

# CLL 槽铝式胶条使用方法及注意事项

## Usage and precautions of CLL Sealing Spacer

■玻璃切割: 尽量不使用玻璃切割油, 如使用切割油必须是易溶于水的煤油。

Glass cutting: Glass cutting oil should be avoid. If any cutting oil is necessary, it must be kerosene that is easily soluble in water.

■胶条剪切: 胶条两邻边垂直, 全部为直角。

Spacer shearing: Make every two adjacent sides of the spacer right-angled, and all the four angles are right-angled.

■胶条摆放: 胶条起始端距玻璃边部为 1.5-2mm (非充气中空玻璃), 胶条起始端用 60mm 封口胶封好, 封口胶要超出胶条铝片一侧 1-1.5mm, 胶条敷设边直、挺, 拐角应 90 度, 胶条最后留口为 0.8-1.5mm (非充气中空玻璃)。禁止手触玻璃内面及胶条粘接面 (检查胶条边是否直、挺, 拐角应 90 度)。

Spacer placing: Keep the starting edge of the spacer 1.5-2mm away from the edge of the glass (non-aerated insulating glass). Have the starting edge of the spacer sealed with 60 mm sealing tape, and the sealing tape should go beyond the aluminum side of the sealing spacer 1-1.5mm, and make the laying side of the spacer straight and forward, with the corners at 90 degree angles. Leave 0.8-1.5mm at the end of the spacer (non-aerated insulating glass). Never touch the inner side of the glass and the adhesive surface of the spacer (check to make sure the edge of the spacer is straight and forward, and the corners at 90 degree angles).

■热合温度: 中空玻璃从热压机出来后测量胶条温度应为 40—50℃; 温度过高会使中空玻璃内部负压过大导致玻璃炸裂或漏气及变形, 温度过低会导致粘接不良。

Heat sealing temperature: The measuring temperature of the insulating glass coming out of the hot press machine should be 40-50 ° C; a much higher temperature will cause breakage or air leakage and deformation to the insulating glass by excessive negative pressure inside. On the contrary, if the temperature is much lower, the adhesion result will not be good.

■中空玻璃厚度: 热压操作时尽量压低胶条, 以胶条支撑面不漏铝箔, 胶条不倒为合适, 漏出铝条的中空玻璃不能出厂使用, 压缩量太小可能会导致密封失效。

Insulating glass thickness: During the hot pressing operation, try to press the sealing spacer as far as possible. The sealing spacer support surface does not leak aluminum strips. It is appropriate that the sealing spacer does not fall. Insulating glass that leaks aluminum strips cannot be used. Too small compression may cause sealing failure.

■封口: 采用三步程序完成, 即压、拐、捏

The last corner sealing: A three-step process is required, i.e. pressing, turning, and pinching.

一. 压----胶条沿着边部垂直方向另一段胶条挤压, 到两段胶条与封口胶完全融合到一起为止;

Pressing - One spacer is extruded towards the other along edge of the glass vertically, until the two spacers are fully fused together with the sealing tape;

二. 拐----将多出来的封口胶和胶条向内侧拐, 压实以没有气道、气线为标准, 多余的胶沿着中空玻璃中间的空间层抹平不露波浪铝条及胶条端面为标准, 使外面没有多余的胶存在;

Turning - turn the extra sealing tape and spacer inward, press it until it has no air paths and gas lines. The excess glue should be flattened along the space layer in the middle of the insulating glass, and there should be no wavy aluminum strips and spacer ends come out, nor any excess glue remains outside;

三. 捏----将两片玻璃向内捏,消除因为压、拐造成的玻璃向外侧分离造成的间隙;

Pinching - pinch the two pieces of glass inwards to eliminate the gap caused by the separation of the glass to the outside due to pressing or turning;

1) 胶条规格大于 12mm 时;2)中空玻璃的短边 < 380mm 时; 3) 整片中空玻璃面积超过 2 平方米时, 有以上三种情况中的任意一种必须采用冷封口操作。

1) For any of the following three cases, cold sealing operation is required:

a) The size of the spacer is larger than 12mm;

b) The short side of the insulating glass is less than 380mm;

c) The area of the whole insulating glass is more than 2m<sup>2</sup>.

冷封口操作方法: 热压完毕后暂不封口放置, 待中空玻璃冷却至室温后, 用热风机(塑料焊枪)均匀地加热胶条封口处, 玻璃及胶条温度达到 43°C-50°C 后再封口。封口时中空玻璃要求直立放置排气口向上, 否则会导致中空玻璃炸裂或胶条变形。

Cold sealing operation instructions: Do not perform sealing immediately after the hot-pressing is completed. Wait until the insulating glass is cooled to room temperature, and then heat the sealing section of the spacer evenly with a hot-air blower (plastic welder) and have it sealed once the temperature of the glass and the spacer reaches 43-50 ° C. During the sealing process, the insulating glass should always be kept upright with the exhaust port upward. Otherwise, the insulating glass may break or the spacer may deform.

■二次密封胶: 当中空玻璃尺寸  $\geq 2.5 \text{ m}^2$  (1500mm × 1600mm) 时, 在中空玻璃四角及长边中间位置必须进行六点二次密封胶, 当中空玻璃尺寸  $\geq 2.7 \text{ m}^2$  (1500mm × 1800mm) 时, 在中空玻璃短边及拐角处全部密封胶和长边中间位置二次密封胶。注意: a、二次密封胶厚度 3-5mm 最佳; b、用于二次密封胶的聚硫胶必须与胶条做相容性试验后方可使用。

Secondary seals:

When insulating glass dimensions  $\geq 2.5 \text{ m}^2$  (1500mm × 1600mm), the four corners of the insulating glass and the middle of two long sides, total six points need secondary seals.

When insulating glass dimensions  $\geq 2.7 \text{ m}^2$  (1500mm × 1800mm), the full short sides with all corners and the middle of two long sides need secondary seals.

注意: a、二次密封胶厚度 3-5mm 最佳; b、用于二次密封胶的聚硫胶必须与胶条做相容性试验后方可使用。

Secondary seals attention:

a. The sealant thickness of secondary seals about 3-5mm is the best;

b. The polysulfide rubber which used for secondary seals need the compatibility test with Truspacer before application, please ensure they are compatible each other before use.

■胶条存储: 未用完的胶条必须在密封袋内密封保存(尽量减少与空气接触), 重新包装好的胶条应在 30 天内使用完毕;

成品摆放存储: L 架 90° 直角垂直竖放中空玻璃, 单片不得超过 25 片, 封口向上, 也可以用 A 形支架仰角在 6-15 度之间(严禁直接靠于地面或沙土上摆放);

中空玻璃成品存放环境要求: 温度 15°C-25°C、阴凉、干燥、通风的室内或有防雨与遮阳设施的地方。

The storage of the sealing spacer: the unused sealing spacer must be sealed and stored in a sealed bag (to minimize contact with air), and the repackaged sealing spacer should be used within 30 days.

Finished product placement and storage: The L frame is 90°right-angled and placed vertically and vertically. The single piece shall not exceed 25 pieces, and the sealing is upward. A-shaped bracket can also be used. The elevation angle is between 6-15 degrees (it is strictly prohibited to directly lean on the ground or the sand put);

Requirements for the storage environment of the finished insulating glass: a temperature of 15°C -25°C, a cool, dry, and ventilated room or a place with rainproof and shading facilities.

■装卸、运输: 必须采用 L 玻璃架, 不得超过 25 片, 封口向上, 整架玻璃应用绳扎紧捆牢, 运输中要防雨、防潮、防止玻璃 (架) 倾倒滑动、不得剧烈颠簸。

Loading, unloading and transportation: L glass racks must be used, no more than 25 pieces, sealed upwards, and the entire glass rack should be tied tightly with ropes. During transportation, it must be rain-proof, moisture-proof, and prevent the glass (frame) from tipping and sliding, and must not be violently bumped.

■成品安装: 在中空玻璃安装到门窗时, 中空玻璃的封口必须在门窗的上方。以保证在使用过程中玻璃不受到框扇材料的挤压而破损, 门、窗的排水孔、槽必须通畅, 门、窗框内不得有积水。

Finished product installation: When the insulating glass is installed on doors and windows, the sealing of the insulating glass must be above the doors and windows. In order to ensure that the glass is not damaged by the extrusion of the frame material during use, the drainage holes and grooves of the doors and windows must be unblocked, and there must be no water in the door and window frames.

■严禁中空玻璃胶条与溶剂、矿物油或未经相容性试验的胶类接触 (本胶条为中性胶条)

It is strictly forbidden to contact the insulating glass sealing spacer with solvents, mineral oils or adhesives that have not been tested for compatibility (this sealing spacer is a neutral sealing spacer).

■严禁将此类产品应用在玻璃幕墙上。

It is strictly forbidden to apply such products on the glass curtain wall.

■严禁中空玻璃与框、扇之间用任何性质的胶进行粘接或密封, 建议用皮条镶嵌, 否则会导致中空玻璃严重失效。

It is strictly forbidden to use glue of any nature for bonding or sealing between the insulating glass and the frame and fan. It is recommended to use leather straps to inlay, otherwise it will cause serious failure of the insulating glass.

## 其他常见注意事项

### Other common considerations

1. 为了防止玻璃炸裂，玻璃加工中空玻璃之前必须磨边。

1. In order to prevent the glass from bursting, the glass must be edged before processing the insulating glass.

2. 为了保证干净的粘结面，清洗用的水质必须达到 ppm < 200，清洗机用水要求最后一道水箱清澈见底。

In order to ensure a clean bonding surface, the quality of the cleaning water must reach ppm < 200, and the cleaning machine requires the last water tank to be clear and bottomed.

3. 为了保证中空玻璃粘结质量，胶条贴敷操作区（合片室）必须封闭无灰尘，操作温度控制在 18℃-27℃，相对湿度 ≤ 55%，地面清洁、干燥。

In order to ensure the bonding quality of the insulating glass, the sealing spacer application area (combining room) must be closed and dust-free, the operating temperature is controlled at 18℃-27℃, the relative humidity is ≤ 55%, and the floor is clean and dry.

4. 胶条在敷设前，应将提前在 18℃-27℃ 房间内存放 12 小时以上。

Before laying the sealing spacer, it should be stored in a room at 18℃-27℃ for more than 12 hours in advance.

5. 胶条剪口须垂直平齐。

The sealing spacer cut must be vertical and flush.

6. 胶条敷设应使用专用的码条器，如手工摆放，严禁手接触胶条粘结面。

A special hand tool should be used for laying of the sealing spacer. For manual placement, it is strictly prohibited to touch the adhesive surface of the sealing spacer.

7. 敷设胶条时须从玻璃长边开始敷设，最后敷设玻璃短边。

When laying the sealing spacer, it must be laid from the long side of the glass, and finally the short side of the glass is laid.

8. 玻璃合片时，不允许胶条有任何移动。如果玻璃合片不好，可将胶条从二片玻璃间剥下，但胶条不能再用，并须仔细清洗玻璃，除去密封材料的残渣。

When the glass is combined, no movement of the sealing spacer is allowed. If the glass is not well combined, the sealing spacer can be peeled off between the two pieces of glass, but the sealing spacer can no longer be used, and the glass must be carefully cleaned to remove the residue of the sealing material.

9. 热压机应为三辊以上压合。

The hot press should be more than three rolls.

10. 进入热压机时，玻璃封口在前进方向的后部。

When entering the heat press machine, the glass seal is at the rear of the forward direction.

11. 应每天检测中空玻璃从压机出来后的温度，胶条温度控制在 40℃ ~ 50℃ 之间。

The temperature of the insulating glass after coming out of the press should be checked every day, and the temperature of the sealing spacer should be controlled between 40℃ ~ 50℃.

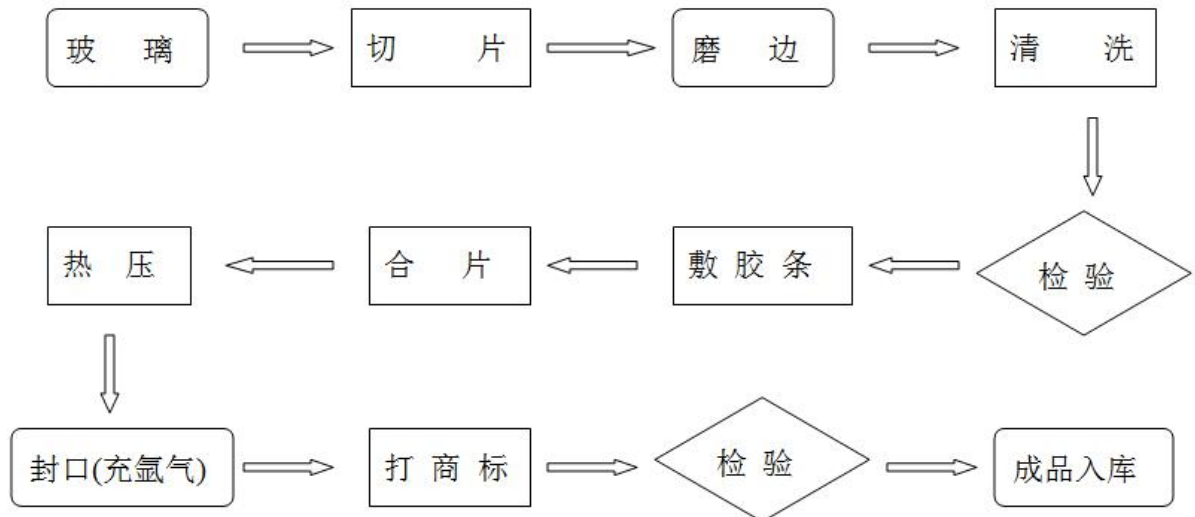
12. 胶条封口特别重要，操作方法必须严格按照我司说明书及封口视频执行，确保完全密封。

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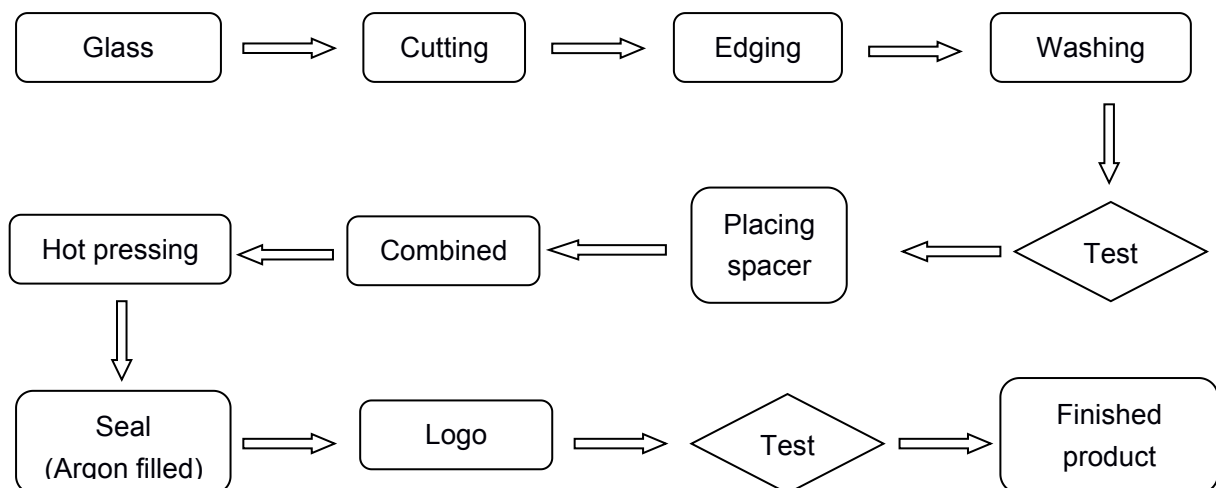
13. 中空玻璃应放在定位垫块上,应通过各种镶嵌材料将玻璃弹性固定在框和扇中,不得与框、扇及连接件直接接触。

The insulating glass should be placed on the positioning block, and the glass should be elastically fixed in the frame and fan through various inlay materials, and should not be in direct contact with the frame, fan and connecting parts.

中空玻璃生产工艺流程



Insulating glass production process



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