

Installation Instructions

安装说明书

Style 490 Graphlock/ 1303-FEP End Rings

490/1303-FEP 模压填料组



◆ 安装步骤

- 1) Raise the valve to the full open position.
将阀门处在最大开启状态
- 2) Insert the first 1303-FEP packing ring into the stuffing box, noting the location of the ring seam. Push this ring down till it contacts the bottom of the stuffing box.
将第一道 1303-FEP 盘根环塞入填料函，记住剖分口的位置，确保将盘根环推入并接触到填料函底部；
- 3) Install a ring of 490 Graphlock packing offsetting the seam of this ring by 120 degrees clockwise from that of the previous ring. Push this ring down until it contacts the ring below it.
将 490 模压石墨环的剖口与前一道盘根顺时针方向错开 120 度装入填料函，并确保石墨环推入到与前一盘根环接触；
- 4) If the gland follower will reach down to contact the 490 Graphlock ring, then use it to apply compression by tightening down on the gland bolts to the minimum recommended torque calculated by the *Torque Equation* below. If the gland follower does not contact the 490 Graphlock packing ring, then insert a bushing in the stuffing box and apply compression by tightening down on the gland bolts to the minimum recommended torque. Remove this bushing after the compression step.
如果法兰随动套能够压到 490 石墨环，那么就通过上紧法兰螺栓来使得随动套预压石墨化，螺栓扭矩使用下面的扭矩计算公式计算的最小推荐扭矩。如果跟随套无法压到石墨环，请通过使用一个额外的衬套来预压石墨环，扭矩同上，预压后移除这个衬套；
- 5) Install the second 490 Graphlock ring offsetting the seam of this ring by 120 degrees clockwise from that of the previous ring. Push this ring down until it

contacts the ring below it.

剖分口与前一个石墨环顺时针方向旋转 120 度，装入第二个 490 石墨模压环，并确保石墨环推入到与前一石墨环接触；

- 6) Install the third 490 Graphlock ring offsetting the seam of this ring by 120 degrees clockwise from that of the previous ring. Push this ring down until it contacts the ring below it.

剖分口与前一个石墨环顺时针方向旋转 120 度，装入第三个 490 石墨模压环，并确保石墨环推入到与前一石墨环接触；

- 7) Use the gland follower to apply compression by tightening down on the gland bolts to the minimum recommended torque.

按照最小推荐扭矩，通过压盖随动套预压缩石墨环；

- 8) Install the remaining 1303-FEP packing ring offsetting the seam of this ring by 120 degrees clockwise from that of the previous ring. Push this ring down until it contacts the ring below it.

剖分口与前一个石墨环顺时针方向旋转 120 度，装入最后一个 1303-FEP 盘根环，并确保盘根环推入到与前一石墨环接触；

- 9) Use the gland follower to apply compression by tightening down on the gland bolts to the minimum recommended torque.

按照最小推荐扭矩，通过压盖随动套压缩整个 490 填料组；

- 10) Use the cycle and adjustment procedure to reduce the likelihood of gland load loss over time.

运用循环调整的措施，以减少填料压盖载荷丧失的可能性；

- 11) 我们建议阀门厂家在填料安装完成，并通过出厂测试后，到终端客户使用前，使用推荐扭矩重复上紧压盖螺栓，以减少由于螺栓扭矩松弛造成的填料泄漏的可能。**

◆ Torque Equation (minimum recommended torque) 推荐最小压盖螺栓扭矩力计算公式

$$\text{Torque} = 85.1(D^2 - d^2) * (\varnothing) / B$$

Where:

T = Torque on each bolt (Ft Lbs)

D = Bore diameter (inches)

d = Stem diameter (inches)

∅ = Gland bolt diameter (inches)

B = Number of gland bolts

◆ Cycle and Adjust Procedure 循环调整步骤

- 1) Actuate the stem through two or three revolutions of the hand wheel (in the closing direction).
启闭阀门至少 2~3 个循环；
- 2) Check the stud nut torque. If there has been any torque loss, re-tighten to the minimum gland load.
符合压盖螺栓扭矩，如果发现扭矩低于最小推荐值，需要重复上紧；
- 3) Repeat steps 2 and 3 three times or until no significant torque loss occurs after moving the stem.
重复 2, 3 步骤，直至压盖螺栓扭矩无明显下降；