Wellhead and Christmas Tree Equipment

Wellhead And Christmas Tree Equipment can be mainly used in Continental flowing wells, pumping wells, pump wells, screw pump oil wells. The product includes Conventional oil production wellhead, KYS Series Wellhead And Christmas Tree Equipment, electrical submersible pump wellhead, high-pressure anti-corrosion wellhead, Anti Hydrogen sulfide corrosion wellhead and Thermal Wellhead.

Product Features:
- Simple structure, small size
- Stable performance, easy to operate
- With anti-theft feature

Product Specifications:

<table>
<thead>
<tr>
<th>Item</th>
<th>Working Pressure MPa (psi)</th>
<th>Product Specification Level</th>
<th>Material Class</th>
<th>Temperature Classification (°C)</th>
<th>Working medium</th>
<th>Thread of Casing flange</th>
<th>Thread of Tubing hanger</th>
<th>Connection Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellhead and Christmas Tree Equipment</td>
<td>13.8<del>103.5 (2000</del>15000)</td>
<td>PSL1 PSL2 PSL3</td>
<td>AA BB CC DD EE FF</td>
<td>-35 ~ 370</td>
<td>Oil, water and saturated steam, gas</td>
<td>51/2&quot;, 7&quot; 95/8&quot;</td>
<td>31/2, EU27/8EU</td>
<td>Flange for tubing head spool; Clamp or flange for gate valve</td>
</tr>
</tbody>
</table>
KYS Series Wellhead And Christmas Tree Equipment

1. It can be used for conventional production well, heavy oil well and extra heavy oil well;
2. Structure type: casing flange, single-stage casing head, dual-stage casing head, etc.;
3. All types and sizes of KYS series wellhead and Christmas tree equipment can be designed and produced according to the customers’ requirements.

Product Specifications:

<table>
<thead>
<tr>
<th>Model</th>
<th>KYS13.8-Y</th>
<th>KYS20.7-Y</th>
<th>KYS34.5-Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated working pressure (Mpa)</td>
<td>13.8(2000psi)</td>
<td>20.7(3000psi)</td>
<td>34.5(5000psi)</td>
</tr>
<tr>
<td>Product specification level</td>
<td>PSL1</td>
<td>PSL2</td>
<td></td>
</tr>
<tr>
<td>Temperature classification (℃)</td>
<td>Y (-18℃ ~ 345℃)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance requirement</td>
<td>PR1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material class</td>
<td>AA, BB, CC, DD, EE, FF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecting mode</td>
<td>Clamp on mechanism or flanged</td>
<td>Clamp on mechanism or flanged</td>
<td>flanged</td>
</tr>
</tbody>
</table>

KY (Q) 78-105 high pressure oil (gas) Christmas tree

suitable for rated pressure 105Mpa and the high pressure oil(gas) well which containing carbon dioxide corrosive gas.

Product Specifications:

1. nominal pressure 103.5Mpa 15000PSI
2. product performance standards API Spec 6A
3. product specification level PSL3
4. material level EE/FF
5. temperature level PU
6. suspension tubing 3-1/2 EU
7. nominal diameter 3-1/16 78
Conventional oil production wellhead

The KY-21 wellhead and X-mas tree uses wedge valves, and it is suitable for conventional well and water injection well.

**Product Specifications:**
1. Rated working pressure: 21MPa
2. Nominal diameter: 65mm (2 9/16"
3. Connecting mode: Flange or clamp

11X3-1/8X3-1/2EU-5k export electrical submersible pump wellhead

The wellhead equipment is used for electrical submersible pump wells.

**Product Features:**
1. There is optimizing design of the head of tubing, to meet the strength and rational distribution of the internal structure parts, its easy installation and operation.
2. There is reliable seal, sealing O ring in the external surface which working with the sealing gaskets to ensure maximum sealing performance.
3. Using a special back-pressure in the tubing hung thread, in order realize no pressure work.

**Product Specifications:**
1. Nominal pressure: 34.5Mpa 5000PSI
2. Suspension tubing: 3-1/2"EU
3. Back pressure screw: 3"BPV
4. Connection flange: 11"
5. Product specification level: PSL1
6. Main path, bypass path: 3-1/8"
7. Rated power of cable through device: 140Amps 5kVAc
TGT13-3/8X9-5/8X5-1/2-5k/10k

high-pressure anti-corrosion gas wellhead device

The device could meet rated pressure of 70MPa, satisfied the requirement of high pressure oil (gas) well which include carbon dioxide corrosion gas. suitable for rated pressure 35MPa, and the oil wells which containing carbon dioxide corrosive gas.

**Product Features:**

easy operation, no need of on-site welding, solved the problem of high pressure or high manufacturing level wellhead material difficult welding. It can effectively prevent corrosion of valves stem. Gas Christmas tree is connecting the heads of tubing pipe flange. There are two plate valves and two adjustable throttle valves setting on the both sides of tubing head and main valve, the plate valve designed with balance rod which can reduce the switch torque.

**Product Specifications:**

- Product specification level: PSL2
- Pressure level: 5000PSI/10000 PSI (34.5MPa/70 Mpa)
- Flange program: 13-5/8 × 11 × 7-1/16
- Tubing program: 13-3/8 × 9-5/8 × 5-1/2
- Suspension tubing: 2-7/8EU or 3-1/2EU
- Material level: EE
- Temperature level: PU
SKR21-370 SAGD Wellhead

1. Standard: API Spec 6A;
2. It is suitable for SAGD process of heavy oil production;
3. The test device can reach the specified position by adopting the structure of tri-tubing and twin tubing-head adapter.
4. All types and sizes of SAGD wellhead and christmas tree equipment can be designed and produced according to the customers’ requirements.

Product Features:

In oil production a gas mixture with high pressure will tend to migrate up the well and has the potential to cause a blowout. The wellhead is equipped with a shut down device located at the cross. If a blowout occurs the rig crew can turn the handles quickly and the sealing elements will seal the polished rod thus preventing pressure from escaping thereby controlling the blowout.

Product Specifications:

| Nominal diameter of flat valve (mm) | 80 52 |
| Working pressure (MPa) | 21 (3000psi) |
| Working temperature (°C) | -35 ~ 370 |
| Working medium | Oil, water and saturated steam |
| Vertical bore of tubing head spool (mm) | 230 |
| Threads of casing flange | 9-5/8"BC |
| Threads of tubing hanger | 4-1/2"NU & 1.9"NU |
| Connection mode | Flange |
| Product Specification Level | PSL1 |
| Performance Equipment | PR1 |
Anti Hydrogen sulfide corrosion wellhead

This device could working on the oil (gas) well which include H2S, CO2. The product is suitable for the oil (gas) well which containing H2S, CO2 and other corrosive gases.

Product Features:
Similar as normal wellhead, but there is differences in material selecting, corrosion research and prevention, heating treatment technology and forging processing. Can satisfy the special oil (gas) working condition requirement which containing H2S, CO2 and other corrosive gases.

Product Specifications:
- product specification level: PSL2
- pressure level: 10000psi, 69Mpa
- nominal diameter: 2-9/16
- bypass path: 2-9/16
- material level: EE
- temperature level: -29 ~ 121
- product performance grade: PR1

Gas Production Wellhead And Christmas Tree Equipment

Standard: API Spec 6A;
All types and sizes of wellhead and christmas tree equipment can be designed and produced according to the customers’ requirements.

Product Specifications:

<table>
<thead>
<tr>
<th>Model</th>
<th>KQ65/103-34.5</th>
<th>KQ65-69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working pressure (MPa)</td>
<td>34.5 (5000psi)</td>
<td>69 (10000psi)</td>
</tr>
<tr>
<td>Working temperature (℃)</td>
<td>-29 ~ 121</td>
<td>-29 ~ 121</td>
</tr>
<tr>
<td>Working medium</td>
<td>gas</td>
<td>gas</td>
</tr>
<tr>
<td>Vertical bore of tubing head spool (mm)</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>Threads of casing flange</td>
<td>5-1/2&quot;LCSG</td>
<td>5 1/2&quot;LCSG</td>
</tr>
<tr>
<td>threads of tubing hanger</td>
<td>2-7/8&quot;EU</td>
<td>2 7/8&quot;EU</td>
</tr>
<tr>
<td>Product Specification Level</td>
<td>PSL3</td>
<td></td>
</tr>
<tr>
<td>Performance Equipment</td>
<td>PR1</td>
<td></td>
</tr>
</tbody>
</table>
KCP (F) 16/65 eccentric wellhead

The eccentric wellhead equipments are used for pumping oil well, annulus logging, extraction and fracture.

Product features:
1 Tubing hanger swing bearing located on the top of tubing hanger, reasonable force, so that flexible and light turning.
2 The rod packing box with rubber valve, sealing pressure 16Mpa, excellent self-lubrication, reliable sealing and easy replacement.
3 Reliable sealing between oil and socket rings.
4 The eccentric wellhead equipment has, two kings, double eccentric structure of type IV.

Product Specifications:
1 nominal diameter: 65mm
2 working pressure: 16MPa
3 hydraulic test pressure: 32MPa
4 connection method: collar clamp connection
5 connection tubing diameter: 2-7/8UPTBG
6 connection casing diameter: 5-1/2CSG

Thermal Wellhead KRJ14-370、 KR21-370（Q）

This wellhead equipment using for exploit heavy oil and high pour point oil. Suitable for rated pressure 14Mpa, heavy oil and high pour point oil exploration. The wellhead is designed for both steam injection and oil production, it is suitable for steam huff &puff, steam drive process. The main parts of the wellhead are made from high quality alloy and stainless steel, it has features such as temperature and pressure proofing, anti-corrosion, low flow resistance.

Product features:
This gate valve of the wellhead is an expansion type, hand operated with an undressed valve stem to provide semi forced sealing. It consists of two plates (slope faced), an expander and a valve seat. The valve plate mates against the valve seat with a blank face whilst touching the expander with the slope face. When closing the valve, the stem pushes the plates downwards whilst the expander gives them a horizontal movement. This provides a forced contact between the valve plate and the valve seat and retains the sealing action. Under medium pressure, the valve plates mate with the outlet valve seats thus ensuring continuous sealing. Due to the valve plate being connected to the expander at a specific
angle self-locking cannot occur. This feature compensates the interval variation caused by line expansion and provides the valve with the advantage of ease of switching with minimum torque.

1. The material has excellent flexible feature under high temperature.
2. The hard-sealing parts has adopted the double-cone-shaped steel ring, so that more reliable seal.
3. Non-metallic sealing material using flexible graphite, can withstand 380°C high temperature.
4. The material of strobe plate and valve base is stainless steel, welding hard-alloy on the seal surface, high hardness and wear resistance.

**Product Specifications:**

<table>
<thead>
<tr>
<th></th>
<th>KRJ14-370</th>
<th>KR21-370 (Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal diameter of flat valve (mm)</strong></td>
<td>80</td>
<td>65</td>
</tr>
<tr>
<td><strong>Working pressure (MPa)</strong></td>
<td>14 (2000psi)</td>
<td>21 (3000psi)</td>
</tr>
<tr>
<td><strong>Working temperature (°C)</strong></td>
<td>-35 ~ 370</td>
<td>-35 ~ 370</td>
</tr>
<tr>
<td><strong>Working medium</strong></td>
<td>Oil, water and saturated steam</td>
<td>Oil, water and saturated steam</td>
</tr>
<tr>
<td><strong>Vertical bore of tubing head spool (mm)</strong></td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td><strong>Thread of casing flange</strong></td>
<td>7″BCSG</td>
<td>7″BCSG</td>
</tr>
<tr>
<td><strong>Thread of tubing hanger</strong></td>
<td>2-7/8 EU</td>
<td>4-1/2″EUE</td>
</tr>
<tr>
<td><strong>Connection mode</strong></td>
<td>flange</td>
<td>Flange for tubing head spool; Clamp or flange for gate valve</td>
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