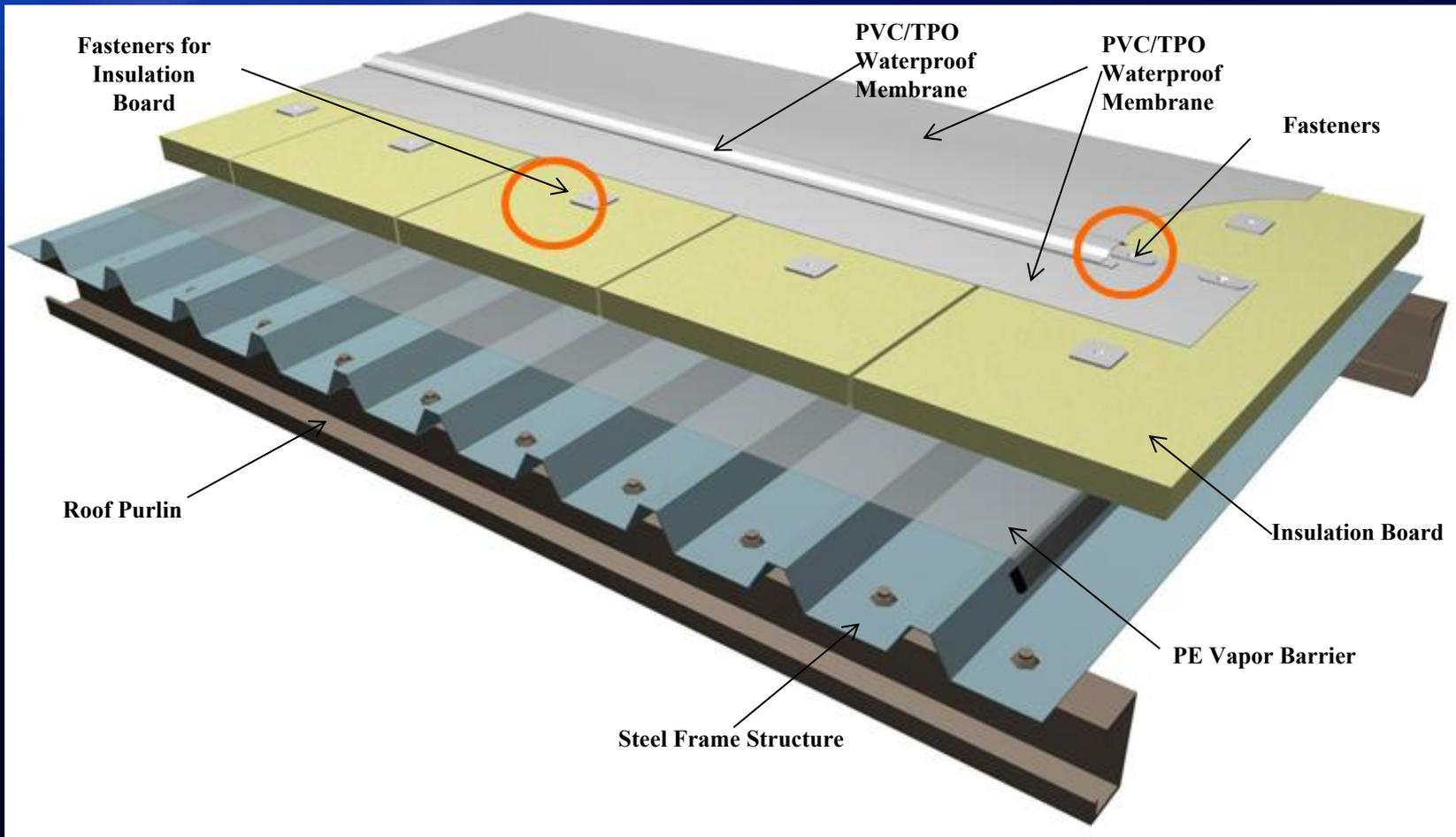




Steel Plate Type WICI Single-ply Roofing System



Problems Existed on Traditional Single-ply Roofing

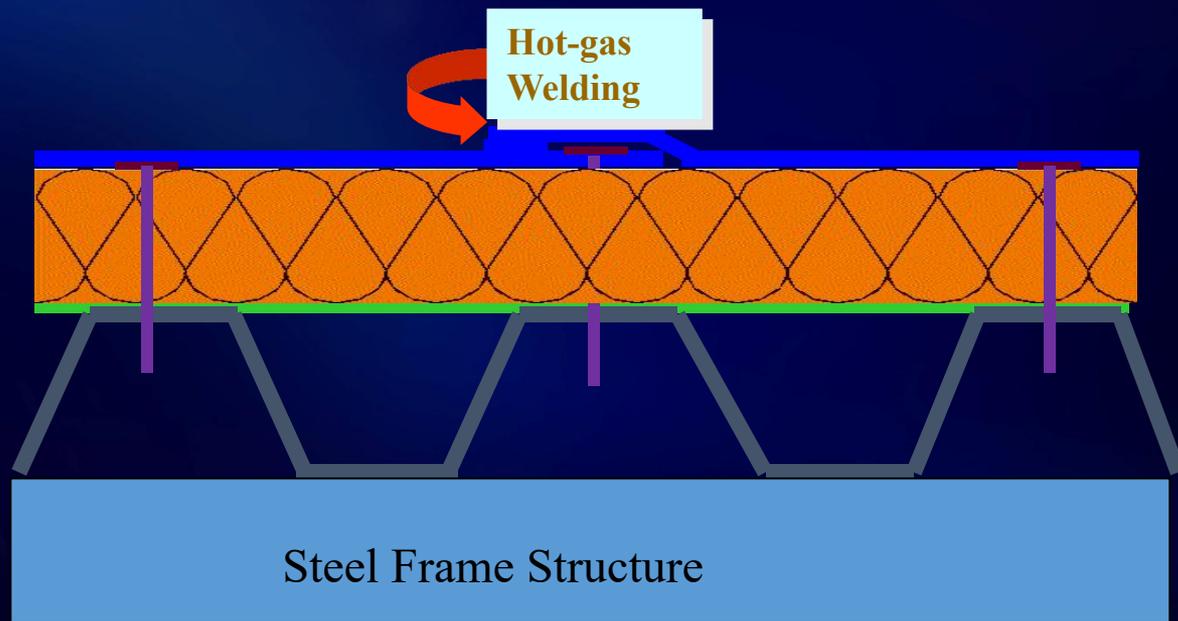


TPO/PVC (mechanical fastening, hot-gas welding)

XPS/Rock Wool Insulation Board

**Vapor Barrier
PE film 0.3 mm**

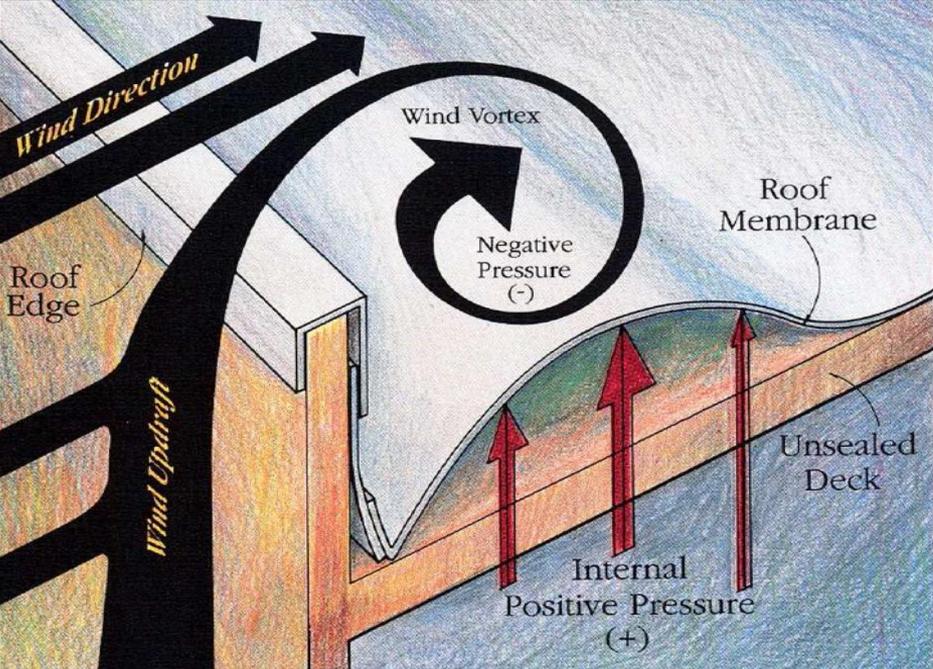
**V125 Profiled Steel Sheet
≥0.8mm thickness**



Issue 1. Weld Joints can be damaged easily



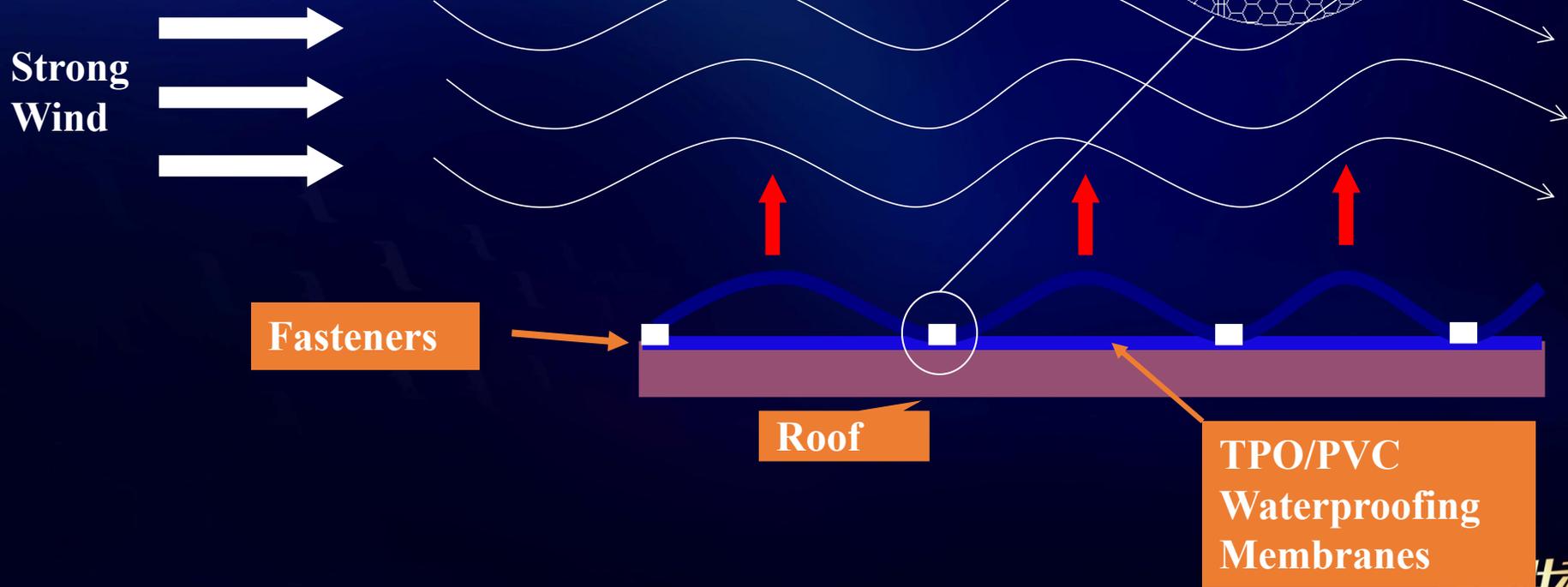
Basic reason that why traditional single-ply roofing can't resist wind uplift power.



When strong wind blows, the velocity of air flow above the sheets is quicker, thus the pressure above it is lower than below. Negative pressure exists, and the sheets are uplifted because of this factor.



Sketch of Wind Uplift

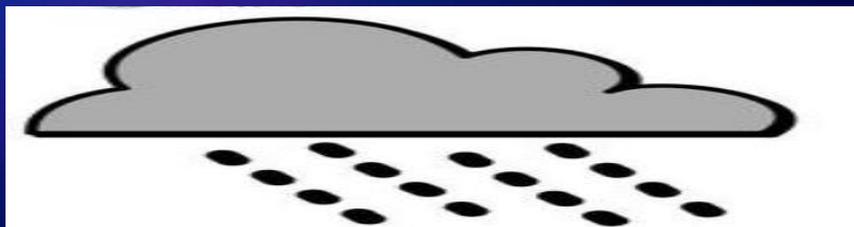




Issue 2. Fluid-channeling



Demonstration of Fluid-channeling



Hot-gas Welding

Screws and gaskets for the fixing of membranes

Leakage Point

PVC/TPO

Insulation layer

Vapor Barrier

Profiled Steel Sheet

Screws and gaskets for the fixing of insulation board



Issue 2. Fluid-channeling

It's hard to locate the leakage point.



Issue 3. Hard to make clear project management responsibility





Introduction of Steel Plate Type

WICI

Single-ply Roofing System

Waterproofing Layer

**No leakage,
no fluid-channeling**

**Eliminate
fluid-channeling**

Insulation layer

**High hydrophobicity,
good fire-resistance and
waterproofing performance**

**Rock wool
insulation board**

Innovation

**Simple Structure
Easy Installation
Cost Saving**

Integrated Panel

**Steel Plate Type WICI
Single-ply Roofing System**



What does WiCi mean?

Waterproof

Insulation

Compound

Integrated

WiCi Waterproofing & Insulation Compound
Integrated System

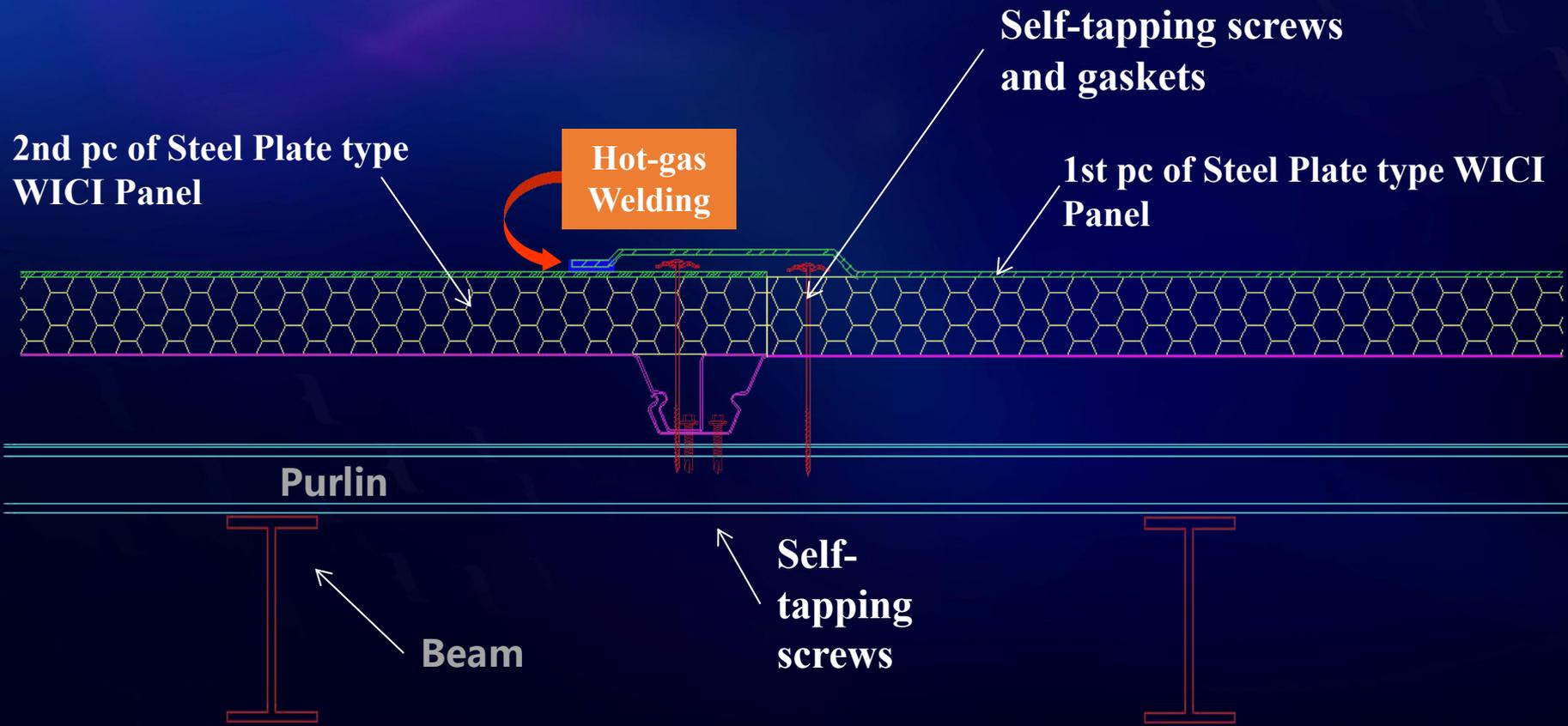


Product Structure of Steel Plate Type WICI Waterproofing & Insulation Compound Integrated Panel



WiCi Panel Types & Specifications

- **Classified by the materials used on top:**
PVC type、TPO thermoplastic polyolefin type
- **Length:** customized by the length of the roof
- **Thickness:** 30、40、50、60、70、80、90、100mm
- **Width:** 1.0m



Advantage of WICI Roofing System

1. The whole roofing system is combined into a complete part.
No fluid-channling, no leakage.



**Steel Plate Type WICI
Roofing System**

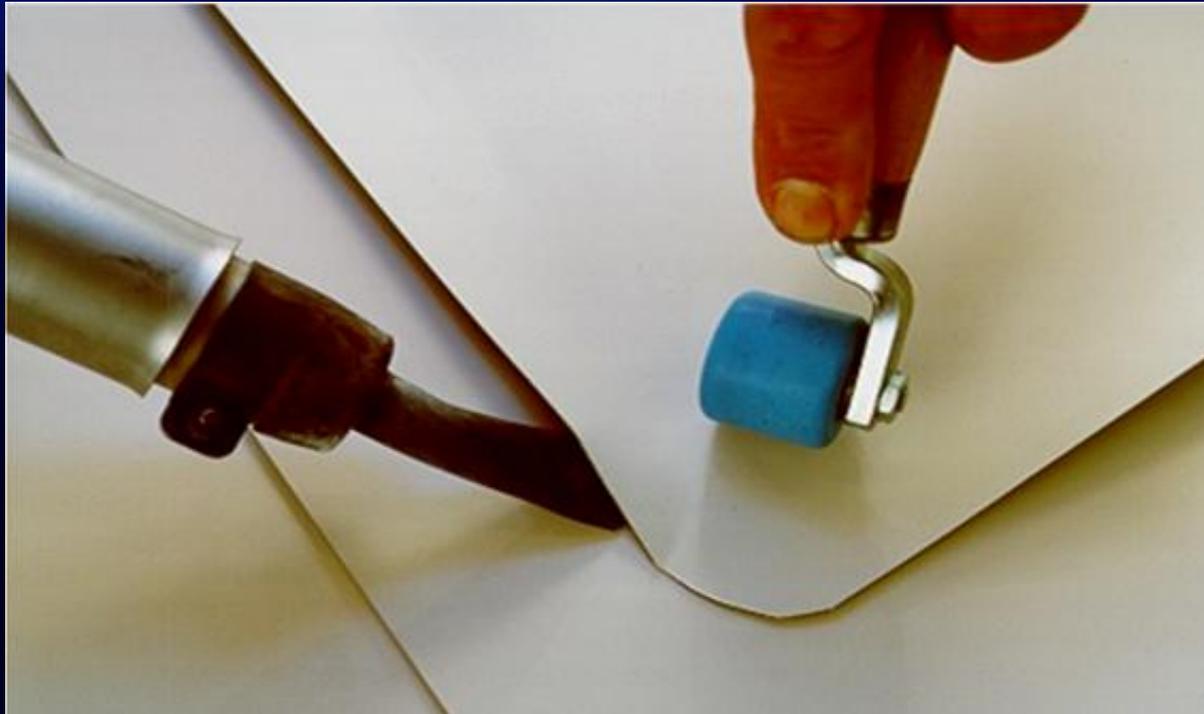


**Traditional Single-ply
Roofing**



Advantage of WICI Roofing System

2. It's quite simple and easy to locate the leakage point, convenient for the maintenance. Only need to cover the leakage point with a small piece of PVC/TPO membrane when leakage issue occurred.



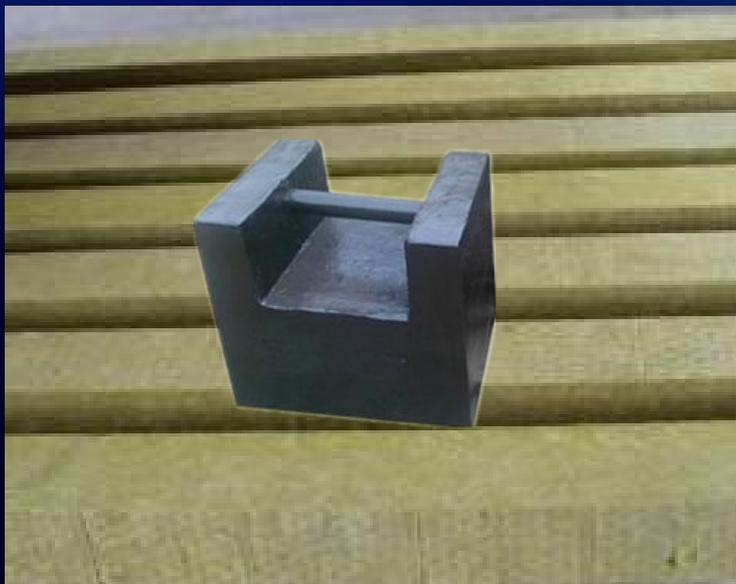
Advantage of WICI Roofing System

3. The fire resistance of Rock Wool Board is A grade, combined with steel plate & PVC/TPO waterproofing membranes.



Advantage of WICI Roofing System

4. $140 \text{ kg} / \text{m}^3$ Compression Strength of Rock Wool Board $\geq 60 \text{ KPa}$



Tensile Bonding Strength between Rock Wool & PVC/TPO Membrane $\geq 0.1 \text{ MPa}$



Advantage of WICI Roofing System

5.heat conductivity coefficient ≤ 0.031 W/m.K

excellent insulating performance, long lasting.



Advantage of WICI Roofing System

6. Fixed on both sides, wind uplift borne by the integrated panel. More reliable and excellent than traditional single-ply roofing system.



Advantage of WICI Roofing System

Simulation scenario of single-ply roofing systems under wind uplift pressure (4.3kPA)



Steel Plate type WICI Single-ply Roofing System



Traditional Single-ply Roofing System

Advantage of WICI Roofing System

7. Grade A fireproof performance, waterproofing layer, rock wool insulation layer and profiled steel sheet combined into a unity, no oxygen provided under PVC/TPO waterproofing sheets.



Advantage of WICI Roofing System

8. Smooth surface, quality treatment on details.



Main Tools



注胶枪

Glue injection machine





Construction Process of Steel Plate type WICI Single-ply Roofing System

4. Construction Process of Steel Plate type WICI Single-ply Roofing System

Step 1. Site Cleaning

Step 2. Application of Roof Purlin, gutter
and roof ridge, etc.

Step 3. Reinforcement Work.



4. Construction Process of Steel Plate type WICI Single-ply Roofing System

Step 4. Pre-apply WICI Panel



Step 5. Fixed the first WICI PANEL



4. Construction Process of Steel Plate type WICI Single-ply Roofing System

Step 6. Fix the second WICI PANEL to the joint angle part of its next WICI PANEL.



4. Construction Process of Steel Plate type WICI Single-ply Roofing System



**Step 7. Fastened of WICI Panel
on both sides.**

4. Construction Process of Steel Plate type WICI Single-ply Roofing System



Step 8. Hot-gas welding on large scale by automatic welding machine

4. Construction Process of Steel Plate type WICI Single-ply Roofing System



**Step 9. Details Treatment with
Welding Gun.**

Finished Roofing



Finished Roofing



Finished Roofing





THANK YOU!