

★ 操作和维护设备之前，请务必阅读并理解本说明书
Please read carefully and understand this manual before operating this product

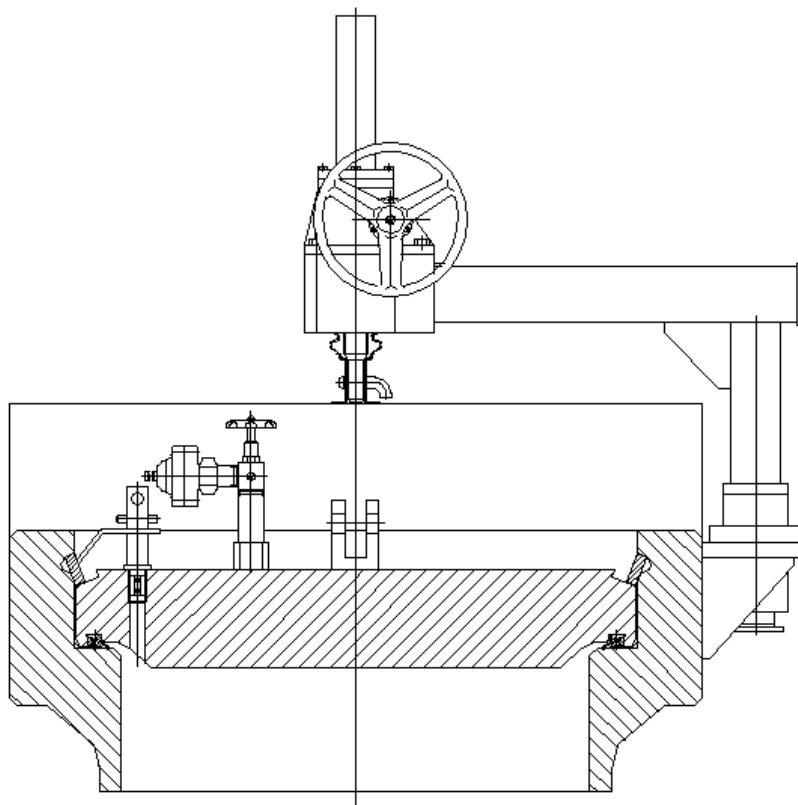
AKM 环锁式立式快开盲板

AKM CLAMPING RING VERTICAL TYPE QUICK-OPENING CLOSURE

操作使用说明书 OPERATION AND MAINTENANCE MANUAL

编号: AKM-MB-1303

SN:



江苏盛伟燃气科技有限公司

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安全警告：任何时候都要遵守安全注意事项

SECURITY WARNING: At any time, must observe safety matters needing attention.

在试图打开快开盲板之前，请确保容器内没有任何压力来源，且确保容器内没有任何可能产生危险的介质，如天然气等易燃易爆气体需用氮气置换后开门。

Before trying to open the Quick-opening Closure, please ensure the container without any pressure source and ensure without any dangerous medium.

Flammable and explosive gas such as natural gas, before opening the door, need use

AKM 型环锁式立式快开盲板，能够保证在产品铭牌标明的压力和温度下实现安全使用，并能完全满足用户提出的技术规格书及相关设计要求。

AKM clamping ring vertical type Quick-opening Closure, can ensure to realize safe use under the product nameplate indicating the pressure and temperature, and completely meet the technical specification and design requirements that user suggest.

用户有责任考虑到任何可能施加到盲板上的载荷或操作工况对盲板所产生的影响或结果。

Users have the responsibility to consider any possible applied to the load on the Quick-opening Closure or operating conditions impact or result on the Quick-opening Closure.

重要提示：

未经设计单位许可，禁止对本盲板进行改装或增加附件。

IMPORTANT NOTE

Without permission by designer ,modify or add attachments for the Quick-opening Closure is prohibited.

1. 产品特点 Product Features

AKM 环锁式立式快开盲板是压力容器的重要组件，具有启闭速度快，操作灵巧简便、安全可靠等特点。

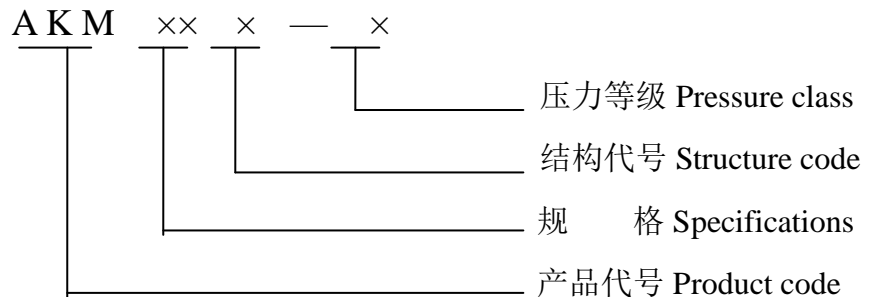
As an important component of pressure containers, AKM Clamping Ring vertical type Quick-opening Closure enjoy features such as quick opening/closing, easiness and flexibility for operation, safety and reliability.

本快开盲板由高颈、门盖、环锁、锁紧机构、密封圈及安全联锁装置等组成，高颈内圆和门盖外圆均有环槽，工作时环锁一半嵌在高颈槽内，另一半嵌在门盖槽内，从而将高颈和门盖锁住。开门时，用加力杆通过锁紧机构将环锁收紧，使其外圈小于门盖外径，就能将门盖打开，操作非常方便。密封圈设计结构合理、用料优良，确保产品密封性能。此外，还设有具有报警功能的安全联锁装置，充分确保安全可靠。

The device is composed of high-neck, door cover, locking ring, Locking mechanism, sealing ring and safety interlocking devices. The inner ring of the high neck and the outer ring of the door cover are equipped with ring grooves. Half of the gapped locking ring is embedded in the groove of the high neck and the other half is embedded in the door cover groove, thus has the high neck and the door cover locked. When opening the door, Use tool bar, through the locking mechanism to lock ring tightening, the outer diameter is less than the door cover, you can open the door cover, the operation is very convenient. The reasonably designed sealing ring uses the good materials, ensure the product sealing performance. In additional, the safety interlocking device that have alarm function, can fully ensure safety and reliability.

2. 型号命名 Type and Descriptions

型号及各字符含义表达如下 The meanings of the type and the characters contained are as follows



结构代号: Structure code

“A” — 卧式容器快开盲板

Horizontal container Quick-opening Closure

“B” — 立式容器快开盲板

Vertical container Quick-opening Closure

规 格: 用英寸来表示产品的设计内径（20 英寸规格表示为 20）。

Specifications: Represent the product design inner diameter in inches (20 inches represented as 20)

例 如 : AKM62A-600 即规格为 62 英寸，用于卧式容器，压力等级为 600，对应设计压力为 11MPa 的快开盲板。

For example: AKM62A-6.3 refer to specification is 62 inches, use for the horizontal container Quick-opening Closure, pressure at 6.3 MPa.

3. 盲板结构 The Quick-opening Closure Structure

AKM 环锁式立式快开盲板结构图，如下：AKM Clamping Ring vertical type Quick-opening Closure as follows:

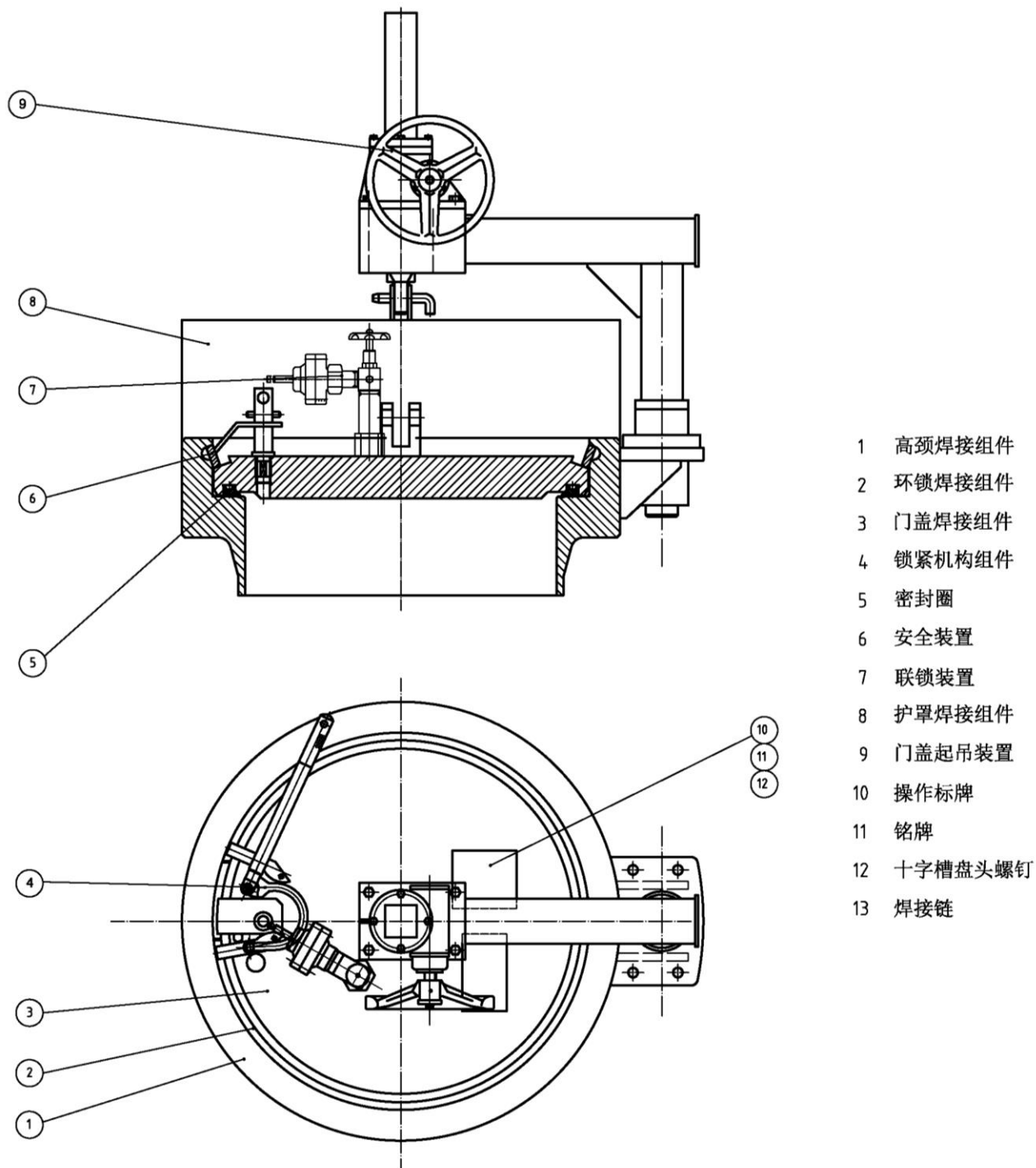


图 1：AKM 型环锁式立式快开盲板结构图

Figure 1: AKM Clamping ring vertical type quick-opening closure structure chart

- | | | |
|---------------------------------|-----------------------------|----------------------------|
| 1.high-neck welding component | 4.locking mechanism | 10.operation scutcheon |
| 2.ring lock welding components | 5.sealing ring | 11.nameplate |
| 3.door cover welding components | 6.safety device | 12.cross recess head screw |
| | 7.interlocking device | 13.welded chain |
| | 8.shield welding component | |
| | 9.door cover lifting device | |

注：1、口径规格小于 20 寸的产品，件 9 为手轮代替蜗轮升降机；2、使用在中国境外产品不包含件号 7。Remark:1.The products diameter less than 20 inch, option 9 instead of worm gear elevator;2、 Use outside of China does not include part number 7.

3.1.锁紧机构组件 Locking Mechanism Components

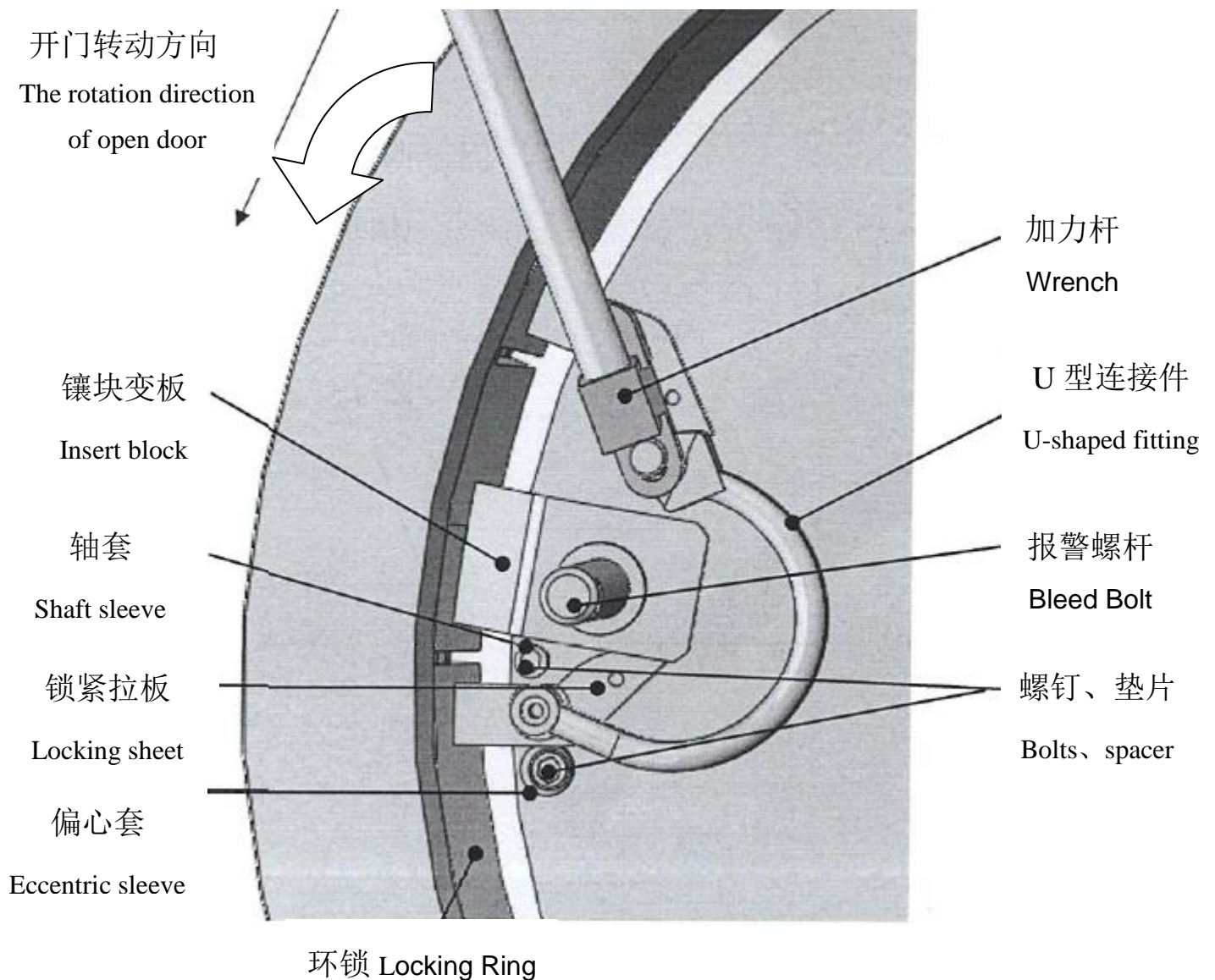
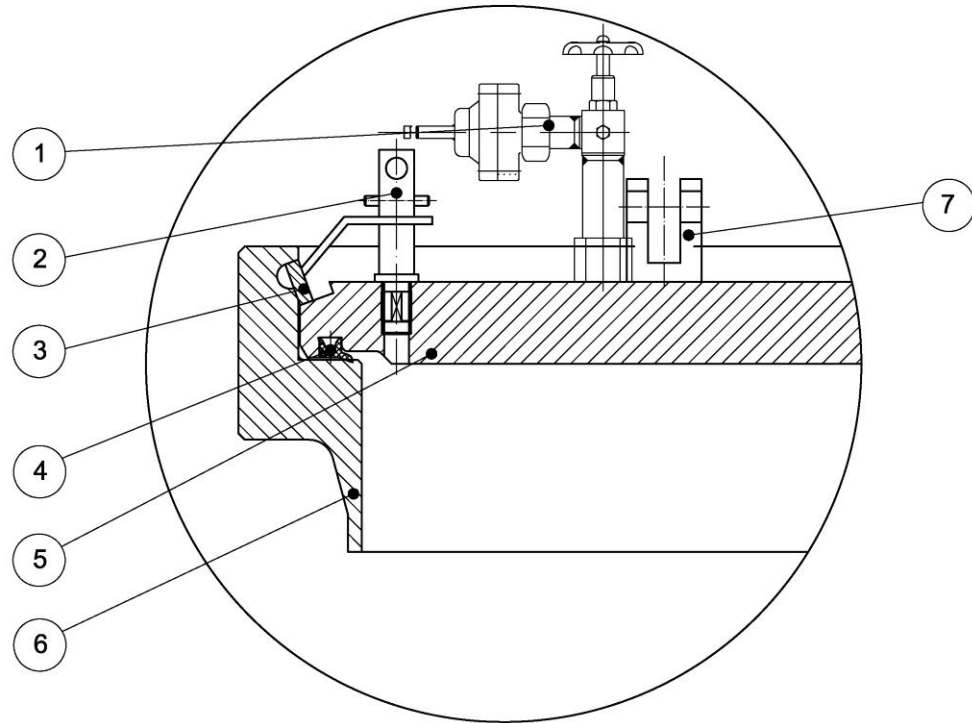


图 2：锁紧机构组件 Figure2: Locking mechanism components

3.2.安全装置工作状态图 Safety Device Working State Diagram



- 1 安全联锁 Safety interlock
- 2 报警螺杆 bleed bolt
- 3 镶块焊接组件 insert block welding
- 4 密封圈 sealing ring

- 5 门盖 door cover
- 6 高颈 high neck
- 7 门盖吊攀 door cover lifting

图 3：安全装置工作状态图

Figure 3: Safety device working state diagram

4. 快开盲板的拆卸与安装 The Removal and Installation

4.1. 盲板初始安装 The Initial Installation

AKM 型环锁式立式快开盲板必须完全水平安装，并确保高颈下方的排水孔在最低位置；需要从标定的水平方向上倾或下倾 1-10° 安装的压力容器，要和盲板角焊相适应。这样就使盲板水平同时适应容器的标定角度。AKM Clamping Ring Vertical type Quick-opening Closure must be completely horizontal installation, and ensure the drain which below high neck at the lowest position; The pressure vessel is calibrated need horizontal tilt or decline 1-10 DEG installation, need to adapt to the blind angle welding. This makes the blind plate level at the same time to adapt to the calibration of the container.

警告：WARNING

千万不能将快开盲板安装在非完全水平位置。

Don't install Quick-opening Quick-opening Closure in the non completely horizontal position.

重要提示：IMPORTANT NOTE

在初始安装开始之前，请参考本使用说明书中章节 4.4 和 4.5，这两个章节为您提供了变形及焊接热处理的重要细节。Before initial installation, please refer to the manual chapter 4.4 and 4.5, both two chapters provide deformation and weld heat treatment details.

AKM 型快开盲板在焊接之前需要拆卸，具体事宜请参阅本说明书中章节 4.2 “盲板门盖的拆卸”。The door of AKM Quick-opening Closure need remove before weld. please refer to chapter 4.2 “Quick-opening Closure door removal”.

重要提示：IMPORTANT NOTE

若还有任何疑问及不详之处，请与我们的客户服务部联系。

If any question or unknown, please contact with our customer service department.

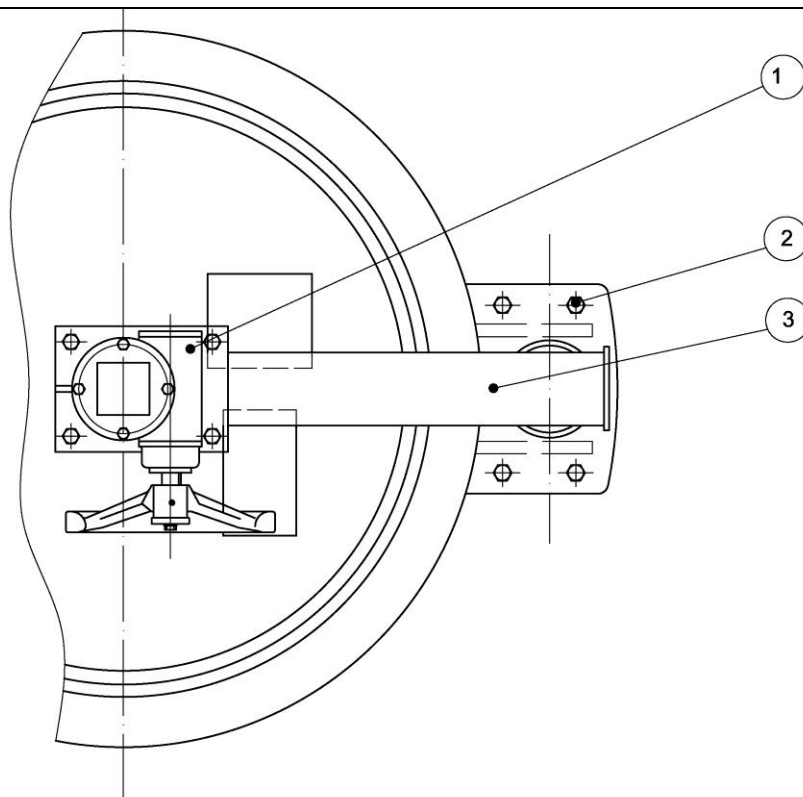
4.2.盲板门盖的拆卸 Quick-opening Closure door removal

若在盲板的初始安装、容器装配或者日常保养时，需要拆卸盲板门盖，应该按照下面的程序进行操作：In the initial installation, container assembly or daily maintenance, need to remove door, the following procedure should be followed..

重要提示：IMPORTANT NOTE

在盲板与任何压力容器焊接之前，必须先将盲板门盖拆下。

The door cover must be removed prior to welding the Quick-opening Closure to any pressure



1 门盖起吊装置 door cover lifting device

2 螺栓 bolt

3 吊杆焊接组件 derrick welding components

注：口径规格小于 20 寸的产品，件 1 为手轮代替蜗轮升降机。

Remark: The products diameter less than 20 inch, option 1 instead of worm gear elevator.

图 4：门盖拆卸与安装附图

Figure4:door cover removal and installation chart

4.2.1. 拆下安全装置（报警螺杆和镶块），利用加力杆紧缩环锁使其处于“门开启”状态。
（详见本说明书中章节 5.1 和 5.2 “盲板的开启和关闭”）

Remove safety device (Discharge bolt and insert block), using wrench tightening ring lock in “door opening” state. (refer to manual chapter 5.1 and 5.2 “Quick-opening Closure opening and close”)

4.2.2. 如果是设备上拆卸门盖，将门盖用符合标准的吊链固定住；如果是从独立的快开盲板上拆卸门盖，先将盲板正面向上水平放置，如图 4 所示，拧下紧固螺栓（序号 2），卸下门盖起吊装置。

If remove door cover from equipment, please use chain that meet standard to fix door cover; if remove door cover from separate Quick-opening Closure, place Quick-opening Closure horizontal face up, as figure 4, unscrew bolt (sequence number 2), remove door cover lifting device.

4.2.3. 安全拆下盲板门盖。Remove Quick-opening Closure Door Cover safely

重要提示：

保存盲板门盖时，务必做好密封面和机加工面的保护，避免损伤。

如有特殊情况，请与我们的服务部门联系，以获取进一步的安装指导。

IMPORTANT NOTE

Save Quick-opening Closure door cover, be sure to protect the sealing surface and the machined surface, to avoid damage.

Any special cases, please contact with our customer service department, for further installation guidance.

4.2.4. 严格执行以上程序能够确保重新安装的门盖与高颈配合的相对位置正确。

Strictly carry out above procedure will ensure reinstalled door cover and high neck meet the right relative position.

4.3. 液压试验 Hydraulic Pressure Test

4.3.1. 液压试验，压力不得超过 1.5 倍的设计压力（标记在盲板铭牌上的）。测试之前应将密封圈拿掉，确保密封圈、密封面（可能与密封圈接触的表面）和密封槽完全清洁再

装上密封圈进行液压试验。

Hydraulic pressure test, the pressure can not exceed the design pressure 1.5 times (mark on nameplate).

4.3.2. 液压试验完成 Hydraulic Pressure Test Completed

确保盲板内部表面完全干燥，尤其要特别注意密封槽并用油脂润滑预防腐蚀。

建议当设计压力大于或等于 11MPa 时，对密封圈进行探伤检测，如有受损必须更换密封圈。

To ensure that the Quick-opening Closure internal surface is very dry, especially note use grease lubrication for the groove to prevent corrosion.

Suggest when design pressure is greater than or equal to 11MPa, carry out flaw detection on the sealing ring. If there is any damaged, must be replace sealing ring

4.4.减小应力变形措施 The measures of Decrease Stress Distortion

为保证可靠的密封效果，应尽量减少由装配、焊接和焊后热处理所引起的变形。按照下面的建议可以减小这类风险：

In order to ensure reliable sealing effect, should try to reduce deformation that caused by assembly, welding and heat treatment after welding. According to the following suggesting can reduce the risk.

4.4.1.筒体上支管连接不能位于高颈焊接环缝附近，焊边缘之间的距离不小于支管的公称直径。

The branch connection of cylinder can not near the high neck girth welding, distance between the welding edge not less than branch nominal diameter.

4.4.2.在容器支管连接完成后，焊接快开盲板高颈与筒体的焊缝，并且在焊接之前，盲板的门盖要被拆卸下。

After the completion of branch connection, weld the Welding seam of Quick-opening Closure high neck and cylinder. And before welding, need remove Quick-opening Closure door cover.

4.4.3.应该一直保持预热温度不低于 20℃，但是这取决于所使用的焊接工艺判定记录中的焊接技术参数。

Should always keep the preheating temperature not less than 20℃, but it depends on the welding technique parameters of the welding process record.

4.4.4.为保持持续的热输入，请使用全自动或半自动工序。

In order to maintain sustained heat input, please use the automatic or semi-automatic process.

4.4.5.当使用手动金属弧工序时，应采用交错焊接顺序。

When using manual metal-arc welding, please adopt staggered welding sequence.

4.5.焊后热处理的注意事项 Post Weld Heat Treatment (PWHT) Attention

4.5.1.拆卸下的盲板部件保存时需注意保护密封面免受损坏。

When save the components which removed from Quick-opening Closure, please pay attention to avoid damage sealing surface.

4.5.2.请按照 ASME VIII 的要求完成焊后热处理。

Please follow ASME VIII request to complete PWHT.

4.5.3.热处理之后，请用金相砂纸（400 目以上含 400 目）除去密封面脏物，及时涂抹防锈油。

After PWHT, please use sandpaper to remove the sealing surface dirt, and apply anti-rust oil timely.

4.5.4.注意：焊后热处理期间，切勿让高颈负重（包括安装在高颈上的门盖等所有零件的自重）。

Note: during PWHT, do not let high neck load (include all parts self weight that installed in the high neck,e.g.,the door cover)

重要提示：

进行任何焊接操作之前，应将除高颈外的所有零部件拆卸下。

IMPORTANT NOTE:

Before welding, all parts except high neck must be removed.

4.6.盲板的喷涂保护程序 Paint Protection Processes of Quick-opening Closure

4.6.1.喷砂除锈时应对盲板的高颈、门盖上的环锁槽及可能与密封圈接触的密封面进行防护。

When sandblasting derusting, should be make protection for Quick-opening Closure high neck, ring lock groove which on the door cover and sealing surface which contact with sealing ring.

4.6.2.喷涂时，标记“防护”的区域不喷漆，并用防爆屏蔽材料进行保护。

When painting is required the areas shown “masked” should not be painted, and protected with a blast proof masking material.

4.6.3.喷涂前应将环锁、报警螺杆和密封圈等从盲板上移除。（这些零部件为不锈钢或橡胶，不需要喷漆）。

To prepare the Quick-opening Closure for painting, the ring lock、bleed bolt and sealing ring etc must be removed from the door. (These components are stainless steel and do not require painting.)

4.6.4.应对盲板门轴承和全部小孔进行适当的防喷砂和喷漆保护。

Quick-opening Closure door hinge bearings and all holes must be suitably protected from ingress of shot blast and paint material.

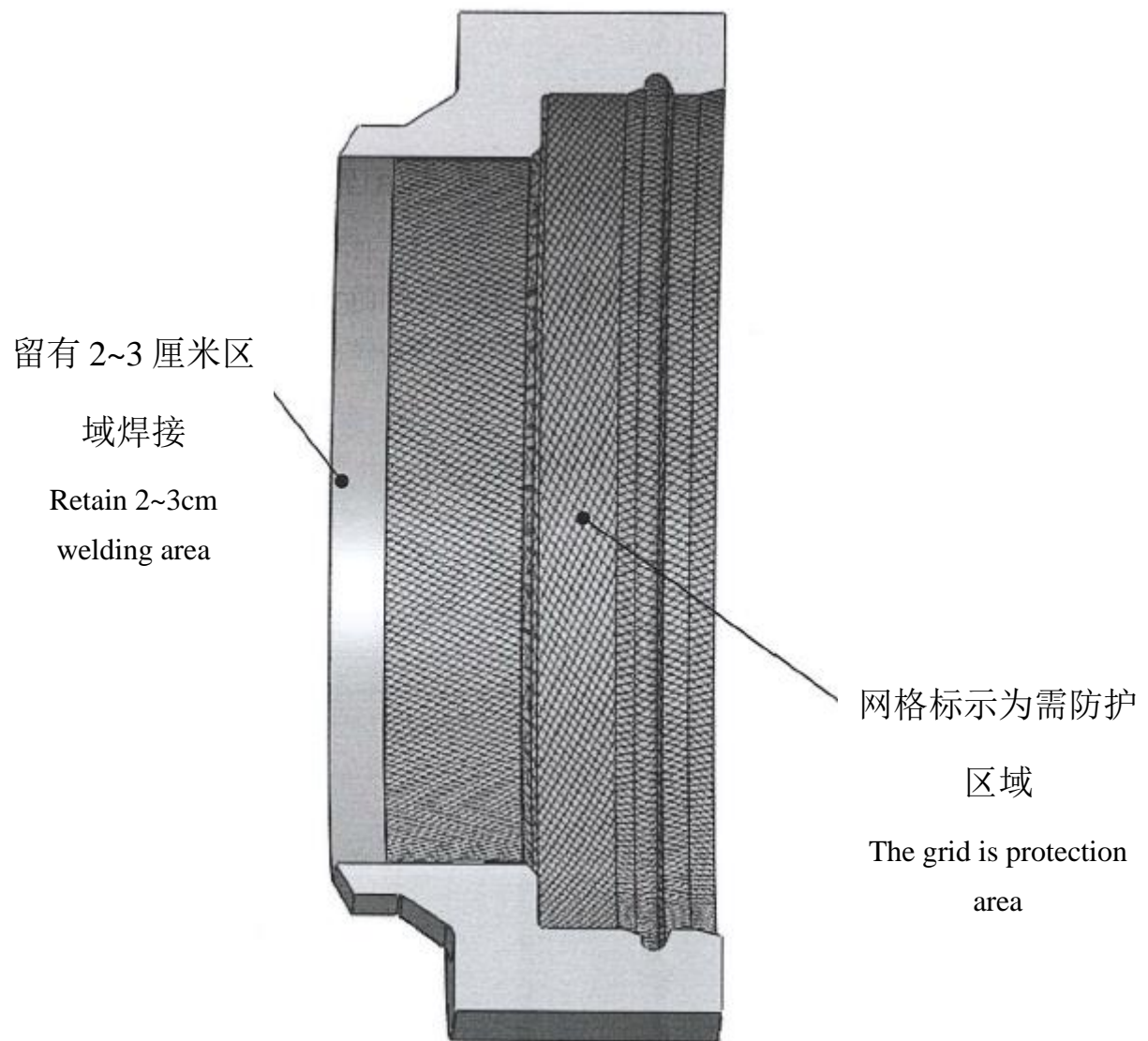


图 6: 高颈上的防护区域
Figure 6: High neck masking area

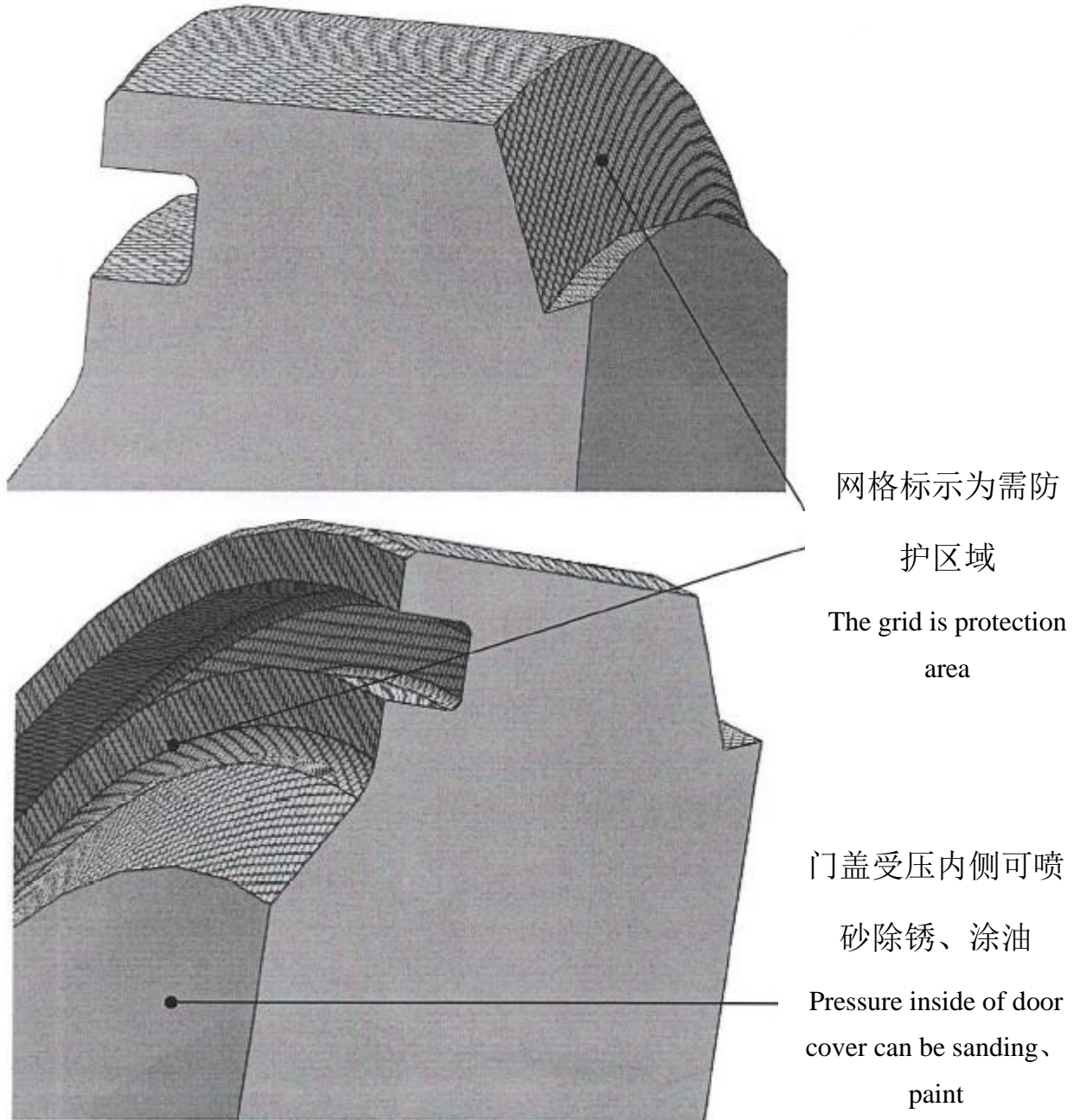


图 7：门盖的防护区域

Figure 7:Door masking area

重要提示：

快开盲板的门盖进行喷漆时，应对轴承和全部小孔进行防喷砂、油漆保护。

IMPORTANT NOTE

When painting the Quick-opening Closure,the hinge bearings and all holes must be protected from shotblast and paint.

4.7.盲板门盖的重新安装 Quick-opening Closure Door Re-installation

在初始安装、容器装配或者日常维护后，进行快开盲板门盖的重新安装时，应遵循以下程序：

After initial installation、container assembly or daily maintenance, ready to re-install the quick-opening closure, the following procedure should be followed.

4.7.1.利用门盖上带有的吊攀，将门盖用符合标准的吊链固定住，不得用此吊攀起重整个盲板甚至容器设备。

Using the lifting bolt hole which on the door cover, fix the door cover with chain hoist and lifting bolt which meet standard. Do not use the lifting bolt lifting the hole quick-opening closure even container equipment.

4.7.2.对所有机加工面进行防腐蚀保护（参考本说明书中章节 6 “快开盲板的维护”）

Ensure that all machined surfaces are corrosion protected. (reference chapter 6.0 “quick-opening closure maintenance”)

4.7.3.撑开环锁到锁定位置；重新安装镶块及报警螺杆等部件。

Expand the ring lock to its locked position; refit the panel board and bleed bolt etc.

4.7.4.严格执行以上程序能够确保在以后的安装中，很容易得到高颈与门盖的配合。

Although strictly carry out the above procedure will ensure that in installation, it is easy to cooperate high neck with door cover.

重要提示：

重新安装期间，最好参考本说明书中章节 6.3 扭矩设定

IMPORTANT NOTE:

During re-installation, it is better to refer to the chapter 6.3 “Torque settings”.

5. 盲板的操作 Quick-opening Closure Operation

5.1. 盲板的解锁和开启 Door Unlocking and Opening

5.1.1. 在试图打开快开盲板之前，关闭控制系统中气体进入容器的控制阀，检查容器压力表指针是否指示为零，确保安全锁锁芯完全退出。确保容器内的水已经完全排出变干，并且没有任何压力来源，并清理盲板表面杂质和污物。

Before attempting to open the closure, close control valve which in control system and control gas into container. Check carefully whether the equipment pressure gauge point at zero, ensure the safety lock has been pulled back completely. Ensure that the container has been completely out of water and dry, there is no any pressure source, clear impurities and dirt from closure surface.

5.1.2. 慢慢松动报警螺杆，但不要卸下，以便于残留的压力显示出来。一旦显示有残余压力，立即对所有阀门进行复检。

Unscrew Bleed Bolt slowly, but don't remove, so that the residual pressure is shown. Once showed residual stress, please review all valves immediately.

5.1.3. 确保残余压力完全释放后，将报警螺杆及镶块从盲板上（参考图 3）卸下。

Ensure that residual pressure is completely released, remove Bleed Bolt and panel board from closure (reference figure 3).

注：拧开报警螺杆后，要轻轻晃动一下，使得连带的镶块松动。

Note: unscrew Bleed Bolt, gently shake, enable the panel board loose.

5.1.4. 参见图 2，将加力杆逆时针转动约 180 度，并停留在此位置，此时驱动链通过“U”形的马蹄机械装置把环锁逐步收拢到门盖的环锁槽内。

Reference Figure 2, rotate the wrench anti-clockwise through approximately 180, remain at this position, at this time, the driving chain gradually gathered ring lock to groove by “U” horseshoe machinery.

警告：

操作过程中应控制好环锁的收缩和扩张。不允许环锁猛地卡进位，锁圈解锁和锁定过程中，请用力握住手柄。

WARNING:

Must to control the expansion and contraction of the ring lock during the operation. Do not allow the ring lock to snap into position. During the unlock and lock operation, please hold the handle.

5.1.5.转动手轮，利用蜗轮蜗杆丝杠升降机将门盖吊起。

Rotating hand wheel, lift the Door Cover by worm gear and worm screw lifting.

保养注意事项：

快开盲板的密封面和机加工面，在门盖开启后，应立即实施防磕碰及防锈保护措施，否则会造成机器表面凹陷影响密封性能。及时完善的保护措施是增加使用寿命的最佳方法。

MAINTENANCE NOTE:

Must have rustproof protected on sealing faces and machined face of the closure immediately after opening. If do not, will result in sealing and machined faces becoming pitted. Immediate adequate protection is the best way of gaining prolonged service life.

5.2.盲板的锁定和关闭 Quick-opening Closure Lock and Close

快开盲板在关门操作之前：Prior to closing the door

5.2.1.完全除去涂在密封面上的渣滓，并将表面擦拭干净。

Remove the rust preventative coating on sealing surfaces completely, and clean the surface.

5.2.2.确保对密封圈进行材料缺陷、裂纹、气泡和化学损伤以及老化情况进行检查。

Ensure that the sealing ring is inspected for material splits, tears, blisters or any chemical damage or degradation.

5.2.3.确保门盖、高颈上密封面干净无碎屑。

Ensure that door and high neck are clean.

5.2.4.轻轻的在密封面和环锁配合面上涂上一层薄的防腐硅油脂。

Lightly smear seal and mating faces with a thin film of silicon grease for corrosion protection.

5.2.5.确保环锁完全回缩至门盖的环锁槽内。

Ensure that the ring lock is fully contracted onto the door groove.

5.2.6.转动手轮，直到门盖完全进入高颈的环锁槽相对位置，注意在门盖进入高颈之前保持门盖平行的正对于高颈中心。

Swing the hand wheel, till Ring Lock completely into the groove on the high neck. Please note that, keep the door parallel and is at the center of the high neck.

5.2.7.按顺时针方向旋转直到锁圈转至颈部入口。

Rotate clockwise till locking collar on neck entrance.

5.2.8.安装安全装置（镶块组件及报警螺杆），任何情况下，安装报警螺杆及镶块都不能过分用力，错误的方式将导致环锁及密封圈不能正确安装。检查确定所有的表面都是干净的并且没有受到腐蚀，安装之前，必须在完全清洁之后进行。

At any time, installing safety device (panel board components and Bleed Bolt), do not too hard. incorrect way will cause the ring lock and sealing ring installed wrong. Check and confirm all surfaces are clean and no corrosive. Must to clean completely before installing.

警告：

操作过程中应控制好环锁的收缩和扩张。不允许环锁猛地卡进位，锁圈解锁和锁定过程中，请用力握住手柄。

WARNING:

Must to control the expansion and contraction of the ring lock during the operation. Do not allow the ring lock to snap into position. During the unlock and lock operation, please hold the handle.

5.2.9.安装报警螺杆时，先确认金属密封垫片外形完好位置正确，再拧紧螺纹。（拧紧力参见本说明书中第 6.3 节扭矩设定）。

When install Bleed Bolt, make sure the metal sealing gasket shape is good and the position is correct firstly, then tighten screw thread.(tightening force reference chapter 6.3 Torque settings)

警告：

在报警螺杆尚未安装时，请勿将快开盲板投入使用。

WARNING:

The Bleed Bolt has not yet been installed, do not put the quick-opening closure to use.

5.3.快开盲板的保存注意事项 Quick-opening Closure Storage Attention

如需要对快开盲板（或含快开盲板的容器）进行保存（包括暂时储存），必须将盲板高颈，包括密封面及所有机加工内表面轻涂防锈保护蜡（Waxoyl）或其它替代保护物。拆掉头盖中的密封圈，再次向所有机加工表面轻涂保护物。重新装入头盖密封圈防潮。在装入密封圈前，擦除沟槽及密封面上的保护物并均匀涂抹一层防锈润滑剂。

If you would like to save (include save temporarily) Quick-opening Closure (or container), must to apply Waxoyl or other shields on surface of High Neck, include sealing face and all machining inside surface. Remove sealing ring from Door Cover, apply shield on all machining surface again. Re-install sealing ring to prevent moisture. Before install sealing ring, clean shield which in groove and on sealing face, and apply anti-rust lubricant.

密封圈保存期: Sealing Ring Storage Life

材料 Material	新密封圈保存 New Sealing Ring storage	使用过的密封圈保存 used Sealing Ring storage
	保存年限 Period years	保存年限 Period years
丁腈橡胶 NBR	3	1

密封圈保存条件: Sealing Ring storage conditions

环境: Environment

储存在干燥处 Stored in a dry place

温度: Temperature

温度在+5℃~+25℃之间，避免和热源直接接触。

Storage temperature should be between +5℃ to +25℃.

光: Light

避光保存，特别是避免在阳光或荧光灯下直接照射。

Should be protected from light, especially protected from direct sunlight and fluorescent light irradiation.

密封: Sealing

置于原始装箱或气密容器内以防止氧化。

In the original packing or airtight container to prevent oxidation.

氧气和臭氧: Oxygen and Ozone

远离有害气源（如臭氧）以防止弹性体受损。

Away from the harmful gas (such as Ozone) in order to prevent the elastomer were damaged.

变形: Deformation

橡胶密封圈应该密封，自然状态储存，避免拉紧、挤压或其它变形。禁止可能导致密封圈形状变化的单点支撑悬挂。

Rubber Sealing Ring should be stored in a seal and natural condition, free from tension, compression or other deformation. Must not be hung from single point supports likely to produce deformation of the seal shape.

6. 快开盲板的维护 Quick-opening Closure Maintenance

6.1. 环锁调整 Ring Lock Adjustment

如果环锁、报警螺杆操作困难，应对环锁进行调整：

Should it become difficult to engage the Ring Lock, Bleed Bolt, it may be necessary to adjust the Ring Lock:

6.1.1. 将环锁扩展至锁定（关门）的位置，然后安装镶块及报警螺杆。报警螺杆应该容易安装并拧紧，若拧紧过程困难，应按照以下程序进行：

Expand the Ring Lock outwards to its fully “locked” position and fit the Insert Block and Bleed Bolt. Bleed Bolt should be easy to install and tighten. If it is difficult to tighten, the following procedure should be adhered to.

6.1.2. 调整偏心套（图 2），可以使位于偏心套和轴套（图 2）之间的锁紧拉板（图 2）转动。

Adjust the Eccentric Sleeve (Figure 2) such that it provides a running fit for the Locking Sheet between the Eccentric Sleeve and the Shaft Sleeve (Figure 2).

6.1.3. 调整到适当位置后，通过拧紧内六角螺钉，来紧固偏心套。

Adjust to the appropriate location, secure the Eccentric Sleeve by tightening hexagon screw.

6.1.4. 通过扩展和收缩环锁的操作来进行复检。如还需调整，按照上述的步骤进行操作。

Re-check operation by expanding and contracting Ring Lock. Adjust as necessary using above.

注意：

建议在最终装配前，轻轻在密封面，环锁和环锁槽处均匀涂抹一层防锈润滑剂。

NOTE:

It is advised, before final adjustment to lightly smear the sealing surface, Locking Ring and Locking Ring groove with a thin film of anti-rust lubricant.

6.2. 更换密封圈 Replace Sealing Ring

如需将盲板密封圈从盲板上移开，只需简单地将密封圈从密封槽处拿开，注意密封面处不会被尖硬物品损伤。

Should it be necessary to remove the Sealing Ring from the Quick-opening Closure, simply to take it out of the groove, make sure the sealing face is not damaged.

6.2.1. 打开密封圈包装前，密封凹槽处应该被清扫干净，并且均匀的涂上一层薄薄的硅脂。

Before take Sealing Ring from package, the sealing groove should be wiped clean, and apply a thin layer of Silicon grease.

6.2.2. 用密封槽里的两个放射状的角来重新安装密封圈。把密封圈装进顶端的密封槽处（12 点钟位置），然后分别装入（6 点、3 点、9 点钟位置），再均匀的装入其余各部分，确保密封圈平整的安装在密封槽的中央。

With two radial angles in sealing groove to replace the Sealing Ring. Press the Sealing Ring into the sealing groove at the top (12 o'clock position). Then press at 6 o'clock position, 3 o'clock position, 9 o'clock position. Finally, press the rest parts evenly and make sure the Sealing Ring is flat and central in the groove.

6.2.3. 在接下来进行液压试验时，当设计压力大于或等于 11MPa 时，建议对试验后密封圈进行探伤检测，如有受损必须更换密封圈。

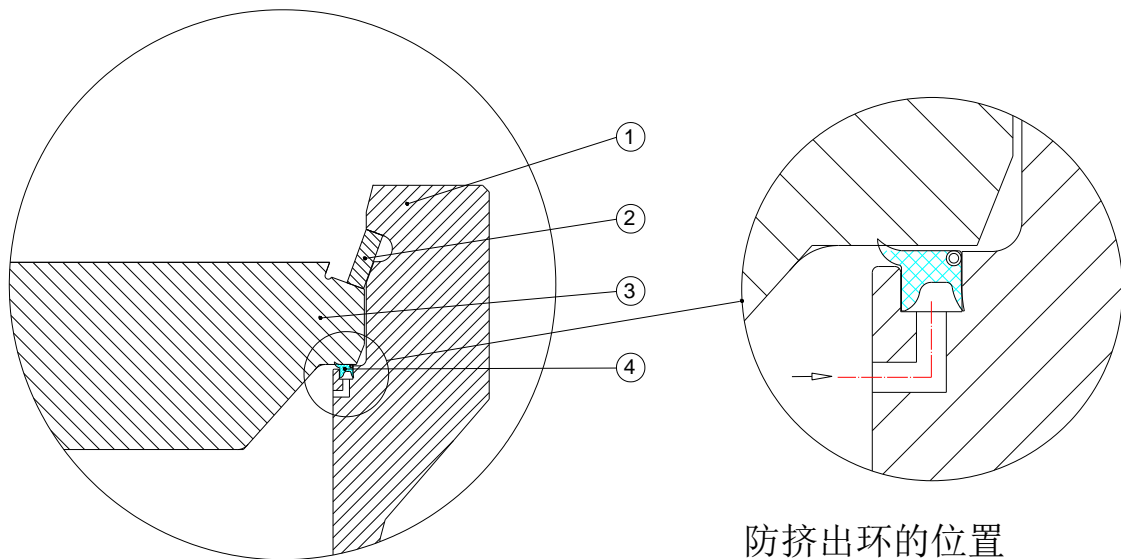
Suggest when design pressure is greater than or equal to 11MPa in following hydraulic pressure test, carry out flaw detection on the sealing ring. If there is any damaged, must be replace Sealing Ring.

注意：

密封的长度是预先确定的，不可更改。润滑密封槽有助于更换密封操作。

NOTE:

The seal is predetermined length and must not be altered. Lubrication of the sealing groove will assist in this operation and general seal replacement.



1. 高颈 High Neck
2. 环锁 Lock Ring
3. 门盖 Door Cover
4. 密封圈 Sealing Ring

防挤出环的位置
Detail of seal note position of
extrusion Ring

图 9 密封圈工作状态图

Figure 9: Sealing Ring working state chart

注意

在密封圈更换过程中一定不能使用尖锐的工具，这将导致对盲板密封圈的破坏。

NOTE

Do not use sharp objects to assist in the removal of seals. This would result in further damage to the Sealing Ring.

重要提示:

若因经济原因而忽视了日常清洁、检查以及表面维护将是得不偿失的。对密封面的破坏将会导致泄漏问题。若有任何疑问，请联系我公司的服务部门。

IMPORTANT NOTE:

If is false economy to neglect the requirements for regular and thorough routine cleaning, checking and surface protection. Damage to the seal faces will cause leakage problems. If you are in any doubt, please contact the SUNWAY Service Department.

6.3. 扭矩设定 Torque Settings

我公司生产的环锁式立式快开盲板推荐的扭矩设定值：

The torque setting value of the Quick-opening Closure produced by our company:

紧固件型号 Fastener type	设定扭矩 Torque value N.m
M8	17
M10	33
M12	57
M16	85
M20	160
M24	250
M30	320

报警螺杆推荐的扭矩设定值：

Bleed Bolt recommended torque value

螺纹型号 Bolt type	设定扭矩 Torque value N.m
M16	31
M24	74
M30	117

6.4.维护作业细则 Maintenance Activity Detail

为了有效地维护环锁式立式快开盲板，以保持良好的工作状况和避免操作困难，作为日常维护步骤的一部分，以下作业应该定期执行。

In order to effectively maintain the Clamping Ring horizontal type Quick-opening Closure, keep good working condition and avoid difficult operation, as the part of the daily maintenance steps, the following should be carry out regular.

快开盲板的机械维护

Quick-opening Closure Mechanical Maintenance

6.4.1.环锁（参考 图 9）Ring Lock (Reference Figure 9)

6.4.1.1. 清洗环锁 Clean the Ring Lock

6.4.1.2. 检查环锁以及锁紧拉板是否有任何扭曲变形。Check for any distortion within the Ring Lock and the Locking Sheet.

6.4.1.3. 使用普通油脂润滑环锁。Lubricate the Ring Lock with ordinary grease.

6.4.2.门盖和高颈（参考 图 3 中序号 5 和 6）Door Cover and High Neck (reference Figure 3 SN5 & 6)

6.4.2.1. 确认门盖的密封面清洁，且免受任何机械损伤和腐蚀，必要时须予以刷新。

Ensure that the sealing surface of the Door Cover is clean and free from mechanical damage and corrosion, refurbish as necessary.

6.4.2.2. 确认门盖及环锁的环锁槽内清洁无污，免受任何机械损伤和腐蚀，必要时须予以刷新。

Ensure that the Door Cover and the groove of the Ring Lock are clean and free from mechanical damage and corrosion, refurbish as necessary.

6.4.3.报警螺杆 Bleed Bolt

6.4.3.1. 目测检查报警螺杆安装孔的螺纹表面及腐蚀情况。Check for damage to the Bleed Bolt installed screw surface

6.4.3.2. 检查报警螺杆密封面的损害程度。Check that extent of damage of Bleed Bolt

sealing face.

6.4.3.3. 用普通油脂润滑环锁断面和所有的机加工表面。Lubricate all machined surface with ordinary grease.

6.4.3.4. 检查螺纹表面腐蚀情况和报警螺杆的直线度以及其密封面的完好情况，必要时予以更换。

Check for the surface of the bolt corrosion ,straightness of Bleed Bolt and the condition of the sealing face, replace as necessary.

6.4.4. 锁紧装置 Locking Device

6.4.4.1. 将环锁向外伸展至“锁紧（关门）”位置，然后安放镶块和报警螺杆。

Expand the Locking Ring outwards to its “locked” position and fit Insert Block and Bleed Bolt.

安装好报警螺杆后，检查环锁端部与镶块的间隙，各边间隙以接近 1.5mm 为宜。如果有必要重新调整该间隙，请调整偏心套位置（参考 章节 6.1.2.）使之与镶块边缘充分接触从而使各边间隙接近 1.5mm。

With the Bleed Bolt in position, check the gap between the ends of the Locking Ring and Insert Block are approximately 1.5mm each side. If it is necessary to reset the gap, adjust the Eccentric Sleeve (reference chapter 6.1.2) such that they make contact with the edges of the Insert Block whilst leaving a gap of approximately 1.5mm each side.

6.4.4.2. 通过预紧内六角螺钉紧固偏心套。

Tighten the Eccentric Sleeve by tightening inner hexagon screw.

6.4.5. 检查吊杆、门盖起吊装置中连接轴、轴承是否转动灵活，检查有没有过度磨损。向相应的油杯内注约 5 毫升的润滑油。

Check flexible rotation for four hinge connecting shaft, bearing. Check there is no excessive wear. Inject about 5ML lubricating oil into the corresponding oil cup.

6.4.6. 密封圈 Sealing Ring

6.4.6.1. 检查快开盲板的密封圈完好情况，确保密封圈没有超过包装上注明的有效期，

如有必要对其进行更换。

Check the condition of the Sealing Ring and ensuring that the Sealing Ring is within the period of validity on package, change out if necessary.

6.4.6.2. 在密封圈及其配合面上轻涂一般用途润滑油。

Lightly lubricate the Sealing Ring and its mating faces with general lubricating oil.

注意：

有效期指使用截止日期，且与密封圈使用情况有关，详见章节“5.3保存注意事项”。

NOTE:

The period of validity is specified as date to be used within, and dependant of operational use. Reference chapter “5.3 Storage Attention ”

6.4.7.所有维修工作完成后，根据业主操作规程，我们推荐进行密封性能进行气密性压力试验，验证盲板整体性能。

Upon completion of all remedial work, and in accordance with client operational procedures we recommend that a leak and pressure test is performed to verify Quick-opening Closure integrity.

重要事项：

为了保证产品整体性能，未经设计和制造单位许可，禁止改变其结构或对其进行材料替代。我们不负责发生结构修改及材料替代产品的质保。

IMPORTANT NOTE:

In order to remain the product overall performance, do not modify the structure or substitute the material without permission by designer. We are not responsible for structure modification and material substitution.

6.5.维修记录 Maintenance Record

快开盲板识别代码 Quick-opening Closure identification code

序列号: 压力等级:
 Serial number Pressure classes

设备号: 操作站点:
 Device number Operating site

密封圈及报警螺杆密封圈更换记录: Sealing Ring and Bleed Bolt Sealing Ring replace record

(请在相关栏目进行标记) please mark in the related columns

日期: Date	密封圈 Sealing Ring (√)	报警螺杆密封圈 Bleed Bolt Sealing Ring(√)	操作人员 : Operator	备注: Re mark

铰链轴使用情况检查: check hinge axis service condition (详见图 1.0 See Figure 1.0)

日期: Date	操作人员: O perator	注润滑油 Injecting grease(√)	备注: Remark

腐蚀情况检查: check corrosion situation

日期: Date	操作人员: Operator	备注: Remark

如有疑问请与制造商联系:

If you have any questions, please contact the manufacturer:

制造商: 江苏盛伟燃气科技有限公司

Manufacturer: Jiangsu Sunway Gas Technology CO.,LTD

地 址: 中国江苏省常州市武进区长虹东路 383 号

Add :Changhong East Road, Wujin District, Changzhou City, Jiangsu Province, China,
No.383

电话(Tel): (86)0519-85571222-205

传真(Fax): (86)0519-85506381

电子邮箱(E-mail): xhy@jssunway.com

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