New Century Machinery Manufacturing Co., Ltd. is a professional manufacturer of drilling and artificial lift equipment which is under the CNPC Bohai Equipment Manufacturing Co., Ltd. New Century Company was established in 1974, and has more than 1,400 employees at present. The annual sales revenue was USD 300 million. New Century Company has been equipped with advanced machineries and held a team of high skilled specialists who major in different subjects. New Century Company is becoming a large petroleum machinery manufacturing enterprise with manufacturing, researching, developing and service. The company is sparing no effort to build up the national leader and world-class enterprise.

The main products are pumping unit, subsurface sucker rod pump, hollow sucker rod, solid sucker rod, special sucker rod for PC pump, tubing, casing and tertiary recovery equipment. New Century Company is granted to use official API monogram on the products of pumping unit, subsurface sucker rod pump, sucker rod, tubing and casing. The company is authorized to use ISO9001 Quality Assurance System Certificate, ISO10012 Measurement System Certificate and ISO 14001 Environment System Certificate. The reliable quality and good services make the products gain good reputation in domestic and overseas market.

New Century Company is located in the Binhai New Area of Tianjin, which is near from Tianjin Seaport. Convenient transportation and favorable economic environment can provide vast space of development and cooperation with worldwide customers.



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD



Qualification



API Spec 11E-0162
API Spec 11E-0058



API Spec 11AX-0046



API Spec 11B-0060



API Spec 5CT-0616

American Petroleum Institute Certificate

Quality, Health & Safety,
Environmental Management
Systems Certificate



CONFORMITY SUBCERTIFICATE OF
OHS&E MANAGEMENT SYSTEMS



OCCUPATIONAL HEALTH & SAFETY
MANAGEMENT SYSTEMS SUBCERTIFICATE



QUALITY MANAGEMENT SYSTEMS
SUBCERTIFICATE



ENVIRONMENTAL MANAGEMENT
SYSTEMS SUBCERTIFICATE



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD



Patented Certificate



Bend Walking Beam Pumping Unit-Canada



Bend Walking Beam Pumping Unit-China



Special Sucker Rod for PCP-China



Soft Sealing Plunger Pump-China

Application Report



Beam Pumping Unit
-Sultanate of Oman



Electric Heating Sucker Rod
System -Turkmenistan



Newspaper -Turkmenistan



Electric Heating Sucker
Rod System -Mexico



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD

— Production Capacity —

The annual production capacity is 4,000 sets of pumping unit, 30,000 sets of sub-surface sucker rod pump, 7,000,000 meters of sucker rod, 300,000 tons of tubing and casing and 100,000 tons of HFW steel pipe. Advanced manufacturing and inspection equipments provide guarantee for product quality.



Friction Welding Machine



GZ Series Multiple Tip Cutting Machine



Remelting Machine for Metal Spraying Plunger



Welding Robot



Surface Casing Production Line



7915 CNC Machine



Chrome Plating Machine



T7 CNC Machine



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD

— Testing Equipment —

The testing equipment can go through material mechanical property inspection, chemical inspection and metallographic inspection of kinds of experiments. There are complete on-line testing equipment and hydrostatic test machine to make sure good quality.



Metallographic Microscope



Direct-reading Spectrograph



Vickers



Universal Testing Machine



Sucker Rod Pump Pressure Testing Machine



Canada NDT Offline Ultrasonic Flaw Detector



Eddy Current Testing Machine



Hydrostatic Testing Machine



Magnetic Particle Flaw Detector



CNPC EQUIPMENT



CNPC EQUIPMENT

— Introduction of Beam Pumping Unit —

At present, New Century Company owns two specialized pumping unit plants. The annual production capacity can reach 4,000 sets.

The main products are as follows: Conventional Walking Beam Pumping Unit, Bend Walking Beam Pumping Unit, Double Horse-head Pumping Unit, Bend Walking Beam Rebuilt Pumping Unit, Rear-mounted with Phased Crank Counterbalance Walking Beam Pumping Unit, Front Mounted Walking Beam Pumping Unit, Complex Balance Walking Beam Pumping Unit and Complex Magneto-electric Motor Pumping Unit, etc. New Century Company has equipped advanced production machineries and related examination and experiment equipment. The Company can provide different kinds of pumping units for various conditions to meet the customers' requirements.

The products are widely used in domestic oilfields, such as Dagang oilfield, Jidong oilfield, Liaohe oilfield, Huabei oilfield, Yanchang oilfield, Changqing oilfield, Hainan Fushan oilfield and CBM oilfield, and are exported to United States, Canada, Sultanate of Oman, Syria, Australia, New Zealand, Thailand, Mexico, India, Cuba, Burma, Egypt and Mongolia, etc.

Pumping Unit Products

**Bend Walking Beam Pumping Unit****Executive Standard:** API Spec 11E, SY/T 5044, GB/T 29021

Product Features: It is designed on the basis of the conventional walking beam pumping unit. By changing the shape of the walking beam and balance position, it is a new energy saving type. This type of pumping unit is reliable, durable, simple in structure and easy to operate.

Applicable Wellbit is suitable for various well conditions.

Technical Parameters of Bend Walking Beam Pumping Unit

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions L×W×H in
1	CW80-67-64	67	64.48.36	1-6	90000	236×70×205
2	CW80-69-64	89	64.48.36	1-8	90000	236×70×205
3	CW114-109-100	109	100.86.74	5.7-9	114000	275×79×260
4	CW160-109-100	109	100.86.74	0.8-7.9	160000	275×79×260
5	CW160-123-120	133	100.86.74	0.8-7.9	160000	275×79×260
6	CW228-133-120	133	320.100.86	2-12	228000	307×87×272
7	CW228-173-120	173	100.86.64	6.8-10	228000	319×87×264
8	CW228-173-120	173	120.100.86	6.8-10	228000	299×85×272
9	CW320-173-120	173	120.100.86	0.7-6.8	320000	307×87×272
10	CW228-213-100	213	100.86.64	6.8-10	228000	319×83×264
11	CW456-213-192	213	192.168.144	4.6-8	456000	433×99×374
12	CW228-256-100	256	100.86.64	6.8-10	228000	319×83×264
13	CW250-256-144	256	144.120.100	5.7-9	320000	330×91×307
14	CW456-256-144	256	144.120.100	5.7-9	456000	330×91×307
15	CW456-256-192	256	192.168.144	4.6-8	456000	433×99×374
16	CW456-256-192	256	192.168.144	4.6-8	640000	429×99×398
17	CW456-305-144	305	144.120.100	6.8-10	456000	394×102×358
18	CW456-305-168	305	168.144.120	5.7-9	456000	413×114×258
19	CW450-305-168	305	168.144.120	5.7-9	640000	425×114×258
20	CW312-305-168	305	168.144.120	5.7-9	912000	421×114×358
21	CW450-305-192	305	192.168.144	5.7-9	640000	465×114×374
22	CW450-305-192	365	192.168.144	4.6-8	640000	446×114×378
23	CW312-365-192	365	192.168.144	4.6-8	912000	472×114×409
24	CW312-365-216	365	216.192.168	4.6-8	912000	472×122×425
25	CW312-427-168	427	168.144.120	4.6-8	912000	441×114×382
26	CW1280-427-192	427	192.168.144	4.6-8	1280000	472×114×398
27	CW1280-427-216	427	216.192.168	4.6-8	1280000	488×114×421

Conventional Walking Beam Pumping Unit**Executive Standard:** API Spec 11E, SY/T 5044, GB/T 29021

Product Features: Simple in structure, moving smoothly and reliably.

Applicable Wellbit is suitable for various well conditions.

Technical Parameters of Conventional Walking Beam Pumping Unit

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions L×W×H in
1	C-1140-143-64	143	64.52.40	6.5-12	114000	306×76×186
2	C-1140-173-64	173	64.52.40	6.5-12	114000	306×76×186
3	C-1600-143-74	143	74.62.50	6.5-12	160000	294×83×221
4	C-1600-173-74	173	74.62.50	6.5-12	160000	294×83×221
5	C-1600-173-95	173	86.74.64	6.5-12	160000	355×85×286
6	C-1600-173-100	173	100.85.70	6.5-12	160000	380×10×295
7	C-1600-200-74	200	74.62.50	6.5-12	160000	294×83×221
8	C-2280-173-100	173	100.85.70	5.7-9	228000	330×85×273
9	C-2280-173-120	173	120.102.84	5.7-9	228000	355×85×286
10	C-2280-213-06	213	86.74.64	5.7-9	228000	370×85×290
11	C-2280-213-100	213	100.85.70	5.7-9	228000	383×118×320
12	C-2280-213-120	213	120.102.84	5.7-9	228000	355×85×286
13	C-2280-246-06	246	86.74.64	5.7-9	228000	360×85×290
14	C-3200-213-100	213	100.85.70	5.7-9	320000	395×83×295
15	C-3200-213-120	213	120.102.84	5.7-9	320000	400×92×300
16	C-3200-256-100	256	100.85.70	5.7-9	320000	395×83×295
17	C-3200-256-120	256	120.102.84	5.7-9	320000	400×92×300
18	C-3200-305-100	305	100.85.70	5.7-9	320000	395×83×295
19	C-4560-256-144	256	144.125.105	4.6-8	456000	460×114×340
20	C-4560-305-144	305	144.125.105	4.6-8	456000	460×114×340
21	C-4560-256-168	305	168.143.119	4.6-8	456000	470×208×421
22	C-4560-256-144	256	144.125.105	4.6-8	640000	446×118×421
23	C-6400-305-168	305	168.142.118	4.6-8	640000	475×108-353
24	C-6400-305-192	365	192.168.143	4.6-8	640000	477×112-392
25	C-6400-365-168	365	168.142.118	4.6-8	640000	475×108-353
26	C-9120-305-168	305	168.142.118	4.6-8	912000	475×108-353
27	C-9120-365-168	365	168.142.118	4.6-8	912000	445×114-400
28	C-9120-365-192	365	192.168.143	4.6-8	912000	387×112-319
29	C-12800-365-192	365	192.168.143	4.6-8	1280000	492×104-392



Reverse Mark Walking Beam Pumping Unit



Executive Standard: API Spec. 11E, SY/T 5044, GB/T 29021

Product Features: Simple in structure, moving smoothly and reliably. The peak torque rating of reducer is low.

Applicable Wells: It is suitable for various well conditions.

Technical Parameters of Reverse Mark Walking Beam Pumping Unit.

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions L×W×H in
1	RM-456D-213-120	213	120, 100, 86	4, 5, 6	456000	366×87×295
2	RM-456D-213-197	213	197, 168, 144	3, 4, 5	456000	460×90×385
3	RM-456D-213-240	213	240, 201, 168	3, 4, 5	456000	520×90×449
4	RM-640D-296-197	296	197, 168, 144	3, 4, 5	640000	492×102×386
5	RM-640D-296-240	296	240, 201, 168	3, 4, 5	640000	492×102×445
6	RM-640D-305-197	305	197, 168, 144	3, 4, 5	640000	492×102×386
7	RM-912D-365-240	365	240, 201, 168	3, 4, 5	912000	488×114×453

Double Horse-head Walking Beam Pumping Unit



Executive Standard: SY/T 5044, GB/T 29021

Product Features: It adopts variable diameter circular arc ball beam and uses flexible connector between walking beam and equalizer. It has the advantages of long stroke, low dynamic load, low net torque wear, moving smoothly and energy efficiency.

Applicable Wells: It is suitable for middle and deep wells.

Technical Parameters of Double Horse-head Walking Beam Pumping Unit.

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions L×W×H in
1	CS160-133-120	133	120, 100, 86	5, 7, 9	160000	307×79×303
2	CS229-173-120	173	120, 100, 86	5, 7, 9	229000	300×85×303
3	CS320-173-120	173	120, 100, 86	5, 7, 9	320000	327×85×300
4	CS425-213-192	213	192, 168, 120	4, 5, 6	425000	356×87×409
5	CS416-236-192	236	192, 168, 120	4, 5, 6	456000	373×90×413
6	CS640-296-192	296	192, 168, 120	4, 5, 6	640000	358×110×413
7	CS416-305-192	305	192, 168, 120	4, 5, 6	456000	373×90×413

Downward Offset Barbell Walking Beam Pumping Unit



Executive Standard: SY/T 5044, GB/T 29021

Product Features: Low dynamic load and low net torque wear.

Applicable Wells: It is suitable for various well conditions.

Technical Parameters of Downward Offset Barbell Walking Beam Pumping Unit

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions L×W×H in
1	CB-223D-128-98	128	98, 83, 67	4, 5, 6	223000	299×75×248
2	CB-320D-173-120	173	120, 94, 71	4, 5, 6	320000	319×83×264
3	CB-456D-213-165	213	165, 142, 120	4, 5, 6	456000	425×90×417
4	CB-456D-213-240	213	240, 200, 177	3, 4, 5	456000	453×90×452
5	CB-640D-296-197	296	197, 157, 120	3, 4, 5	640000	453×90×452
6	CB-640D-296-240	296	240, 205, 177	3, 4, 5	640000	488×102×453
7	CB-640D-306-192	305	192, 165, 142	3, 4, 5	640000	488×110×453
8	CB-912D-365-236	365	236, 205, 177	3, 4, 5	912000	469×110×453

Variable Torque Walking Beam Pumping Unit



Executive Standard: SY/T 5044, GB/T 29021

Product Features: Low dynamic load, moving smoothly and easy to maintain.

Applicable Wells: It is suitable for middle shallow and low permeability wells.

**Technical Parameters of Variable Torque Walking Beam Pumping Unit**

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions LxWxH in
1	B-114D-109-03	108	83, 71, 59	1-6	114000	307*63*248
2	B-2180-128-120	128	120, 94, 71	1-6	220000	354*75*268
3	B-3200-128-120	128	120, 94, 71	1-6	320000	354*83*268
4	B-3200-128-142	128	142, 120, 94	1-6	320000	365*83*279
5	B-2180-173-120	173	120, 94, 71	1-6	229500	319*75*264
6	B-3200-173-165	173	165, 142, 120	1-6	320000	403*83*306
7	B-4560-173-165	173	165, 142, 120	1-6	456000	403*85*302
8	B-3200-213-120	213	120, 94, 71	1-6	320000	335*83*264
9	B-4560-213-165	213	165, 142, 120	1-6	456000	335*83*264
10	B-4560-213-197	213	197, 157, 120	1-6	456000	486*90*294

Complex Magnetolectric Motor Pumping Unit**Executive Standard:** SY/T 6729**Product Features:** With long stroke and low frequency, the stroke and frequency can be adjusted steplessly. It has low energy cost, easy to operate and maintain.**Applicable Wells:** It is suitable for middle and deep wells.**Technical Parameters of Complex Magnetolectric Motor Pumping Unit**

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Max. Stroke Frequency at the Max. Stroke min ⁻¹	Electric Motor Torque in-lb	Overall Dimensions LxWxH in
1	WCYJW-242-173-240	173	240	4	24000	157*114*413
2	WCYJW-362-213-275	213	275	3.5	36000	157*114*476
3	WCYJW-452-256-275	256	275	3	45000	169*118*484
4	WCYJW-462-305-315	305	315	3	65000	169*118*531
5	WCYJW-827-365-315	365	315	2.2	82000	169*118*531
6	WCYJW-892-385-315	385	315	2.2	99000	177*126*539
7	WCYJW-1072-432-315	432	315	2	107000	177*126*539

Variable Torque Intelligentized Auto-control Beam Pumping Unit**Executive Standard:** SY/T 1044, GB/T 29021**Product Features:** It adopts auto-control system to realize remote control and automatic decision-making and adjustment of balance and stroke frequency, which is energy-efficient.**Applicable Wells:** It is suitable for middle, shallow and low permeability wells.**Technical Parameters of Variable Torque Intelligentized Auto-control Beam Pumping Unit**

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions LxWxH in
1	C80-67-64	67	64, 48, 36	1-8	80000	252*67*193
2	C80-89-64	89	64, 48, 36	1-8	80000	252*67*193
3	C160-109-100	109	100, 86, 74	1-8	160000	307*94*264
4	C160-153-100	153	100, 86, 74	1-8	160000	307*94*264
5	C209-173-120	173	120, 100, 86	1-8	200000	350*98*276

Solar Energy Accumulation Intelligentized Auto-control Beam Pumping Unit**Executive Standard:** SY/T 1044, GB/T 29021**Product Features:** It adopts solar energy as its power source to adjust the balance with wireless control system. There's no cable between the tail walking beam and control panel to realize remote control, automatic decision-making, adjustment of balance and stroke frequency, which is energy-efficient.**Applicable Wells:** It is suitable for reclamation oilfields.**Technical Parameters of Solar Energy Accumulation Intelligentized Auto-control Beam Pumping Unit**

No.	Designation	Structure Capacity 10 ³ lb	Stroke Length in	Stroke Per Minute min ⁻¹	Reducer Torque in-lb	Overall Dimensions LxWxH in
1	CB-4560-213-240	213	240, 205, 177	3.4, 3	456000	433*90*483
2	CB-6400-256-240	256	240, 205, 177	3.4, 3	640000	480*102*483
3	CB-6400-305-192	305	192, 165, 140	3.4, 3	640000	488*110*483



CNPC EQUIPMENT



CNPC EQUIPMENT

Introduction of Subsurface Sucker Rod Pump

In 1984, New Century Company imported the advanced equipment and technology from the United States, and then manufactured subsurface sucker rod pumps according to the standard of API Spec 11AX. In 1988, New Century Company was granted to use official API monogram on the pumps and fittings. After more than 30 years of development, the company becomes the largest and highest level producing manufacturer in China, and the pump is the famous brand in international market. The company has a large number of professional designers and skillful workers. According to customer's requirements, the company can provide personalized products and good services. The pumps include rod pump, tubing pump and special purpose pump. The annual production capacity has reached 30,000 sets with three series and forty types, and the pump bore ranges from 1.12in to 4.25in. The company also can design and manufacture special purpose pumps such as sand-control type, gas-control type, heavy oil type, ultra-deep type, deviated well type, anti-corrosion type and anti-scale type, etc.

New Century Company has international advanced production equipment, such as numerical control machines, vertical CNC machines, coreless grinding machines, deep hole chrome plating equipment, nitrocarburization well type stoves, middle frequency quenching and tempering equipment, etc.

Subsurface Sucker Rod Pump Products



Material and Technology of Pump Spare Parts

Barrel

Hardening Technology: chrome plate, carburization
 Chrome Plate Barrel Base Material: AISI1045 steel, 4/6 chrome steel, admiralty brass

Carburized Barrel Base Material: AISI1020 steel

Max. Length:30t

Chrome Plate Hardness: HV_{0.05}900-1160

Carburized Hardness: when single surface space is 0.005in, the smallest hardness is 690knopp, when single surface is 0.010in, the smallest hardness is 466knopp.

Plunger

Hardening Technology: spray metal, chrome plate

Spray Metal Hardness: ≥HV_{0.05}495

Chrome Plate Hardness: HV_{0.05}900-1160

According to customers' requirements, the company can manufacture different length of plungers and the max. length is 32t

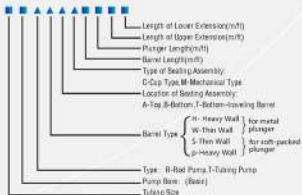
Parts

Material: carbon steel, low alloy steel, stainless steel, Ni/Cu Alloy, admiralty brass

Valves

Material: high chrome stainless steel, cobalt and chrome and tungsten alloy, tungsten carbide, titanium carbide, nickel carbide

Pump Designation



Pump Bore (basic) and Designation

Basic Dia.	in	1.06	1.12	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.25	3.75	4.25
	mm	26.99	28.58	31.75	38.10	44.45	50.80	57.15	63.50	69.85	82.55	95.25	107.95

Clearance Code and Range

Clearance Grade	Pump Bore Tolerance in	Metal Plunger			Clearance Range between Barrel and Plunger in
		Code	Diameter in	Limit Tolerance in	
1	0 ^{+0.002} / ₀	1	ø-0.001	0 ^{-0.0005}	0.001-0.0035
2		2	ø-0.002		0.002-0.0045
3		3	ø-0.003		0.003-0.0065
4		4	ø-0.004		0.004-0.0085
5		5	ø-0.005		0.005-0.0105

Ordering Information

The pump type and code need to be described carefully with above designation. For example: 1 3/4" rod pump with 16ft heavy wall barrel, 2ft upper extension, 2ft lower extension, 4ft plunger and a bottom cup type sealing assembly for operation in 2 7/8" tubing. For this pump type, it should be described as follows: 25-175RHBC16-4-2-2. In addition, the following information needs to be provided:

1. Barrel material and surface hardening process.
2. Plunger material and surface hardening process.
3. Valve assembly material.
4. Pump clearance will be provided in grade 2 if there is no requirement in the order.
5. Alloy steel single piece cage will be provided if there is no requirement in the order.
6. The extension will not be provided if there is no requirement in the order.
7. The strainer pipe will not be provided if there is no requirement in the order.
8. Other requirements can be provided by the customers.

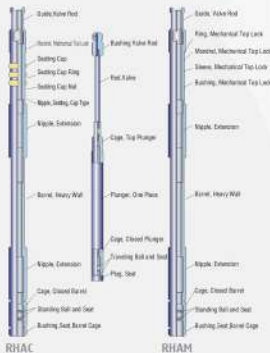


Rod Pump

Rod pump is also referred to "insert pump" as it should be installed inside the tubing with sucker rod. It is not necessary to pull the tubing out of the well when checking the pump, which can make the operation easier and quicker. It also prolongs the service life of tubing. It is suitable for deep well and deviated well. According to seating assembly mode, the rod pump can be divided into two types: cup hold-down pump and mechanical hold-down pump. According to the anchored position, the rod pump can be divided into three types: stationary barrel top anchored pump, stationary barrel bottom anchored pump and traveling barrel bottom anchored pump.

Stationary Barrel, Top Anchored, Rod Pump

The pump barrel is anchored on the top by a mechanical or cup lock. When the rod pump is running, fluid discharged from the guide cage flushes sand sedimentation away. So it is suitable for sandy well. However, it is not suitable for deep well because the internal pressure and tension caused by the fluid column is likely to cause the pump barrel to expand, and enlarge plunger clearance. There are four types of stationary barrel top anchored rod pump: RHAC, RHAC, RWAC and RWAC.



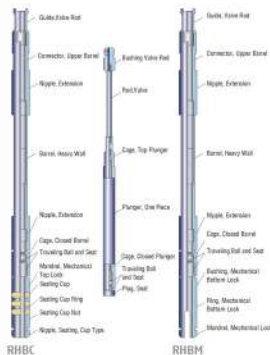
Specifications and Parameters

Specification	Nominal Bore in	Plunger Length ft	Sucker Rod Thread in	Tubing Size in
26(23)-1125HAC	1.12	2.0	3/4	2.58 (2.70)
26(20)-1125HAA			3/4	2.58 (2.70)
26(21)-1250HAC	1.25	2.0	3/4	2.78
26(15)-1250HAA			3/4	2.78
25-1600HAC	1.50	2.0	3/4	2.78
25-1600HAA			3/4	2.78
25-1750HAC	1.75	2.0	3/4	2.78
25-1750HAA			3/4	2.78
25-2000HAC	2.00	2.0	3/4	2.78
25-2000HAA			3/4	2.78
30-2250HAC	2.25	2.0	3/4	3.10
30-2250HAA			3/4	3.10
30-2500HAC	2.50	2.0	3/4	3.10
30-2500HAA			3/4	3.10

Rod Pump

Stationary Barrel, Bottom Anchored, Rod Pump

The pump barrel is anchored at the bottom by a mechanical or cup lock. Because the barrel can only bear the external hydrostatic pressure rather than the tension load caused by the fluid column weight, there is little change in plunger clearance. This type of pump is suitable for deep well. However, it is not suitable for sandy well because the bearing point is at bottom, and the sand is easy to be stored in the annular space between barrel and tubing. There are four types of stationary barrel bottom anchor rod pump: RHBC, RHBM, RWBC and RWBM.



Specifications and Parameters

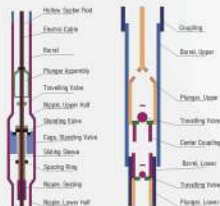
Specification	Nominal Bore in	Plunger Length ft	Sucker Rod Thread in	Tubing Size in
26(20)-1125HAC	1.12	2.0	3/4	2.58 (2.70)
26(20)-1125HAA			3/4	2.58 (2.70)
26(20)-1250HAC	1.25	2.0	3/4	2.78
26(20)-1250HAA			3/4	2.78
25-1600HAC	1.50	2.0	3/4	2.78
25-1600HAA			3/4	2.78
25-1750HAC	1.75	2.0	3/4	2.78
25-1750HAA			3/4	2.78
25-2000HAC	2.00	2.0	3/4	2.78
25-2000HAA			3/4	2.78
30-2250HAC	2.25	2.0	3/4	3.10
30-2250HAA			3/4	3.10
30-2500HAC	2.50	2.0	3/4	3.10
30-2500HAA			3/4	3.10



Special Purpose Pump

Pump for Heavy Oil

With high viscosity and high flow resistance of the oil, it is difficult to put down the sucker rod and causes inclining abrasion between rod and tubing. It also decreases the pump constant, delays the valve closing time, reduces the pump efficiency and influences the well production. This type of pump can solve these problems.



Electric Heating Pump for Heavy Oil

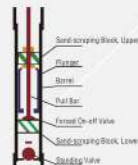
Hydraulic Feed Back Pump

Specifications and Parameters

Specification	Nominal Bore	Plunger Length	Sucker Rod Thread	Tubing Size
Electric Heating Pump for Heavy Oil				
CYB251CDR	2.25	3-5	KG34 or KG36	2 7/8 or 3 1/2
CYB251CDR	2.75		KG34 or KG36	3 1/2
Hydraulic Feed Back Pump				
CYB25150DYF	2.25/1.50	2-4	3/4	2 7/8
CYB25175DYF	2.75/1.75		7/8	3 1/2
CYB25225DYF	3.25/2.25		7/8	4
CYB25275DYF	3.75/2.75		1	4 1/2

Gas-control Pump

This type of pump is suitable for high oil-gas ratio well and can raise the pump efficiency. In the well with high gas content, the conventional pump can not work normally. Even worse, it'll produce impact on the liquid surface, which will speed up the damage of downhole equipment such as sucker rod, valve rod, valve cage, valve ball, valve seat and tubing. The gas-control pump can solve these problems.



Forced On-off Gas-control Pump for Heavy Oil

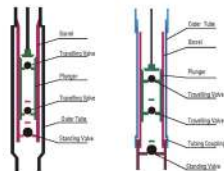
Forced On-off Gas-control Pump for Heavy Oil

Specifications and Parameters

Specification	Nominal Bore	Plunger Length	Tubing Size	Sucker Rod Thread
CYB30100G	1.50	3	2 7/8	3/4
CYB41100G	1.75		2 7/8	3/4
CYB51100G	2.25		2 7/8	3/4
CYB70100G	2.75		3 1/2	7/8

Hanging-up Pump

This type of pump is designed to be used in the deep well. It improves the barrel loading condition and enhances the pump efficiency.



Hanging-up Pump

Bottom Anchored Hanging-up Pump

Specifications and Parameters

Specification	Nominal Bore	Plunger Length	Sucker Rod Thread	Tubing Size
Hanging-up Pump				
CYB150THGG	1.50	3-6	5/8 or 3/4	2 7/8
CYB175THGG	1.75		3/4	2 7/8
CYB225THGG	2.25		3/4	2 7/8
Bottom Anchored Hanging-up Pump				
CYB150THXG	1.50	3-6	5/8 or 3/4	2 7/8
CYB175THXG	1.75		3/4	2 7/8
CYB225THXG	2.25		3/4	2 7/8

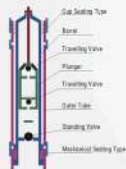
Special Purpose Pump



Special Purpose Pump

Double Anchored Rod Pump

This type of pump is designed to be used in the large anchored force and reliable sealing well.



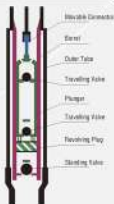
Specifications and Parameters

Specification	Nominal Bore (in)	Plunger Length (ft)	Sucker Rod Thread (in)	Tubing Size (in)
Top and Bottom Double Anchored Rod Pump				
25-125RHAC-8M	1.25	3-6	3/4	2 7/8
25-150RHAC-8M	1.50		3/4	2 7/8
25-175RHAC-8M	1.75		3/4	2 7/8
30-225RHAC-8M	2.25		3/4	3 1/2
Top Double Anchored Rod Pump				
25-125RHAM-AC	1.25	3-6	3/4	2 7/8
25-150RHAM-AC	1.50		3/4	2 7/8
25-175RHAM-AC	1.75		3/4	2 7/8
30-225RHAM-AC	2.25		3/4	3 1/2
Bottom Double Anchored Rod Pump				
25-125RHBC-8M	1.25	2-6	3/4	2 7/8
25-150RHBC-8M	1.50		3/4	2 7/8
25-175RHBC-8M	1.75		3/4	2 7/8
30-225RHBC-8M	2.25		3/4	3 1/2

Pump for Deviated Well

It is designed to be used in the deviated well. The features are listed as follows:

1. The guidance quality of cage is good, so it can ensure the valve closing in time.
2. The outer tube can improve the force condition of barrel.
3. The rotating plunger can rotate and reduce the inclining abrasion.
4. It is suitable for the well which deviation angle is no more than 45°.



Specifications and Parameters

Specification	Nominal Bore (in)	Plunger Length (ft)	Sucker Rod Thread (in)	Tubing Size (in)
CYB150HTX	1.50	4-6	5/8	2 7/8
CYB175HTX	1.75		3/4	2 7/8
CYB225HTX	2.25		3/4	2 7/8
CYB275HTX	2.75		7/8	3 1/2

Special Purpose Pump

Other Special Purpose Pump

Specifications and Parameters

Specification	Nominal Bore (in)	Plunger Length (ft)	Sucker Rod Thread (in)	Tubing Size (in)
Pump for separate zone production: It is designed to be used in the multiple zone well.				
225/150TFC	2.25/1.50	3-6	3/4	2 7/8
275/175TFC	2.75/1.75		7/8	3 1/2
Double-action Pump: It is designed to be used in the high capacity well.				
190/225TSCZY	1.90/2.25	3-6	3/4	2 7/8
175/225TSCZY	1.75/2.25		7/8	3 1/2
175/325TSCZY	1.75/3.25		7/8	3 1/2
Annular seal pump: It reduces the pump max. diameter in order to test the well through annular space.				
275TDDQ	2.75	3-6	7/8	2 7/8
Pump for deep well: It is designed to be used in the deep well. It has high pump efficiency and high reliability.				
CYB150 SJ	1.50	5	5/8	2 7/8
CYB175 SJ	1.75	5	3/4	2 7/8
CYB225 SJ	2.25	5	3/4	2 7/8
CYB275 SJ	2.75	5	7/8	3 1/2
Pump for tertiary recovery: It is designed to be used in the polymer flooding well and ternary polymer injection well. It can solve the problems of pump-block and large resistance of plunger in the downstroke.				
CYB190 SCGY	1.90	3-4	3/4	2 7/8
CYB175 SCGY	1.75	3-4	3/4	2 7/8
CYB225 SCGY	2.25	3-4	3/4	2 7/8
CYB275 SCGY	2.75	3-4	7/8	3 1/2
CYB325 SCGY	3.25	3-4	7/8	3 1/2
CYB375 SCGY	3.75	3-4	7/8	3 1/2
175/325SCGY	1.75/3.25	14-30	3/4	3 1/2
225/275SCGY	2.25/2.75	14-30	3/4	3 1/2



BOHAI EQUIPMENT NEW CENTURY
MACHINERY MANUFACTURING CO., LTD.

Sucker Rod Products

— Introduction of Sucker Rod —

New Century Company has two sucker rod production lines: upsetting technology line and friction welding technology line. There are several series of products: solid sucker rod, hollow sucker rod, and special sucker rod for PC pump, sucker rod for anti-corrosion.

Upsetting sucker rod production line was established in 2012. The annual production capacity can reach 5,000,000 meters of solid sucker rod. New Century Company has an international advanced rod forming technology and hot die forging automatic production line, and also has high precision straightening machine, the bulk heat treatment resistance furnace, powerful surface shot blasting machine, fluorescent magnetic particle flaw detection unit, five coordinates special NC machine, superasonic frequency surface quenching machine, and other high-end equipment. Besides, the technology has reached to the first class in domestic markets and enjoyed a high reputation in international markets.

New Century Company established the first sucker rod production line with friction welding technology in 1991 for producing hollow sucker rod and special driving sucker rod for PC Pump. The annual production capacity is 2,000,000 meters. Friction welding production line has many advanced equipment: eddy current and ultrasonic nondestructive testing machine, middle frequency quenching and tempering machine, friction welding machine and welding seam tempering machine.

**Upsetting Sucker Rod**

New Century Company adopts international advanced upsetting production technology, which is full automatic control of heating and upsetting, and achieves continuous upsetting in eight stations. Sucker rod connector has the features of good forging structure, continuous metal streamline, higher grain grade, and there are no defects of overheating burnt, crack, pit, folding. Sucker rod has advantages of high forming precision, high straightness, good structure property, good anti stress destruction and corrosion resistant ability.

Main specifications: 5/8", 3/4", 7/8", 1", 1 1/8"
Sucker rod grade: K, KD, D, HL, HY, which accord with API Spec 11B and SY15029 specifications.

**Upsetting Sucker Rod****Specifications and Parameters of Upsetting Sucker Rod**

Specification	Rod Body			Connector O.D.						Length		
	Dia	Roundness Tolerance	Nominal Thread	Connector		Coupling		Slim Hole Coupling		Rod	Pony Rod	
				in	mm	in	mm	in	mm			in
DY16	5/8in	0.525	15.88	1.576	1.250	31.75	1.500	38.10	1.250	31.8	25.0	588.0
DY18	3/4in	0.750	19.05	1.710	1.300	38.10	1.625	41.28	1.500	38.1	299.0	7518.4
DY22	7/8in	0.875	22.25	1.976	1.625	41.28	1.810	48.00	1.625	41.3	399.0	5642.4
DY25	1in	1.000	25.40	1.328	2.000	50.80	2.187	55.60	2.000	50.8	92.0	2326.8
DY28	1 1/8in	1.125	28.58	1.576	2.250	57.15	2.375	60.33	—	—	116.0	2940.4
											140.0	3556.0

Specifications and Parameters of Polished Rod

Specification	Rod Body			Connector O.D.						Length		
	Dia	Roundness Tolerance	Nominal Thread	Connector		Coupling		Slim Hole Coupling		Rod	Pony Rod	
				in	mm	in	mm	in	mm			in
DY022	7/8in	0.875	22.23	1.376	1.625	41.28	1.811	48.0	1.625	41.3	—	—
DY025	1in	1.000	25.40	1.376 or 1.308	1.625 or 2	41.28 or 50.80	1.811 or 2.188	48.0 or 55.0	1.625 or 2	41.3 or 50.8	399	7620
DY028	1 1/8in	1.125	28.58	1.58	2	50.80	2.189	55.5	2	50.8	438	10922
DY032	1 1/4in	1.250	31.75	—	—	—	—	—	—	—	—	—
DY038	1 1/2in	1.000	38.10	—	—	—	—	—	—	—	—	—

The parameters comply to the API Spec 11B Sucker Rod Specification

Mechanical Property of Upsetting Sucker Rod and Polished Rod

Strength Grade	Yield Strength R_{eL}		Tensile Strength R_m		Elongation Percentage A ₅ %	Section Contracture Z %	Surface Hardness HRC	Core Hardness HBW
	psi	MPa	psi	MPa				
K	>=80000	>=55	90 000 ~ 115 000	620 ~ 795	>=13	>=50	—	—
D	>=80000	>=500	115 000 ~ 140 000	795 ~ 995	>=18	>=50	—	—
KD	>=80000	>=500	115 000 ~ 140 000	795 ~ 995	>=18	>=50	—	—
HL	>=110000	>=785	140 000 ~ 170 000	955 ~ 1195	>=18	>=45	—	—
HY	—	—	140 000 ~ 170 000	955 ~ 1195	—	—	>=42	>=224



Sucker Rod for Anti-corrosion

New Century Company has two types of anti-corrosion sucker rods: material anti-corrosion sucker rod (grade KD) and technology anti-corrosion sucker rod (surface tungsten alloy plating).

Material anti-corrosion sucker rod: Grade KD sucker rods are made from high quality alloy steel (Cr-Ni-Mo), such as AISI-310, AISI-4330, AISI-4720. Anti-corrosion sucker rod has good corrosion proof performance and can be applied to oil wells of high corrosive conditions. Besides, we can design and produce special anti-corrosion sucker rod according to customers' special requirements and different corrosive medium.

Technology anti-corrosion sucker rod: we adopt tungsten alloy plating technology to form anticorrosive wearing coat on the surface. The coating acts nano crystalline state after heat treatment and has the advantages of high microscopic hardness, corrosion resistant, anti-scaling, good abrasion resistance, strong bonding force and high temperature resistance. There are no hydrogen embrittlement and no change on mechanical performance after plating, which is suitable for deep well, deviated well and high H₂S gas well.

The parameters of tungsten alloy plating anti-corrosion sucker rod:

Plating Thickness: >0.04mm

Hardness: 550-650HV_{0.05}

Corrosion resistance: 1MPa H₂S partial pressure resistance, 100.000mg/L concentration Cl⁻ resistance and different kinds of CO₂ resistance.

Bonding force: the coating layer will not bubble, fall off and separate.

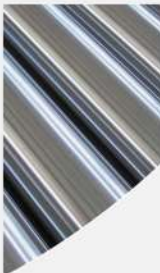


Sucker Rod for Anti-corrosion



Coupling for Anti-corrosion and Anti-abrasion

Polished Rod for Anti-corrosion and Anti-abrasion



Polished Rod for Anti-corrosion and Anti-abrasion

With coating on the polished rod, its hardness can reach to HRC56 and the combination strength is more than 400MPa, which prolongs the service life of the polished rod and the packing. For high hardness and self-lubrication characteristic, it is especially suitable for high corrosive medium well, sandy well and it can prevent the break of polished rod.

Centralizer

New Century Company can produce good anti-abrasion and big flow passage centralizer for sucker rod.

Hollow Sucker Rod

Hollow sucker rod is a kind of special product which is designed for producing high condensation oil, high viscosity oil and high paraffin oil. The hollow sucker rod's connector and coupling are welded to the two ends of seamless steel pipe by friction welding technology. It forms a passage inside the rod string, which can achieve all functions of hollow sucker rod.

The mechanical property of hollow sucker rod has reached the standard of Hollow Sucker Rod Grade HL Grade D and SY170050.

The hollow sucker rod can be used in:

1. Production device with injecting heat carrier.
 2. Electric heating hollow sucker rod system.
 3. Tubeloss production devices.
 4. Electric heating hollow sucker rod system for flowing well.
5. It can also be used to drive the PC pump as its high load bearing and high rigidity.



Connector and Coupling of Hollow Sucker Rod



Hollow Sucker Rod

Specifications and Parameters of Hollow Sucker Rod

Specification	Rod Body						Connector O.D.		Length			
	Dia		Thickness		Nominal Thread	in	mm	in	Rod		Pony Rod	
	mm	in	mm	in					mm	ft	mm	ft
NG32	32	1.25	5.5	0.22	1 7/16	48	1.89				600	1.97
NG34	34	1.34	5.0	0.20	1 1/2	50	1.97				1000	3.28
			5.5	0.22							~	~
NG36	36	1.42	6.0	0.24	1 3/8	50	1.97				2000	6.56
			6.5	0.26							~	~
NG38	38	1.50	6.0	0.24	1 3/4	56	2.20				3000	9.84
NG42	42	1.65	6.0	0.24	1 7/8	59	2.32				3500	11.48

Mechanical Property of Hollow Sucker Rod

Strength Grade	Yield Strength R _y MPa	Tensile Strength R _m MPa	Elongation Percentage A	Section Contraction Z %
D	≥ 590	795 - 905	≥ 10	≥ 48
HL	≥ 795	965 - 1165	≥ 10	≥ 45

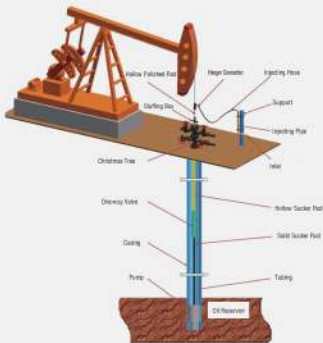


Production Device with Heat Carrier Injection through Hollow Sucker Rod

The device is used to raise the temperature in the wellbore and decrease the viscosity of crude oil. It can solve the paraffin troubles of the wellbore, and make the well equipment working normally by injecting hot water, hot oil, steam and chemicals continuously or intermittently through the hollow sucker rod inner bore.

Features:

- It has good heating efficiency and there is no interference or pollution to the oil layer.
- The well can be washed at any time according to the requirement of non-stop, and it is no need to pump back the washing fluid.
- Simple in process, easy to operate and low energy cost.
- Extend the effective stroke of plunger, increase pump efficiency and prolong the service life.
- It is used to decrease the viscosity of crude oil by injecting with heat carrier and chemicals. Besides, this system can be used to test downhole condition.

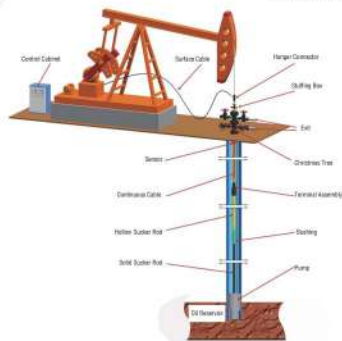


Electric Heating Hollow Sucker Rod System

It makes electric cable go through the inner bore of hollow sucker rod and a current loop can be formed between the cable and rod body. When the alternating current is supplied, the wall of hollow sucker rod is heated based on the principle of skin effect. Then the crude oil in the whole tubing string can be heated and the viscosity will be decreased. It can improve the oil flowability and prevent paraffin troubles.

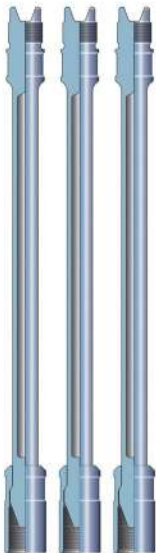
Features:

- Simple to install.
- Easy to operate and manage.
- It has high heating efficiency and can realize automatic temperature control.
- Extend the plunger effective stroke, increase pump efficiency and prolong the maintenance period of pumping unit well.
- Its safe and reliable in structure, and can realize repeated operation.
- Improve the load conditions of the pumping unit. We will select the type and design the system for the customers according to the well conditions if necessary.





Special Driving Sucker Rod for PC Pump (Driving Sucker Rod)



The special hollow sucker rods for PC pump have been developed on the basis of general solid and hollow sucker rod production system according to the requirements of customers. It can solve the conventional problems of broken and unscrewed rod in PC pumping wells.

Structure:

There are two kinds of driving sucker rods: driving solid sucker rod and driving hollow sucker rod. There are two types of connection:

1. Double shoulder straight thread type
2. Wedge jack left hand thread type

Features:

1. The structure of double shoulder straight thread type:

a. Increase the thread specification and improve the thread torsional strength and connecting capacity.
b. Double shoulder structure adds a load bearing surface to enhance connecting capacity effectively by increasing friction area. The friction area of the shoulder is doubled, so it can bear more heavy transient torque and reversal torque, prevent from making and unscrewing the thread, and protect thread from break. It is easy to operate and can be reused repeatedly.

2. The structure of wedge jack left hand thread type: the part of wedge jack is V type and the thread root is thicker, so the twisting strength is higher. The connecting thread is only used for connection. The left hand thread can prevent from being unscrewed when coupling rubs against tubing wall. This type of driving sucker rod is widely used by customers.



Double Shoulder Straight Thread Driving Rod Connector



Wedge Jack Left Hand Thread Driving Rod Connector

Specifications and Parameters of Driving Sucker Rod

Type	Specification		Thread	Max. O.D.		Length			
	mm	in		mm	in	Rod		Pins	
Solid Sucker Rod	φ22	7/8	1.3/8	51	2.01				
	φ25	1	1.3/8 or 1.3/16	φ48 or φ52	1.89 or 2.05				
	φ28	1.1/8	1.3/16 or 1.7/8	φ82 or φ90	2.05 or 2.30				
Hollow Sucker Rod	φ26x5	1.40-0.22	1.3/16 or 1.7/8	φ82 or φ90	2.05 or 2.28	2000	22.57	1000	7.02
	φ26x8	1.40-0.24	1.3/4 or 1.7/8	φ50 or φ60	2.20 or 2.36	8000	26.25	1000	4.92
	φ26x9	1.65-0.24	2	φ81	2.43	6140	30	2000	6.50
								3000	9.84

Testing Torque of Driving Sucker Rod

Specification	mm	φ 22	φ 25	φ 26	φ 30	φ 36	φ 42
	in	0.87	1	1.13	1.42	1.50	1.65
Testing Torque	KN.m	≥ 1.4	≥ 1.8	≥ 2.4	≥ 3.6	≥ 4.2	≥ 5.0

Recommended Thread Rotate Torque

Thread Size	in	1.3/8	1.3/16	1.3/4	1.7/8	2
	mm	34.93	33.68	44.45	47.63	50.80
Rotate Torque	KN.m	0.8 - 1.0	0.9 - 1.0	1.0 - 1.2	1.1 - 1.3	1.2 - 1.4



Tubing Products

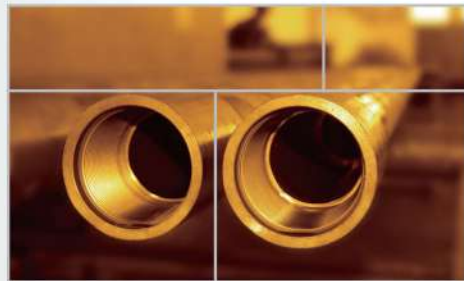
Introduction of Tubing

New Century Company can manufacture tubing, pup joint and tubing coupling according to API Spec 5CT and API Spec 5B with the steel grade including J55, K55, N80, L80 and P110, and with NUE and EUE thread type. New Century Company has four tubing production lines, which are equipped with advanced numerical control thread processing machines and efficient hydrostatic test equipment. New Century Company has a complete quality control and tracing system. The annual production capacity can reach 100,000 tons.



Specifications and Parameters of Tubing

Specification	Size	O.D. mm	Wall Thickness PWT (mm)	Length Series mm
Tubing (NUE, J55)	1.807	48.26	2.75 (3.58)	800 - 4750
	2.387	60.33	4.80 (4.65)	
	2.107	73.32	6.40 (5.51)	
	3.127	88.90	9.20 (8.46)	
	4	101.60	10.70 (8.85)	
Tubing EUE (NUE, J55)	4.127	114.30	12.00 (8.88)	800 - 4750
	5.307	146.20	14.70 (14.62)	
	2.128	73.32	6.30 (5.51)	
	3.127	88.90	6.30 (8.46)	
	4.127	114.30	12.75 (8.88)	
Specification	Size	O.D. mm	Min. Length mm	Pup Joint Series mm
Coupling	1.807	66.68	66.26	500 - 8000
	2.387	75.80	107.66	
	2.107	68.40	130.18	
	3.127	147.66	143.88	
	4	130.65	146.88	
	4.127	132.68	155.33	
	3.367 5.18	77.30	123.62	
	2.128 5.18	82.17	133.26	
2.127 5.18	114.30	146.05		





Casing Products

Introduction of Casing

New Century Company has four casing production lines, which are equipped with advanced numerical control thread processing machines from Belgium Colinet and efficient hydrostatic test equipment. New Century Company has a complete quality control and tracing system. The annual production capacity can reach 200,000 tons, including LC, SC, 8C, BMEC and BMC special thread. We can manufacture casing, pup joint and casing coupling according to the standard of API Spec SCT and API Spec SB with the steel grade of H40, J55, K55, N80, L80 and P110.



Specifications and Parameters of Casing

Specification	O.D. mm	Wall Thickness PIF (mm)	Thread Type	Length Range mm
4 1/2"	114.30	6.88 (0.271)	SC	R2 (2029-10568) R3 (10300-12569)
		10.50 (0.414)	SC, 8C	
		11.00 (0.433)	SC, LC, 8C	
5"	127.00	10.00 (0.433)	SC, LC, 8C	
		10.00 (7.57)	SC, LC, 8C	
5 1/2"	139.70	14.00 (0.551)	SC	
		15.50 (0.611)	SC, LC, 8C	
		17.00 (7.72)	SC, LC, 8C	
		18.00 (0.71)	LC, 8C	
6 5/8"	168.28	16.00 (7.25)	SC, LC, 8C	
		15.00 (0.594)	SC, LC, 8C	
		18.00 (0.69)	LC, 8C	
		22.00 (12.00)	LC, 8C	
7"	177.80	20.00 (0.81)	SC	
		20.00 (0.84)	SC, LC, 8C	
		20.00 (0.18)	SC, LC, 8C	
		20.00 (0.30)	LC, 8C	
7 5/8"	193.98	33.78 (0.902)	LC, 8C	
		30.00 (12.70)	LC, 8C	
8 5/8"	219.48	38.00 (0.94)	SC, LC, 8C	
		40.00 (0.00)	SC, LC, 8C	
		47.00 (1.90)	LC, 8C	
10 3/4"	273.05	52.75 (2.08)	SC	
		46.50 (0.88)	SC, 8C	
13 3/8"	339.72	43.00 (0.170)	SC, 8C	
		55.00 (0.65)	SC, 8C	
		61.00 (2.02)	SC, 8C	
		68.00 (2.70)	SC, 8C	

Specifications and Parameters of Casing Coupling

Specification	Thread Type	O.D. mm	Weight kg	Min. Length mm
4 1/2"	LC	127.00	4.15	172.00
	SC		3.62	180.75
5"	LC	141.30	5.78	190.00
	SC		4.98	195.18
5 1/2"	LC	159.07	6.42	202.00
	SC		5.23	171.45
7"	LC	198.00	15.90	228.00
	SC		10.80	184.18



BOHAI EQUIPMENT NEW CENTURY
MACHINE MANUFACTURING CO., LTD.

HFW Steel Pipe Products

Introduction of HFW Steel Pipe

New Century Company has a $\varnothing 244.48\text{mm}$ (9-5/8in) HFW steel pipe production line equipped with an advanced FFX pipe forming unit from Japan, an E.F.D. high frequency unit from Norway and a NDT equipment from Canada. New Century Company has advanced molding technology, complete control system and reliable NDT. The annual production capacity can reach 100,000 tons.



FFX Forming Equipment



High Frequency Welding Equipment



Technical Specifications

1-Product Standards

API Spec 5CT, API Spec 5L, GB-T19830, GB-T9711, GB-T3091, JIS G3452, JIS G3444, JIS G3445, EN 10218, ASTM A513

2-Pipe Specifications

(1) \varnothing : 3-1/2 - 9-5/8in (100.5 - $\varnothing 244.48\text{mm}$)
(2) Thickness : 0.1 - 0.5in (2.5 - 12.7mm)
(3) Pipe Length : 20 - 40ft (6.4 - 12.8m)

3-Grade

Pipe Line Steel : A, B, X42, X46, X52, X56, X60, X65, X70, X80, L175, L210, L245, L290, L330, L360, L380, L415, L450, L460, L565

Casing : H40, J55, K55, N80

Structural Steel : Q215, Q235, Q295, Q345



BOHAI EQUIPMENT NEW CENTURY MACHINERY MANUFACTURING CO., LTD

Tertiary Recovery Equipment

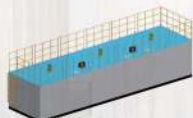
Introduction of Tertiary Recovery Equipment

New Century Company developed and researched the first set of Polymer Injection Equipment in 1989. The company developed the device from single polymer dissolution to a series complete set of skid-mounted modularization equipment. The series polymer injection equipment has more than ten types such as ZJ20, ZJ30, ZJ50 Polymer Dissolution Equipment, Polymer Injection Equipment, Binary Combination Injection Equipment, Ternary Combination Injection Equipment, Air Foam Injection Equipment, Flowing Gel Injection Equipment and Micro-sphere Injection Equipment, etc.

More than 80 sets of Polymer Injection Equipment have been used in the domestic oilfields such as Dagang, Shengli, Huabei, Henan and Bohai, etc.



1. Dissolution Unit



2. Maturation Unit



3. Feeding Unit



4. Injection Unit



Product Features

1. The complete set of equipment is designed with skid-mounted modular structure or fixed station structure and it makes the installation and transportation work easily.
2. The set of technology is optimized design and the retention rate of viscosity should remain above 94%.
3. The set of equipment can control automatically, and it has the advantages of high reliability and low failure rate.
4. Show the technology status dynamically, and adjust the parameters conveniently and accurately.
5. The chemicals including polymer, alkali and surfactant are commingled by practiced technology with high mixing uniformity and it is less than 1% accuracy error.
6. Adopt special structure mixer and it can get good results of dispersal and dissolution, without fish eye.

