

Introduction of O STABLE PANEL IBS SYSTEM

1. Founder

The founder of O Stable Panel System Mr. Khoo Tian with a degree of BSc in Architectural Engineering graduated from CHENG KUNG UNIVERSITY (成功大学), TAIWAN in the year 1971.

2. O Stable Panel System – Patented

(Granted patented Certificate No. My-147923-A, MY-168282-A, MY-138022-A)

This high-end patented prefabricated building system known as O–Stable Panel System was invented by our Managing Director Mr. Khoo Tian through a long process of R&D since the year 1994, has successfully developed the system after an investment of more than RM10 million based on his over 50 years of accumulated experience in building construction. One of the most impressive projects is 17 story government office income tax complex at Jalan Duta, K.L. where the frame structural started from the 3rd floor onward was completed one week per floor without using a tower crane. The police headquarter at Jalan Shaw K.L and the 4 Storey new block for Sekolah Menengah Maxwell are another amazing accomplishment too. It was completed within 3 months including the foundation and demolition within the tight schedule assigned by JKR.



Late 70s most of the class A contractor don't have tower crane

3. Moulds

Using the system, O-Stable Panels are produced through a set of moulds that can adjust or adapt the size in accordance with the specification and design required. With only standard vertical joints and standard horizontal joints, these panels enable the construction structure to achieve refinement while maintaining simplicity and unparalleled quality. In other words, **quality control that is normally dependent on man is now monitored by the system.**

(More details: <https://youtu.be/wtRO9I6Rck8>)

4. News

Thousand units of various types of houses/buildings had been completed by using the above system. The first launch of the O-Stable System was in the year 2001. That had been broadcasted by Bloomberg in the year 2002 on April 22.

(More details: <https://youtu.be/x2DRa4djlul>)

5. Structure Integrity

O-Stable Panel System follows the code of engineering practice. The RC frame is designed as non-load-bearing walls supported by the Beam and tied to the columns.

Each Ostable panel is a precast element with the wall and beam cast together to form one single wall panel.

The precast wall panel will then be connected together where the side edge by cast-in-situ Vertical joints which are designed as Columns.

In actual fact, the whole building with the RC Frame, RC Slab and RC Walls connected together resulted in the formation of a strong RC BOX STRUCTURE.

The earthquake simulation testing had been carried out by the Tonji University Shanghai, China which indicated the O-Stable Panel System is able to resist the earthquake up to 7 and 8 Richter scales.

(Report: https://www.ostap.com.my/ostap-system_earthquake.html)

6. Deconstruction Test

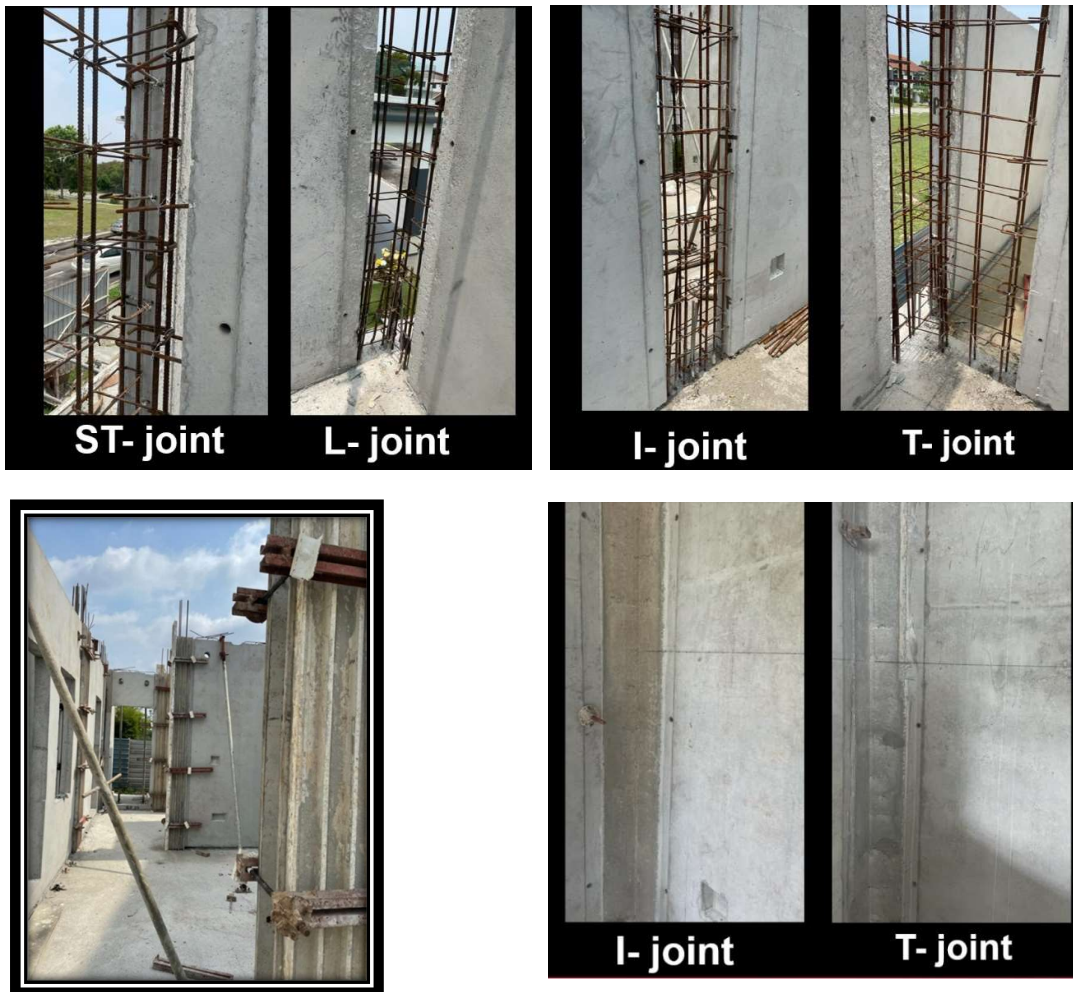
Relocated 2 guard houses. The whole unit of guard house including strip footing with ground beam had been unloaded to the sloping ground without compaction.

4 years later, the building was tilted by 15 degrees. We can't find any hairline crack in between the precast wall and column joints.

(Deconstruction test video: <https://youtu.be/oguiU-bdilw>)

7. Joints system

O-Stable Panel System provides a good tolerance for column joints.





(More details: <https://www.youtube.com/shorts/GZZxLFBZKLM>)

11. Comparison

Most of the IBS Players In The Building Industry Market stated that the construction cost will be higher by 10% to 15% compared to the conventional method of construction.

Why does O Stable IBS System claim that the construction cost will be cheaper or equivalent?

Item	O Stable IBS	Others IBS
1. Precast Concrete Plant	<ul style="list-style-type: none"> • Small factory or warehouse to store adjustable moulds and accessories • Investment Costs Are Low 	<ul style="list-style-type: none"> • Big factory with heavy machinery • Investment Costs Are High
2. Panel To Panel Joints	Provide Big Tolerance for Column Joints that are bigger than conventional columns.	Small Gap or Small Joints
3. Method Of Joint	Wet Joint Acts as A Column with a feature design to prevent rainwater seepage.	Dry Joints or Wet Joints.
4. Panel Production	In The Factory or Project Site	In Factory
5. Base Moulds	<p>With Or Without Base Moulds</p> <p>Metal Base Moulds or Fiberglass Moulds</p>	<p>With Base Moulds</p> <p>Metal Base Moulds</p>
6. Panel with Texture Concrete Surface	<p>Are able to produce any design of texture concrete surface if required.</p> 	No Comment

		
7. Logistics And Transport	Low Cost	High Cost
8. Precis For the PC Panel Dimension	No Need All The Vertical Joints/Columns Provide a Big Torrance.	Yes Small Gap / Small Joints
9. Door and Window Opening Profile	Special feature design to prevent rainwater seepage	No Comment

<p>10. Other Components Use at The Project Site</p>	<p>Alloy Aluminium Formwork with An Auto Lock System.</p> <p>Easy To Handle, And Completed with Good Quality Finishing.</p> <p>Sustainable and Lasting Easy to adjust to any size of formwork for the column and beam. without cutting,</p> <p>unlike the conventional method of construction. The contractor has to buy plywood and timber and asks his workers to cut and assembly the size according to the design (time wastage with high cost)</p> <p>(The above Alloy Aluminium formwork can be used at least 300 Times)</p>	<p>Unknown</p>
<p>11. Green-Built Technology</p>	<p>Using Sun and Wind Energy for natural ventilation to reduce carbon without using air conational units.</p> <p style="text-align: center;">Tested report by UITM</p>	<p>No Comment</p>
<p>12. Learning to familiarize the System</p>	<p>Within a Month</p>	<p>No Comment</p>
<p>13. Construction Joint</p>	<p>Excellent With Almost Zero Defects.</p>	<p>No Comment</p>
<p>14. Operation And Overhead</p>	<p>Low</p>	<p>High</p>