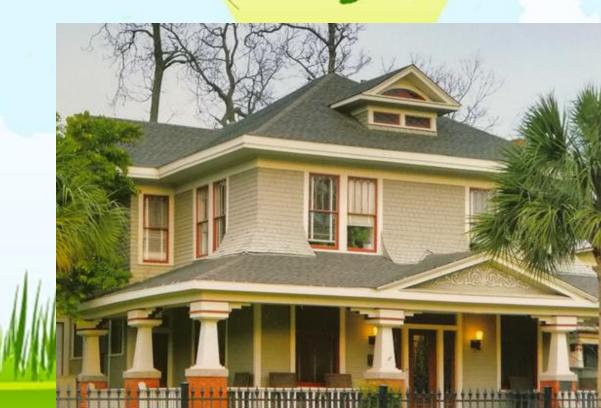


Eco-friendly Home

天津市弗雷姆新能源科 技有限责任公司

Tianjin Flame New Energy Technology Co.,Ltd.







New Prefabricated Construction

Tianjin Flame is committed to the development of various energy-saving prefabricated construction, development, production and sales, technical services and engineering construction. Tianjin Flame is focused on providing the overall solution for the green and environmental friendly construction.



Manufacturing center





The low-floor cold-formed thin-walled steel plate wall structure is a new type of building structure technology, which is a kind of "box" structure composed of composite wall panels, compensating the shortage of brick wall structure and frame structure;

It is very suitable for the buildings with floors less than 30 floors.

Compared with the traditional brick-concrete structure and frame-type construction technology, it is the innovation of building materials and building technology in the construction field. It can completely replace the traditional brick-concrete structure, frame-type structure and other architectural forms in the low-rise building, changing the architectural traditional construction mode for the low-rise building.





技术荣誉 Technology Awards





panels made from insulating, lightweight concrete

panels incorporating EPS sections, steel wire and steel C sections running along the long side of the

panel to provide a wide range of design options.

Accessories include U shaped Steel Brackets (non-

adhesive, specified tape that can be plastered over.

galvanised), specified tek scews, specified mortar

low feaming PU feam, specified tape to seal be-

tween the window and wall, and a specified plaster

based exterior finishing system for the walls. The

system. The roof panels are protected from the

the roof panels.

new residential buildings.

floor panels are finished using a specified levelling

weather using a specified roofing solution attached

Product purpose or use

The E-Build Prefabricated Masonry Wall, Floor and

Certificate Holder

ShangDa New Type Building Materials Ltd.

2/37 Gretel Place, Hillcrest, Auckland, 0627.

www.shanada.co.nz

CodeMark Certification Body

BEAL Certification Service Limited

2A Plimmerton Drive

Plimmerton, Porirua 5026, NZ

E-Mail: bcs@beal.co.nz

Phone: +64 4 233 6661

Roof Panel System is intended for construction of

over timber purlins which are in turned attached to

CERTIFICATE OF CONFORMITY

This is to certify that

The E-Build Prefabricated Masonry Wall, Floor and Roof Panel System

Complies with the New Zealand Building Code; Performance Clause B1.3.1, B1.3.2, B1.3.3 (b), (f), (g) & (h)

Performance Clauses B2.3.1 (a) panels & (c) wall and roof finishing systems

Performance Clause E2 3.2

Performance Clause F2.3.1

Performance Clause H1.3.1

Compliance with other clauses fall outside the scope of this certificate

Subject to the following:

Limitations of use -

A) an external environment above ground, with a (seismic) locality factor (Z) of up to 0.42 (Upper Hutt), in a temperate climate, with winds up

B) the height of buildings shall be up to and including 10m from the finished ground level

C) the system shall use specific designed steel framing and shall incorporate a concrete foundation to a specific design.

D) the system is limited to use for residential housing including Importance Class 1 and Class 2 type construction, i.e. stand-alone houses and multi-apartment dwellings, up to three stories high;

E) the system shall be constructed in accordance with the approved technical and quality plan literature by those trained and approved by ShangDa New Type Materials Ltd.

F. Accessories and componentry to comply with that specified in E-Build Prefabricated Masonry Wall, Floor and Roof Panel System Technical Installation Manual; and the ShangDa New Type Materials Ltd.* Building Product Quality Plan ver 1 G. Installation shall be performed by ShangDa* trained and approved installers, who shall be supervised by a Licensed Building Practi-

H. Maintenance of the E-Build Prefabricated Masonry Wall. Floor and Roof Panel System, shall be in accordance with the Building

Product Quality Plan ver 1**, available on request: Conditions of certification -

J. This certificate is subject to S15 of the Building (Product Certification) Regulations 2008

information that forms part of this certificate or the basis for certification is available from the issuer on request and may be subject to a fee.

Note that this certificate may only be reproduced in its entirety.

The Building Product Quality Plan shall be reviewed and subject to audit at their head office and building sites by the issuer at least once a

23 February 2018

BCS-173418-CMNZ

BEAL

CERTIFICATION SERVICE

MINISTRY OF BUSINESS.

Certificate Number

C R Prouse

BEAL Certification Service

losses, expenses, damages, and costs arising as a result of the use of the building method(s) or product(s) referred to in this certificate.

This certificate is issued by an independent certification body accredited by the product certification accreditation body appointed by the Chief Executive of the Ministry of Business, Innovation and Employment (MBIE) under the Building Act 2004. MBIE does not in any way warrant, guarantee, or represent that the building method or product the subject of this certificate conforms with the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. MBIE disclaims, to the extent permitted by law, all liability (including negligence) for claims of



Le Président du Salon: Jean-Luc Vincen





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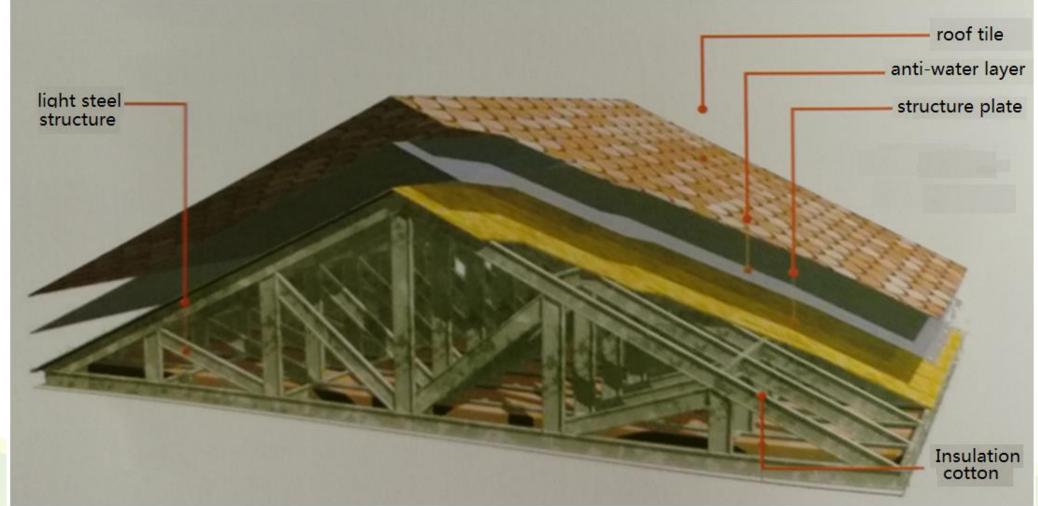


Main features:

- 1) it is earthquake resistance;
- 2) it is energy saving and environmental friendly;
- 3) it is easy for installation and simple assembly method;
- 4) it can be constructed in a short time;
- 5) it is with a long lifespan, at least 50 years;



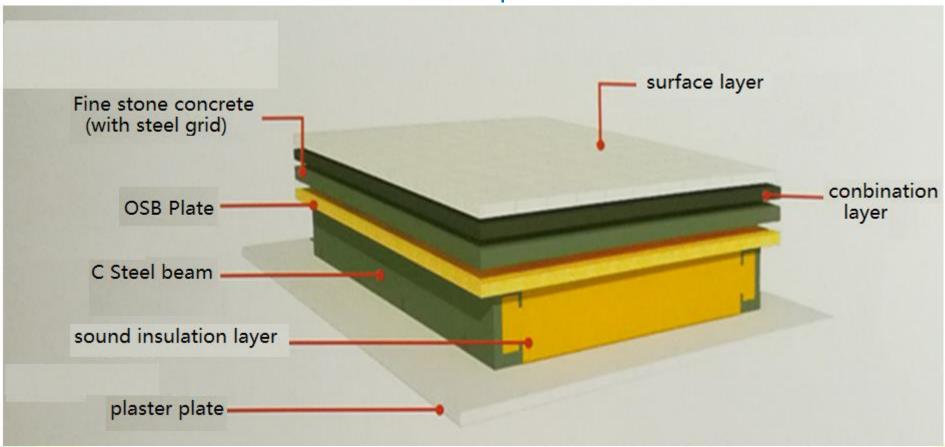








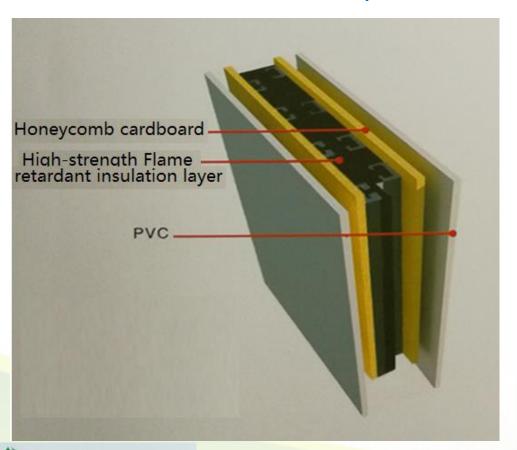
Surface part



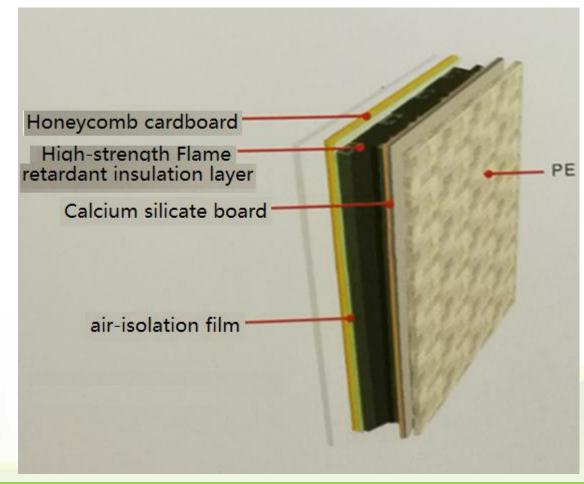




internal wall part



external wall part







复合墙板 Composite Wallboard

The composite wallboard is a new generation of high-performance building inner partition produced by industrialization. It is made up of a variety of building materials featured in environmental-friendly, energy-saving, pollution-free, earthquake-resistant, fire-proof, heat-insulating, sound-proof and quick construction.

The wood-plastic honeycomb composite wall is made of special recycled paper and is modeled after the honeycomb structure. It consists of wood plastic, stone plastic wallboard, honeycomb paperboard and environmental-friendly adhesive. The wood-plastic wallboard is made of PE and PVC wood-plastic as the composite panel of the panel; the stone-plastic main material is made of stone powder as the composite material of the panel. Honeycomb paper core is made of high-strength corrugated paper treated with special flame retardant process, and environmentally friendly corn starch glue for viscose.

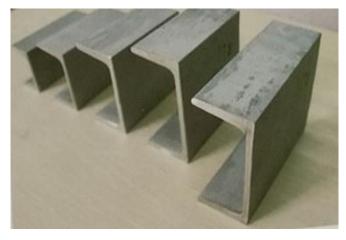




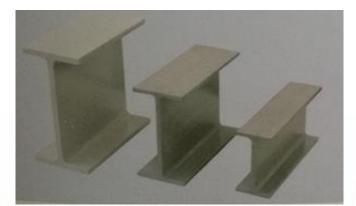


The steel structure is a light and extremely vital rigid structure system.

It is widely used in office buildings, villas, warehouses, gymnasiums, casinos, residential buildings, etc. It has the characteristics of convenient transportation, short construction period, movable type, and demolition.



Groove steel



H Steel



C steel



I Steel





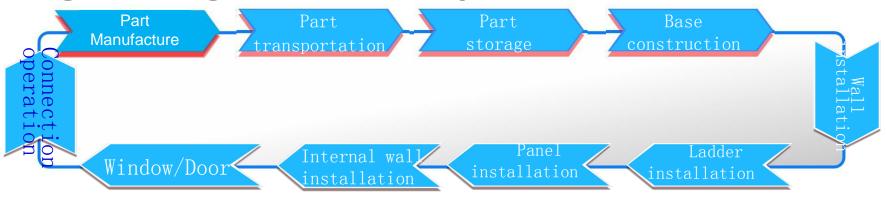
- **1.Anti-earthquake and wind-resistant:** The box-type structure composed of composite plates has stronger shock resistance. It is suitable for earthquake-resistant at 8 degree or more, and it can resist hurricanes of 70 meter/second.
- 2.Energy saving: The outer wall retaining structure is a combination of thermal insulation material and light steel. The wall panels are connected by staggered seams with excellent tightness. The heat transfer coefficient of the wall is 0.32, and the energy saving is not less than 8%.
- **3. Fire prevention:** the wood-plastic and stone-plastic wallboards will never burn, and will not generate harmful gases. It is an ideal fireproof material.

- **4. Environmental protection:** There is less dust pollution during the construction process, and the house panels can be reused after demolition.
- **5.Excellent sound insulation:** It can be separated from the volume of 36~56 decibels, and has excellent sound insulation and sound absorption effects.
- **6.Durability:** The steel is made of ultra-high-grade anti-corrosion high-strength cold-rolled galvanized steel sheet filled with insulation material, and has good corrosion resistance.





Engineering Practice—key of the construction



This process has realized the integrated work flow from parts transportation, parts onsite installation, wall installation, ladder installation, panel installation, internal wall installation, window/door installation and connection operation.









Part transportation Part storage wall installation connection operation

Function: it has solved the problem of low installation efficiency, orderless work process,

realized the recycling use of facilities and labor, significantly reducing time



















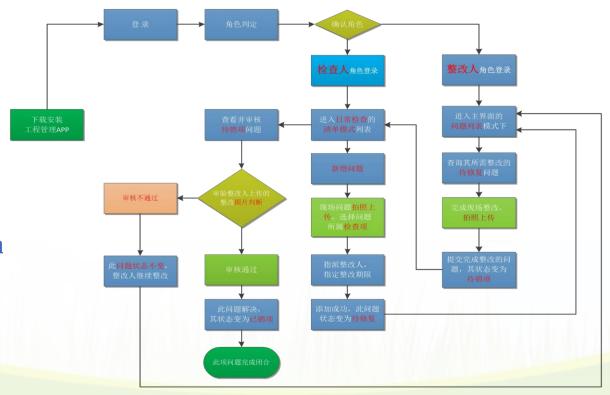




Engineering Practice—Developed a construction process information monitoring management system

Real-time monitoring of the construction process of prefabricated components, and timely feedback information through the cloud platform, solving the problems of component accuracy check and positioning and installation accuracy

Development process of construction process monitoring management system







Low-floor construction



























Cost and economic benefit analysis

- The prefabrication rate of the ring-reinforced anchored concrete shear wall structure is 60%, and the assembly rate is more than 50%;
- Prefabrication rate of prefabricated rigid column hybrid beam frame structure is 85%, and assembly rate is more than 50%;
- Reduced construction waste by more than 80%;
- Reduced labor by more than 50%;
- Overall housing gain rate increased by more than 3%;
- Reduced the total construction period by more than 30%;
- Added 50mm thick concrete protective layer for the external wall insulation layer, which greatly improves
 the fire resistance of the external wall insulation layer and its durability is increased;





High-floor construction





















According to different countries, the style can be customized, and the different styles can be selected as follows:

1.European Palace Style

2. European Rural Style

3. Americal simple Style

4. British retro Style

5. Romantic tenderness Style

6. Chinese elegance Style











1. European Palace Style











2.European Rural Style











3.Americal simple Style











4. British retro Style











5. Romantic tenderness Style











6. Chinese elegance Style

Other styles are available upon request!

























































Project location: Dubai

Product name: Module house

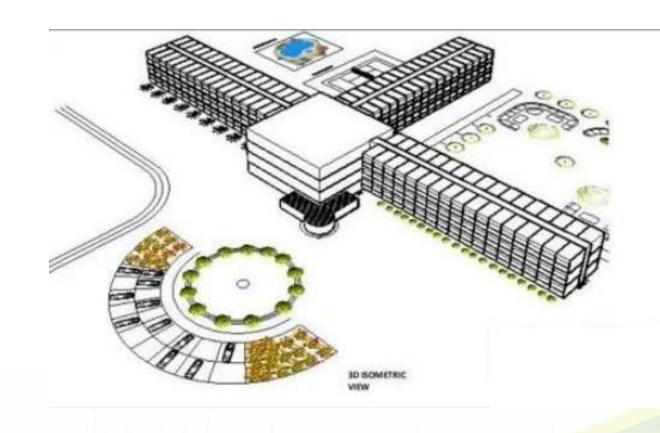
Customer: Local engineering company

Application: Hotel

Total area: 8283.4 Sqm

Project information:

The prefabricated construction will be the first hotel for their development with total budget at around 5 million USD.







Project location: Brazil

Product name: Module house

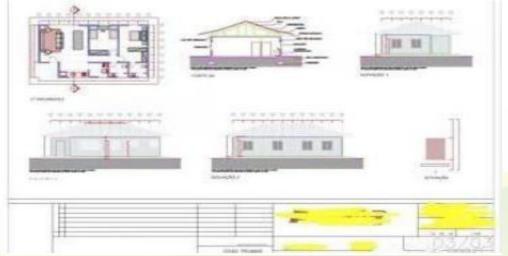
Customer: Local designing company

Application: Residential area

Project information:

The prefabricated construction will be installed in Divnopolis city in Brazil, mainly for commercial center, public construction (school, administration center), residential application.









Project location: Mosco, Russia

Product name: Module house

Customer: Local real estate company

Application: Residential area

Total floors: 27 floors

Project information:

The prefabricated construction will be installed in Mosco of Russia, mainly use as CBD for commercial center.









Thanks!

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