

Glass curtain wall construction process

1, the basic operating conditions

1. curtain wall construction organization design should be prepared, and in strict accordance with the order of the construction organization design.
2. Curtain wall construction should be completed in the main structure after the start of construction. For the curtain wall of high-rise buildings, due to the construction period needs, under the precondition of ensuring the quality and safety, the constructional design can be used along the high-section construction. In the upper main structure of the three-dimensional cross-curtain wall construction, the structure below the construction layer and curtain wall construction above, we must take reliable protective measures.
3. When the curtain wall is constructed, the outer scaffolding erected by the original main structure should be retained and the necessary alterations and modifications should be made according to the requirements of the curtain wall construction (the inner layer of the scaffolding should be no less than 300mm away from the main structure). Such as the use of hanging basket curtain wall, the basket must be safe and reliable
4. Curtain wall construction, should be equipped with the necessary safety and reliability of lifting tools and equipment.
5. When renovating the sub-project will cause pollution or damage to the curtain wall, the project should be arranged prior to curtain wall construction or reliable protection measures should be taken against the curtain wall.
6. The curtain wall construction should not be carried out in a heavy rainy weather. When the temperature is below -5°C glass installation shall not be carried out, sealant construction should not be carried out in the rain.
7. During the construction of the main structure, the elevation, the size of the edge and the position of the embedded parts in the floors of the fixed curtain wall should be controlled and checked, and the inspection and measurement of the curtain wall should be carried out before construction. When the deviation of the size of the edge of the structure is too large, the structure should be modified as necessary. When the position deviation of the embedded parts is too large, the sizing of the frame material should be adjusted or the connection between the link and the main structure should be modified.

2, curtain wall installation

1. Hide (Ming) glass curtain wall installation process

Curtain wall installation construction order:

Measuring and releasing → installing L type adapter → installing aluminum column → installing aluminum cross beam → installing lightning protection and fire protection → glass magnesium board installation → installing glass → installing horizontal (vertical) fastening cover → plastic injection and facade cleaning

(1) Measuring payoff: According to the payout mark during structural review and the cross center line of embedded parts, the installation reference line shall be determined, including the keel

arrangement reference and the horizontal elevation of each part of the curtain wall, Curtain wall to determine the three directions of the benchmark.

(2) Installation of L-type adapter: According to the pay-off marking of the embedded parts, the L-shaped adapter angle steel code is fixed on the embedded part by M16 bolt. The deviation of the center line of the connecting angle code should be less than 2mm , Left and right deviation should be less than 2mm. L-shaped connection angle steel bar and column contact edge should be perpendicular to the curtain wall horizontal line, and should be kept level, not due to the incline of the precast slant. In such cases, the steel bar or bar should be padded between the angle code and the surface of the embedded steel, and the full weld should be performed.

(3), install vertical aluminum column:

① The installation of the vertical aluminum column on the curtain wall should be installed from the bottom to the bottom of the structure. Check the size (length) of the main girder first (L type adapter angle steel code installation hole) according to the construction drawing;

②, the vertical aluminum column with two M12mm * 140mm stainless steel bolts fixed on the transfer angle code, between the angle code and aluminum columns with 2mm thick nylon spacer isolation, the two ends of the bolt and the transfer angle steel code each contact plus A 2mm thick circular gasket.

③, adjust the fixed: the use of adapters on the waist-shaped hole, according to sub-grid size, measuring the pay-off mark, horizontal and vertical control of steel wire to adjust the three-dimensional column;

④ vertical aluminum column connected with aluminum ferrule, ferrule and aluminum column by the upper corner of the fixed connection angle code stainless steel bolts connection, vertical column two columns should meet the design requirements, not less than 20mm, ferrule length is not Less than 420mm.

⑤, deviation requirements: vertical column installation is less than 2 mm.

⑥, adjust the bolt reinforcement, tighten all bolts.

⑦, conceal the project acceptance for each anchor point, and make a record.

(4), installation of aluminum beams:

①, according to the requirements of the drawings sub-grid and civil engineering to provide the elevation of the vertical column crossed to determine the location of connecting aluminum pieces.

②, using M5 * 35mm stainless steel self-tapping screws will be connected to the aluminum fixed aluminum column in the corresponding location. Note that the joints between beams and columns should meet the design requirements (plus 2mm thick rubber mat), beam and column plane should be consistent, the surface error of not more than 0.5mm.

③, select the appropriate length of the beam, the use of M6 * 25mm stainless steel self-tapping screws in the connection of aluminum parts, beam installation should be from the bottom up, when the installation of a height check and adjustment, tighten the bolts in a timely manner.

④, the upper and lower beam surface and column front should be at right angles, is strictly prohibited downward tilt, if such a phenomenon should be self-tapping screws will be fixed directly on the column angle aluminum block to enhance the beam's ability to resist torque.

⑤, the use of weather sealant seal column seams and columns and the gap between the seam beams.

(5), lightning protection node installation:

①, according to the drawings require the use of materials, should adopt the diameter ϕ 12mm galvanized round bar and 1mm thick stainless steel lightning film.

②, Galvanized round bar and horizontal, vertical structure of the main structure of the lightning protection for lap, double-sided welding length of not less than 80mm.

③, every three layers should be added a circle of horizontal closed lightning bars, and should be embedded with each piece lap;

④, in the major angles and the vertical lightning rod transfer parts are used ϕ 12mm galvanized round bar to lap;

⑤, in the main building layers of the daughter wall and the top of the tower are set in a circle of closed lightning and curtain wall of the vertical lightning to lap.

⑥, the first floor of the vertical lightning and the main structure of the grounding flat iron lap, the lap length of double-sided welding 80mm.

⑦, in the aluminum column and the steel column and the vertical joints of the joints of the telescopic extension site, are made of stainless steel lightning film connection.

⑧, in the installation of lightning protection, the aluminum profile, galvanized steel surface coating needs to use the grinder grinding clean to ensure the full contact of the lightning film to achieve the conductive effect. The contact surface should be flat, using four M5 * 20mm self-tapping screws.

(6), fire protection installation between layers:

①, according to the site structure and the actual distance back of glass magnesium board, galvanized sheet metal cutting processing;

②, according to the actual situation of the site structure to determine the height of the fire floor, according to the top of the beam pops up the level of galvanized sheet metal installation;

③, nailing galvanized iron fixed on the structure of the surface, nailing the spacing should be 300mm appropriate;

④, the other side of the galvanized sheet metal cut directly by pulling the rivet fixed on the glass back of the glass magnesium board;

⑤, according to the actual gap between the fire rock wool cut, tiled in galvanized iron above;

⑥, in the fire cotton seam joints, the structure between the surface and glass magnesium board between the back, the use of fire sealant plugging.

Note: fire protection installation should be smooth, splicing at the gap.

(7), install the glass plate:

①, the glass plate according to the drawing number sent to the installation of the required layers and regions; check the glass plate quality, size and specifications meet the design requirements;

②, according to the design requirements of the glass spacer placed in the beam position; select the appropriate rubber wear in the profiles (glass inside the contact area) notch;

③, with a hollow plate to the glass plate shipped to the installation location, then the glass plate gently from top to bottom on the glass mat, so that the plate around the center line and sub-grid consistent;

④, the use of temporary pressure plate to suppress the glass, to prevent the tilt down, adjust the left and right position of the glass plate (indoors attention from the edge of the glass stopper and the aluminum frame, the four sides should be uniform);

⑤ After the adjustment is finished, the pressure plate with rubber strips will be fixed on the beam with M5 * 20mm hexagonal bolt (the natural length of the rubber strip should be equal to

the length of the frame edge and the corner seam should be tight);

⑥, according to the design drawings to install the opening of the curtain wall and windows should comply with the installation of the relevant provisions of the standard; glass plate from the bottom up, each floor from top to bottom installation;

(8), clasp cover installation:

①, select the appropriate size, length of the inside and outside the deduction cover number;

②, the inner and outer clamshell hanging down from the upper and lower plate cogs;

2.2 skeleton glass installation process

As the glass length, size, weight, construction mechanized construction methods are generally used, that is, the installation of electric vacuum suction cups on the forklift, the glass adsorption in place, the operator standing on both sides of the glass erected scaffolding on both sides, with a clamping device to the glass The top of the fixed installation. Between each glass with silicone caulking.

3, curtain wall installation quality requirements and acceptance

1 installation quality requirements

(1) Curtain wall and aluminum alloy components should be horizontal and vertical, with the correct elevation, no mechanical damage (such as scratches, abrasions, indentations) on the surface, and no defects to be treated (such as spots, smudges and streaks Wait).

(2) All exposed metal parts (pressure plate) of the curtain wall shall be smooth in appearance from any angle and shall not allow any small deformation, ripple or recess or protrusion of fasteners.

(3) After the fixing of the iron legs of the cowhide and the T-shaped groove, it should be welded firmly, and the clearance between the contact surface of the concrete with the main structure shall not be more than 1mm, and the solidified with galvanized steel plate. Iron legs and curtain wall connection, you must pad a good cushion. Welded steel welds at the construction site shall be painted with 2 antirust paint on site.

(4) In the contact with the masonry, plaster or concrete surface of the metal surface, paint brushing asphalt paint, the thickness greater than 100um.

(5) When the glass is installed, the edges and the bones must maintain the gap, so that the upper, lower, left and right sides of the gap are guaranteed. At the same time, to prevent pollution of the glass, especially the coating side should pay special attention to prevent the coating flaking to form a face. Installed glass surface should be whole, may not appear warping and so on.

(6) Rubber strips and strips of impaction should be dense, comprehensive, the interface of two rubber strips must be filled with sealant strictly. Seal sealant should be packed full, uniform, the appearance should be smooth.

(7) fire between layers, insulation mineral wool material, to fill tight, shall not be omitted.

2.Finished product protection

(1) lifting basket should be the person responsible, the inside should be set to soft elastic material to prevent damage to the curtain wall and glass. When closing work, the hanging basket should be fixed on the floor (or on the ground) where the curtain wall has not been installed.

(2) The curtain wall which has been installed shall be provided with a special person for

inspection. The upper part of the curtain wall shall be covered with a baffle to prevent the curtain from falling and damaging the curtain wall when the upper floor is constructed. The upper electrical welding operations, should be set up a special "access sparks" to prevent sparks splash damage to the curtain wall. Near the curtain wall near the construction, should also take shelter measures to prevent contamination of aluminum alloy materials and glass damage.

(3) Before use, scrub the curtain wall with a window cleaner.

3 project acceptance

(1) curtain wall project acceptance should be completed in the building (not including the second decoration), the surface should be scrubbed clean.

(2) curtain wall project acceptance should submit the following information:

- ①, design drawings, documents, design changes and material substitution documents;
- ②, materials, components factory quality certificate, profile test report, structural silicone sealant compatibility and adhesion test report;
- ③, concealed project acceptance documents;
- ④, construction and installation of self-test records.

Contact US:

Office Addr:Room 1107, B1 Block, Tianan Cyber,Nancheng Area, Dongguan City, Guangdong Province, China,

Factory Addr:Taiying Industrial, Hongmei Town, Dongguan City, Guangdong Province, China

Tel: 0086-769-22273585; Fax: 0086-18145870793

Email: info@jingglass.com; Mobile(Whatsapp): 0086-18145870793

Website: www.jingglass.com