



Make a better building

# Cold room installation instruction

By Xiamen Yumi Imp.&Exp. Co., Ltd.

Edited by:Alina Lin

Checked by:Roy Wang

Date:2019-06-24

## Installation steps:

Step 01

Cold room wall  
panels installation

Step 02

Cold room floor  
insulation layer  
installation

Step 03

Cold room ceiling  
panels installation

Step 04

Important nodes  
display

## Part 01:

### Cold room wall panels installation:

Cold storage wall panel installation: 200mm thick and 100mm thick polyurethane storage panels are used in the refrigerating compartment and the medium temperature platform. The lower end of the storage panel is installed with 5# angle steel. The plates are tightly connected by a plug-in connection, and the middle is sealed with three sealants. The lower end of the plate extends to the underlayer under the insulation. The wall panel and the positioning angle steel are connected by rivets, and the distance between the rivet and the rivet is 300 mm. The wall panel and the wall beam are connected by a mushroom head nylon bolt



Angle steel positioning elevation, 200 thick polyurethane wall panel mounted to angle steel



Polyurethane grout spraying 3 lines




In order to ensure absolute sealing between the cold storage plates, the polyurethane caulking agent is sprayed to 3 channels, which strongly seals and keeps the heat.

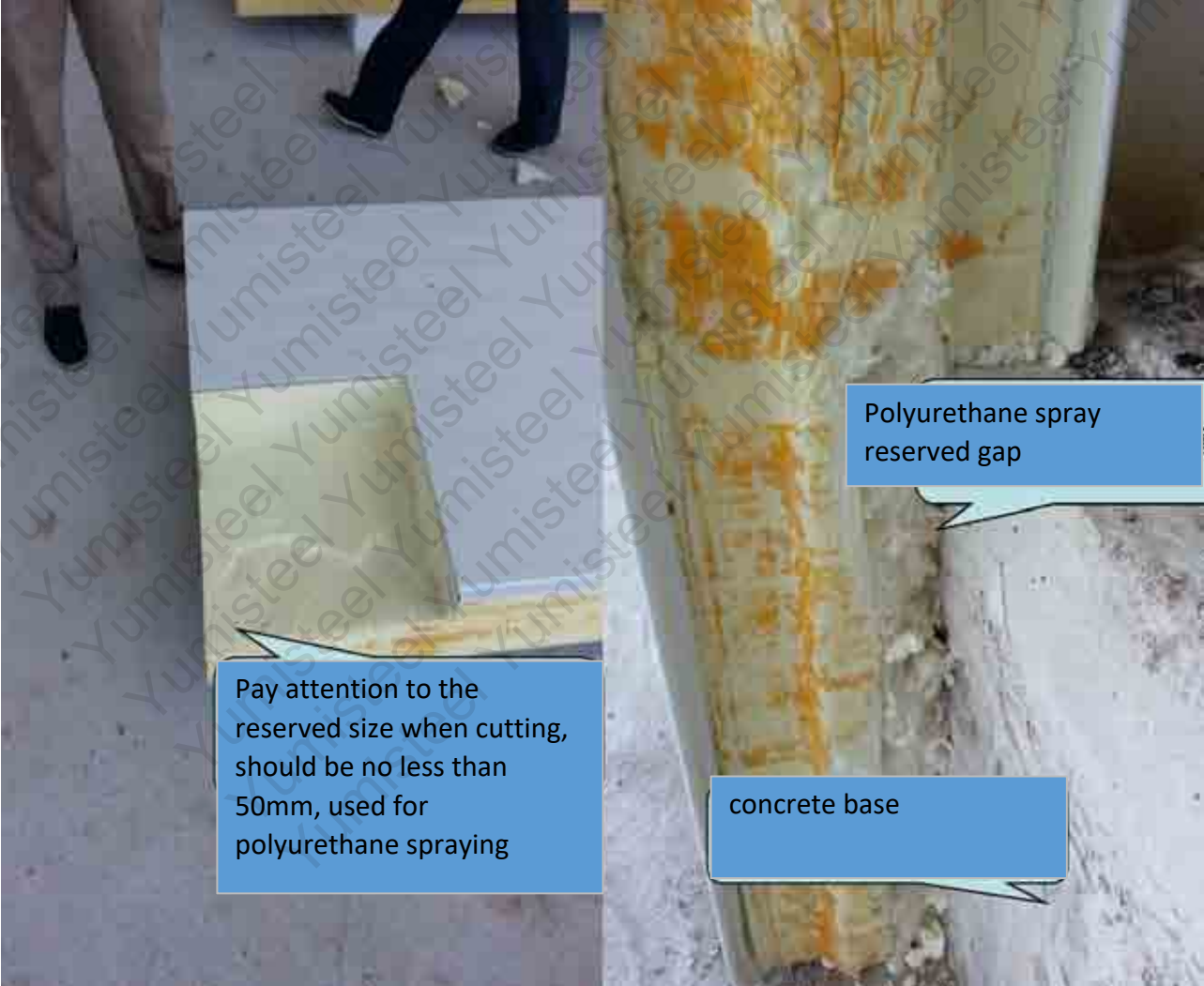


Cold storage wall panel is under installation

Theodolite ensures the verticality of the cold storage wall panel



400kg hoist easily  
lifts cold storage  
wall panels



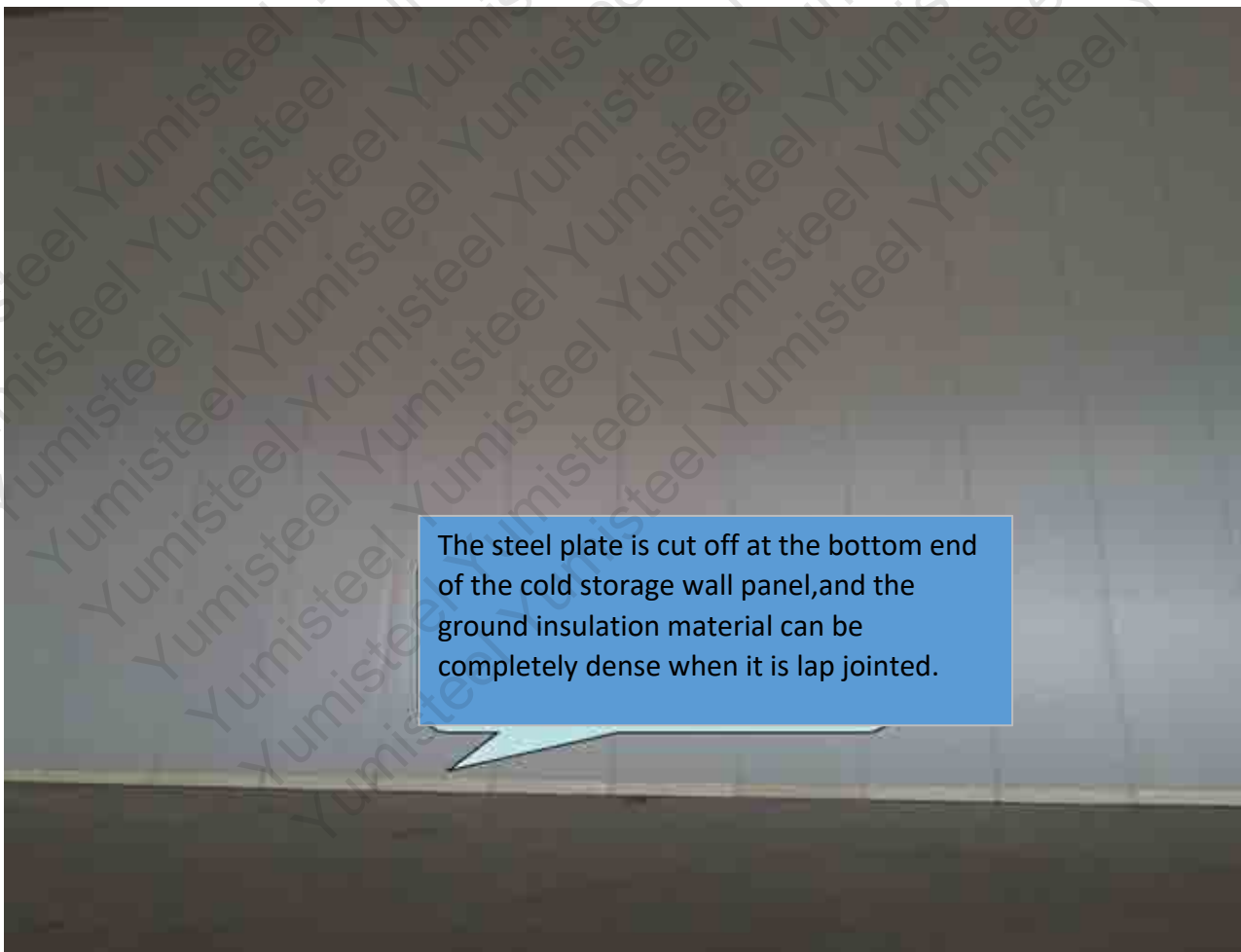
Polyurethane spray  
reserved gap

Pay attention to the  
reserved size when cutting,  
should be no less than  
50mm, used for  
polyurethane spraying

concrete base



The top of the wall panel need to cut off 150mm, 100mm for connecting with ceiling panels and 50mm is for polyurethane spraying and filling.



The steel plate is cut off at the bottom end of the cold storage wall panel, and the ground insulation material can be completely dense when it is lap jointed.

## Part 02:

### Cold room floor insulation layer installation

Cold storage floor insulation layer construction: The ground insulation of this project is laid by the density of  $\geq 39\text{kg/m}^3$  XPS (extruded board), which is divided into three layers of 50mm, 75mm and 75mm. 50mm thick extruded boards are laid on the top, each board is reserved with a 50mm wide gap, and the gap is sprayed with polyurethane on site. The reinforced concrete is poured on the insulation board.





Polyurethane sprayed surface is not flat and needs to be cut with a saw







The extruded column is wrapped around the steel column to prevent condensation on the cold bridge.

Lay moisture-proof, sealed PE film over the extruded board.



Waterproof construction



## Part 03:

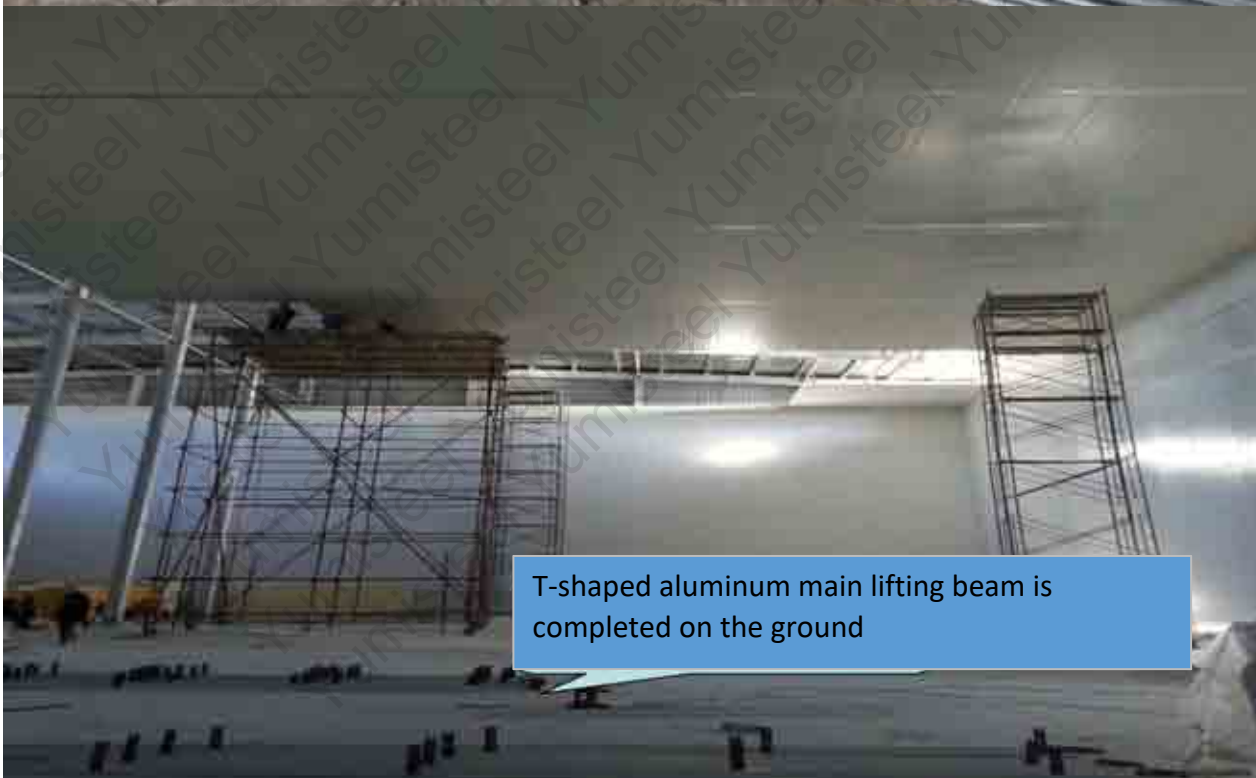
### Cold room ceiling panels installation

- Galvanized boom installation: The boom is machined in galvanized round steel and attached to the angle steel with two galvanized nuts. Adjust the elevation with the tension of the two nuts to ensure the exact dimensions of the installation.
- T-type aluminum main lifting beam installation: T-shaped aluminum main lifting beam is installed with the plane facing down, the upper end is connected with the connecting rod by the connecting plate, the T-shaped aluminum main lifting beam is connected with the T-shaped aluminum main lifting beam, and the four-hole connecting plate is used. Make the connection fixed. The end of the cold storage ceiling plate and the end of the plate are placed on the T-shaped aluminum piece, and the distance between the two plates is not less than 50 mm. Polyurethane foaming after fixing with rivets
- C-type galvanized secondary suspension beam installation: C-type galvanized secondary suspension beam installation should be placed on the T-shaped main suspension beam, and then fixed after C-type galvanized secondary suspension beam installation. The upper flange and the lower flange of the C-type galvanized secondary lifting beam are both opened, the upper flange is connected with the galvanized hanger, and the lower flange is connected with the mushroom head bolt. The C-type galvanized secondary lifting beam and the cold storage ceiling plate are prefabricated holes, which open holes in the ground, reduce labor intensity and improve work efficiency. The installation and construction can be directly connected with mushroom head bolts.
- Cold storage ceiling plate installation: The top plate is fixed on the C-type lifting beam

with a mushroom head nylon bolt. The plate is connected with the plate with a buckle connection and the intermediate polyurethane caulking agent is foamed. Each plate is attached to the Type C secondary beam by two mushroom head nylon bolts. The end of the top plate is placed on the T-shaped aluminum main suspension beam. Because the library board needs to be hung to a high place, a lifting platform or a scaffolding platform method can be used.



Galvanized boom



T-shaped aluminum main lifting beam is completed on the ground



Hanging beam and boom installation

Active scaffolding platform for steel pipes



Cold storage ceiling panel under construction



Top mushroom head bolt

Column covering sheets & edge flashings



Pulley lift for ceiling lift



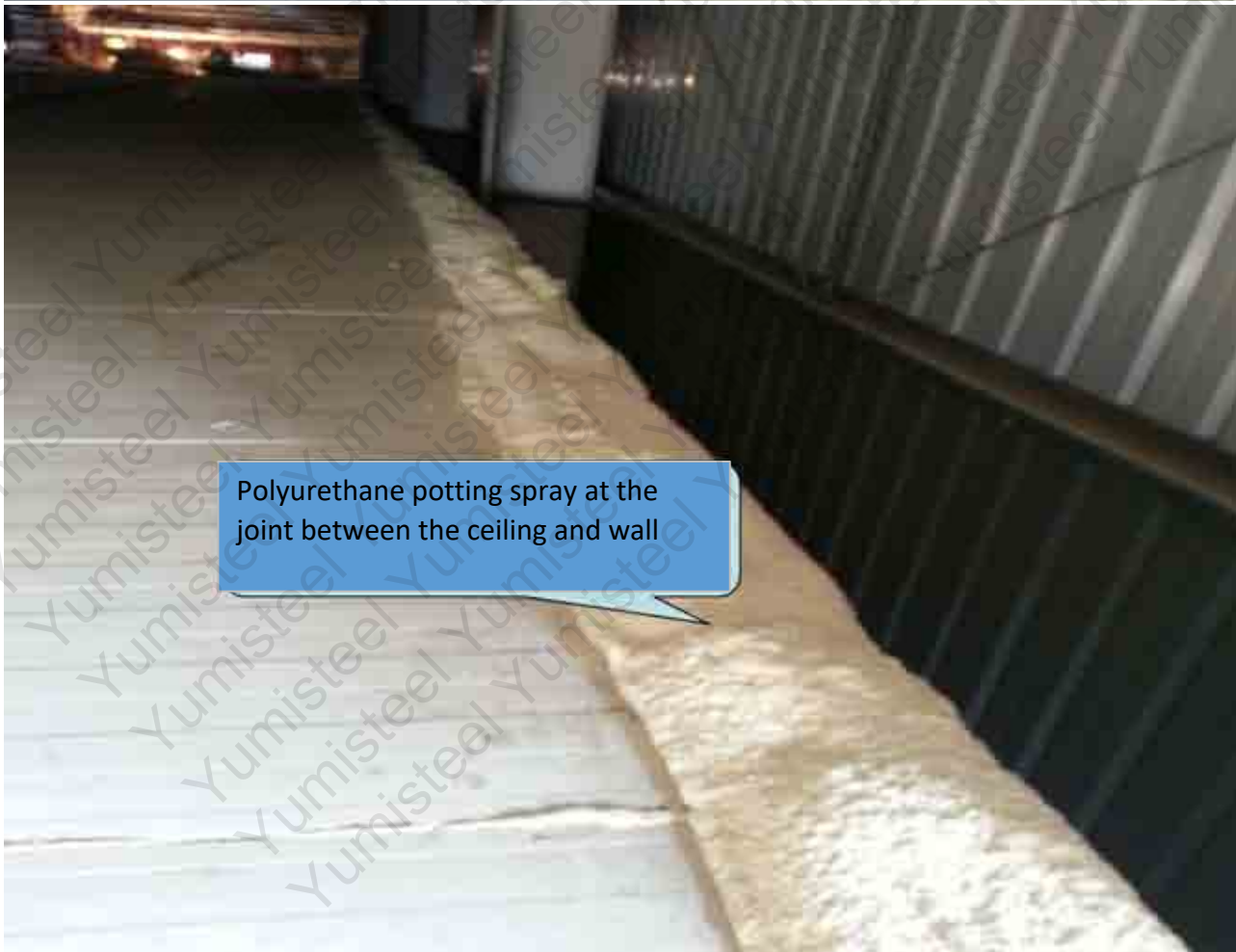
Use of lifts and scaffolding mobile platforms



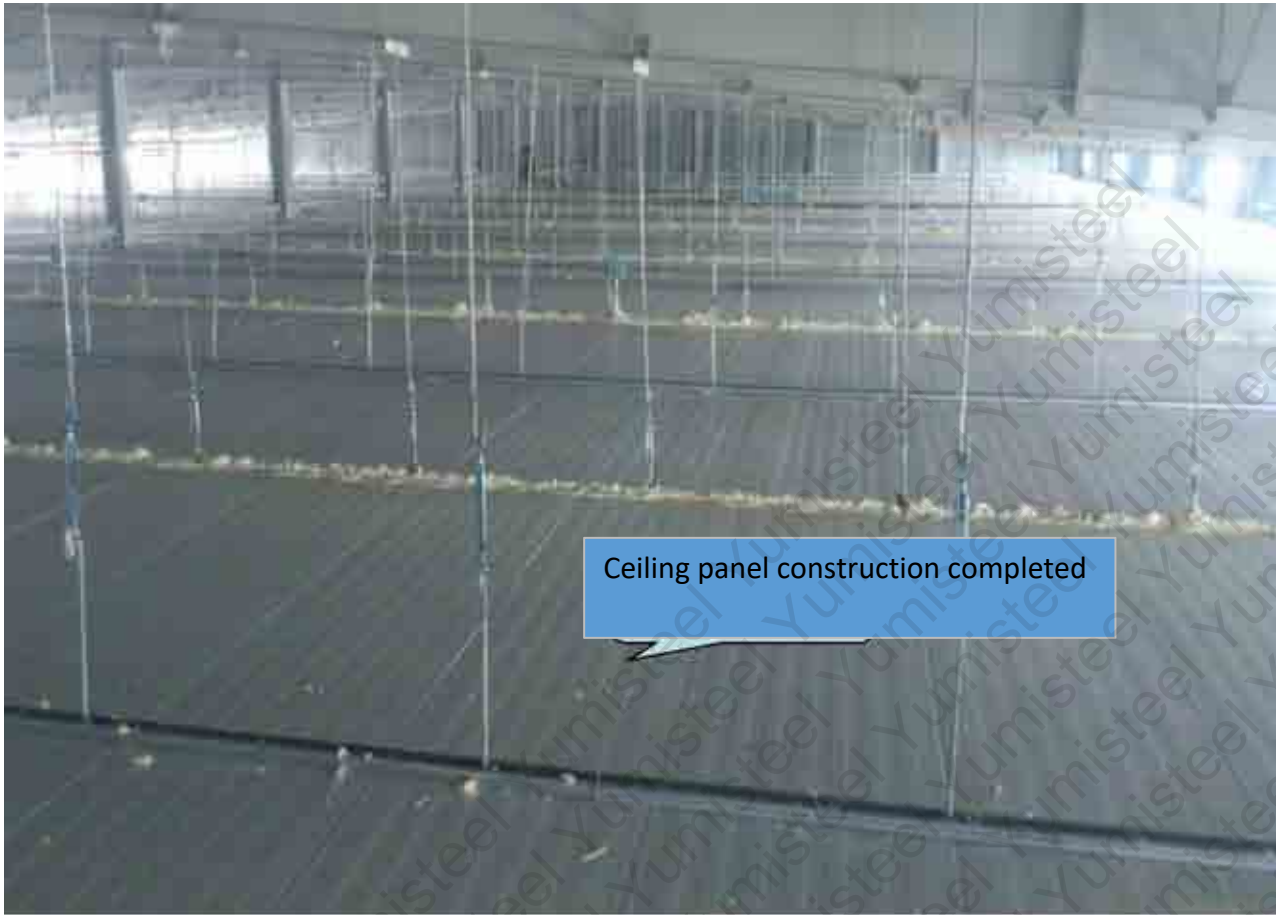
Cold storage special seal weatherproof rubber joint filling



Ceiling panel polyurethane construction



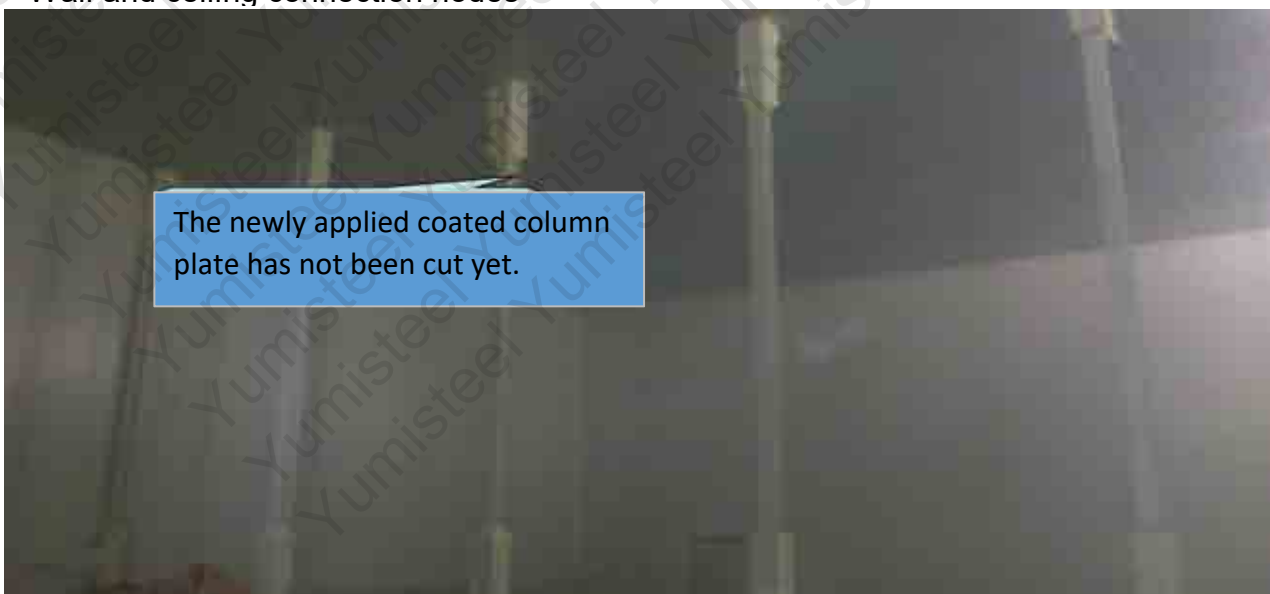
Polyurethane potting spray at the joint between the ceiling and wall



## Part 04:

### Important nodes display

- Column covering sheets installation: 2 meters of columns covering sheets on the upper and lower ends of columns, H-shaped steel column web gaps are sprayed with polyurethane.
- Wall and floor insulation nodes
- Wall and ceiling connection nodes

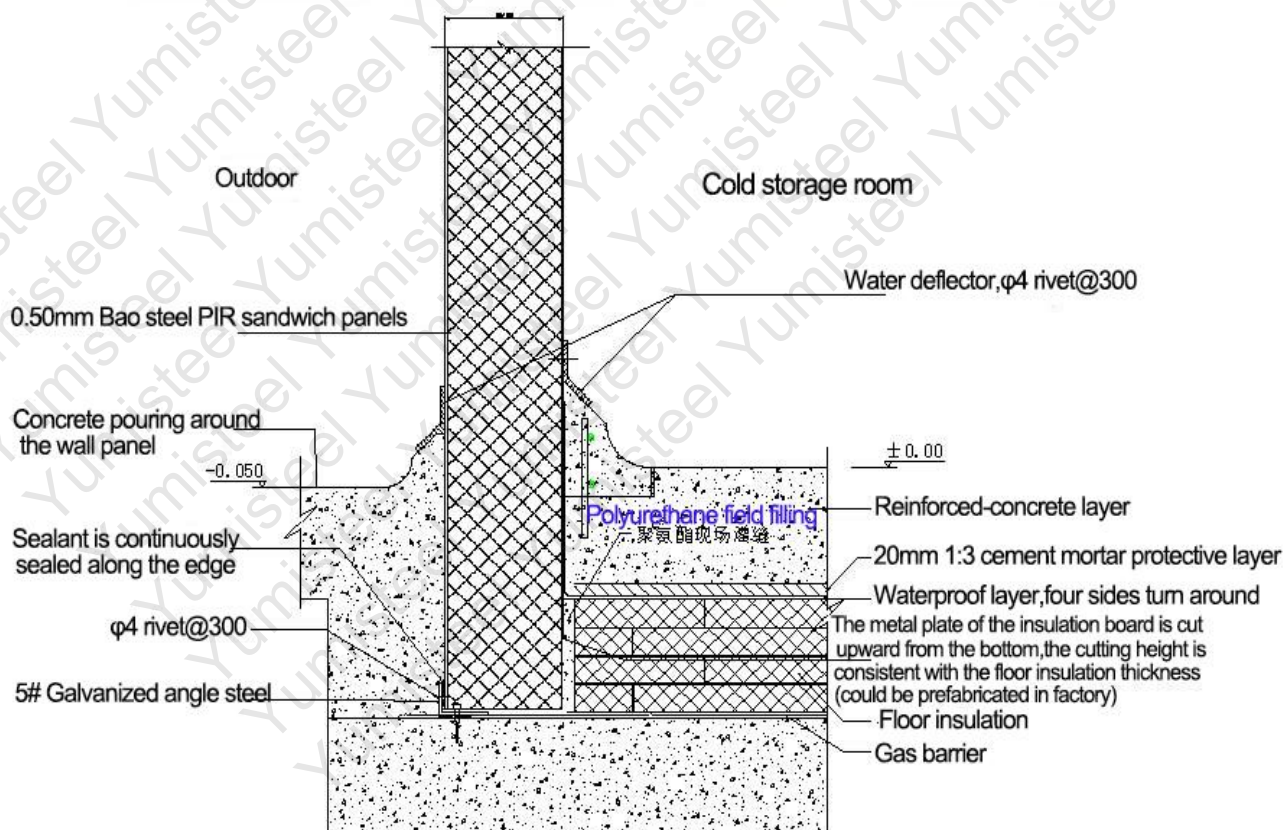






After the covering sheets and edge flashing installation are completed, the effect display

Wall and floor insulation nodes



Wall and ceiling connection nodes

