

ALUCOSUPER · DECORATIVE ENERGY-SAVING INTEGRATED SYSTEM

装饰保温产品系列 ——

墙煌 · 装饰节能一体化系统

挂板式 (APKM)

粘贴式 (ACKM)



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 **安徽墙煌科技股份有限公司**
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1 ABOUT THE ALUCOSUPER 关于墙煌

公司简介 ABOUT US

安徽墙煌科技股份有限公司（以下简称“墙煌科技”）为中国民企500强精工控股集团下属企业。成立于2008年7月，注册资本5000万元人民币，位于安徽六安经济技术开发区长江精工工业园，占地面积20万平方米，总投资4.3亿元。

墙煌科技集专业研发、生产各类规格齐全的彩涂铝板、彩涂钢板、铝单板、铝塑复合板、装饰节能复合板和金属覆膜板等产品于一体，是目前国内及亚洲地区同行业中规模庞大、品种齐全、工艺先进、综合实力强的科技型企业。拥有3个省级名牌产品、7条先进彩涂生产线、1条覆膜生产线、3条铝单板生产线、1条铝塑板生产线、装饰节能复合板全自动生产流水线，以及配套的10条纵剪横剪线，年生产彩涂铝板6万吨、彩涂钢板8万吨、铝单板200万平方米、铝塑板150万平方米、装饰节能复合板100万平方米。

“墙煌”牌彩涂铝板、家电钢板、铝塑板、铝单板及墙煌·装饰节能一体化系统等新型材料广泛应用于高档建筑内墙装饰、外墙装饰节能、铝蜂窝复合系列、天花吊顶系列、屋面围护系统系列、电子电容、家用电器、食品金属包装等领域。产品性能优异，颜色绚丽多彩，规格齐全，可满足客户的不同需求。

Anhui Wonderful-wall Science Technology Corp.,Ltd. (Hereinafter referred to as “Wonderful-wall Science Technology”) is a subsidiary of the top 500 Chinese private enterprise Jinggong Holding Group. Established in July 2008 and located in Changjiang Jinggong Industry Area, Economic development zone, Lu'an, Anhui, China, covering area of 200,000 square meters, registered capital of RMB 50 millions and total investment of RMB 430 millions.

Wonderful-wall Color Coating Aluminium specializes in the research and development、manufacturing kinds of prepainted aluminium coil(PPAL), prepainted steel coil(PCM), solid aluminium sheet, ACP, decorative energy-saving composite panels, and film laminate metal(VCM) and so on. It is the largest and most comprehensive technology enterprise, a color coating aluminium industrial manufacturer along with the largest production scale, the most complete specifications and the first-class equipment in domestic and Asia. We have 7 advanced color coating production lines, 1 film laminated metal production lines, 3 solid aluminum sheet production lines, 1 composite production lines, automatic production line for decorative energy-saving composite panel, also matching 10 slitting & cutting lines, with annual production capacity of 60,000MT PPAL, 80,000MT PCM, 2 million square meters solid aluminum sheet, 1.5 million square meter ACP, 1 million square meter decorative energy-saving panel.

Wonderful-wall Color Coating Aluminium PPAL, PCM/VCM, ACP, solid aluminum sheet, decorative energy-saving panel, which are widely used for curtain-wall, interior or exterior, honeycomb composite panel, ceiling system, roofing system, electronic capacitors, home appliances, and other related fields, with excellent performance and various colors, meet kinds of requirements from customers.



经过近20年的发展，墙煌品牌已成为行业内最具有影响力的品牌之一，荣膺“全国建筑装饰装修材料知名品牌”。公司多年来获得行业诸多实力奖项，被评定为“国家高新技术企业”、国家级“专精特新”小巨人企业、省级企业技术中心、安徽省建筑节能与科技协会理事单位、中国建筑节能协会会员单位、中国建筑装饰材料百强企业、中国建筑装饰材料铝塑板行业十强企业、中国建筑材料联合会铝塑复合材料分会副理事长单位等。公司也是国家标准《铝塑板》、《铝单板》起草单位之一，国家铝塑材料协会创办企业之一，第一届开始至今的常务副理事长单位，以及国内第一家通过国家建筑材料检验认证中心验收合格的CTC认证单位。

公司始终坚持“以人为本，科技为先”的经营理念，不断发展，持续创新，在环保、节能减排的大趋势下，积极研制出降温节能覆膜金属板和装饰节能复合板及其系统材料，广泛应用于医院、学校、机场、高铁站等工业、民用建筑领域，深受市场的欢迎和好评，下一步将持续扩大产能，向新行业、新领域拓展迈进。



After nearly 20 years of development, Alucosuper brand has become one of the most influential brands in this industry and won the "National Famous Brand of Building Materials" award. The company has won many industry awards and has been designated as a "Key National High-tech Enterprise", national-level "specialized, sophisticated, and new" small giant enterprise, provincial technical center, Council Members of Anhui Building Energy Conservation and Technology Association, Member units of China Association of Building Energy Conservation, top 100 Chinese building material enterprise, top 10 enterprise in the composite industry of Chinese building material, and a deputy director of the Aluminum Composite Material Branch of the China Building Materials Association. The company participated in drafting National Standard for Aluminium Composite Panel and Solid Aluminum Sheet, a founding enterprise of the National Aluminum Composite Materials Association, and a standing deputy director unit since the first session. It is also the first domestic CTC certification company to pass the acceptance of the National Building Materials Inspection and Certification Center.

Company focus on "People-oriented, Science and Technology First", development and innovation. With the trend of environmental protection and energy saving, developed cooling film laminated metal and decorative energy-saving system, which are successfully applied for public construction. We will keep moving for production capacity, expand into new industry and field.

企业文化 CORPORATE CULTURE

以人为本，科技为先

PEOPLE FIRST, TECHNOLOGY FIRST

树立坚定而清醒的质量观念，秉持专业精神，专注核心优势，追求卓越品质，精益求精，始终如一。

Establish a firm and clear quality concept, uphold professionalism, focus on core advantages, Pursue excellent quality, keep improving and be consistent.

始于客户要求，终于客户满意

FROM CUSTOMER REQUIREMENTS TO CUSTOMER SATISFACTION

信奉知恩相报的道德准则，事业的成功，墙煌建材的发展，离不开每位客户的支持。

Believing in the moral principle of "repay each other with gratitude", the success of the cause, and the development of the wall huang building materials, Every customer's support is indispensable.

优良的品质，完善的服务，争做行业领跑者

EXCELLENT QUALITY AND PERFECT SERVICE, STRIVING TO BE THE INDUSTRY LEADER

秉持专业精神，追求专业品质，全心全意打造高品质的现代建筑艺术空间。

Adhere to professional spirit, pursue professional quality, and wholeheartedly create high-quality modern architectural art space.



2 SYSTEM OVERVIEW 系统概述

“**墙煌·装饰节能一体化系统**”是由墙煌装饰节能复合板、固定连接层、嵌缝密封材料等共同组成；集保温、隔热、防水和装饰诸多功能于一体的非幕墙类建筑保温装饰构造体系。根据固定方式不同，分为粘贴式和挂板式两种安装类型。适用于各种公共和民用建筑保温装饰工程以及既有建筑的节能改造。

由相互作用、相互依赖的若干组成部分结合而成，具有特定功能的有机整体；而且这个有机整体又是从属的更大系统的组成部分。

"Alucosuper-Decorative Energy-saving Integrated System" is a non-curtain wall construction decorative structural system, composed of decoration energy-saving composite panels, fixed connection layers, embedded joint sealing materials and so on. It has multiple functions, like heat preservation, thermal insulation, waterproofing, and decoration. There are two installation types - APKM type and ACKM type - based on different fixing methods, suitable for all kinds of public and civil building thermal insulation projects and energy-saving renovation of existing buildings.

A specific function organic entirety composed by the combination of several interacting and interdependent components; And the larger system is composed by this organic entirety at the same time.

ALUCOSUPER,WORK TOGETHER WITH YOU TO
CREATE A GREEN ENVIRONMENT FOR HUMAN LIFE

墙煌科技与您共同呵护绿色环境

健全善行远 墙煌相伴

产品特点

- ▶ 外表面为辊涂氟碳涂层铝板，颜色及纹路多样，装饰效果好。
- ▶ 保温芯材分为无机材料、有机材料和复合材料三类，完全满足不同建筑类型的建筑节能及防火设计需求。
- ▶ 饰面铝板经压延企口成型，保证了安装拼接的精度与平整度。
- ▶ 双边固定保证了系统的固定安全性，8~20kg/m²的系统重量极大地降低了建筑的线性荷载。
- ▶ 微孔渗入式主动交联、在线发泡热合成型工艺，除保证板面平整度外，还杜绝了传统“冷粘结”复合工艺极易造成的板面不平、空鼓、脱落隐患。
- ▶ 系统主材在工厂智能化全自动生产流水上高度集成，辅以专业快捷的物流配送，施工现场只需简单“三步法”装配即可成活，至简的工序，大大节约工期及施工成本。

PRODUCT FEATURES:

- ▶ External surface is PVDF PPAL with various colors and patterns, an excellent decorative effect.
- ▶ Three types of insulation core - inorganic, organic, and composite materials - fully meet the requirements of energy-saving and fireproof design of different building design.
- ▶ The aluminum sheet is formed by tongue-and-groove type, ensuring precise and flat installation and splicing.
- ▶ Double-side mechanical fixation ensure the system security, and the system weight of 8~20kg maximally reduces the linear load of the building.
- ▶ Micro porous infiltration type active cross linking and online foaming thermal bonding process ensure the panel flatness and completely avoid the risks of surface unevenness, emptiness, and peeling in the traditional "cold bonding" process.
- ▶ The main materials are highly integrated on the factory intelligent automatic production line, accompanied by professional and fast logistics. Construction site with "three-step method" to install, saving construction period and cost.

3 SYSTEM COMPOSITION 系统组成

墙煌·装饰节能一体化系统是建筑节能设计方案的供应商
ALUCOSUPER DECORATIVE ENERGY-SAVING INTEGRATED SYSTEM IS A SUPPLIER
OF BUILDING ENERGY-SAVING DESIGN SOLUTION

设备与工艺
EQUIPMENT & PROCESS

系统材料
SYSTEM MATERIALS

系统构造
SYSTEM STRUCTURE

施工流程
CONSTRUCTION PROCESS

安装方式
INSTALLATION METHOD

建筑应用系统
BUILDING APPLICATION SYSTEM

产品性能
PRODUCT PERFORMANCE

设备与工艺

EQUIPMENT & PROCESS

墙煌QHJ02全自动热压交联复合生产线

ALUCOSUPER QHJ02 AUTOMATIC THERMCOMPRESSION CROSSLINKING COMPOSITE PRODUCTION LINE

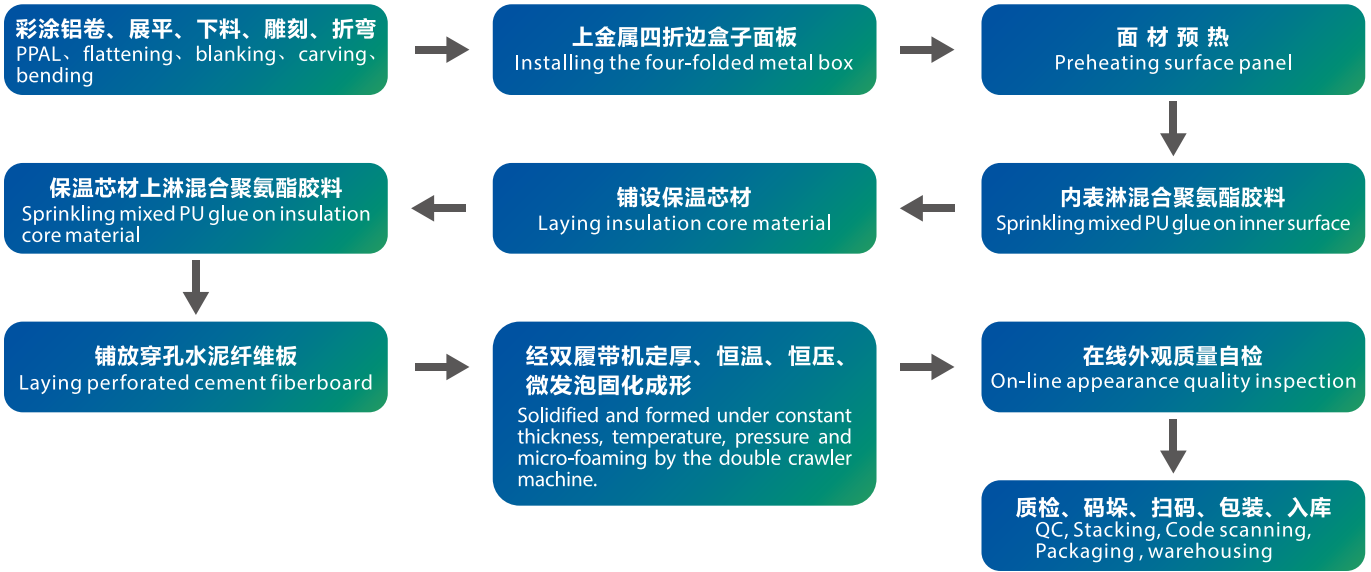
采用自主设计开发、国内先进全自动热压交联复合生产流水线，功能齐全、技术先进，在同行中处于领先水平。

It adopts independent design and development, domestic advanced automatic hot pressing cross-linked composite production line, complete functions, advanced technology, and is at the leading level in the industry.

在线发泡热合工艺 ON-LINE FOAMING THERMCOMPRESSION TECHNICAL

连续均匀发泡、自动化流水线生产效率高、一次性热压复合成型，产品质量稳定如一。
Continuous uniform foaming, high production efficiency of automatic assembly line one-time thermocompression composite shaped; Keep stable product quality.

生产工艺流程 PRODUCTION PROCESS



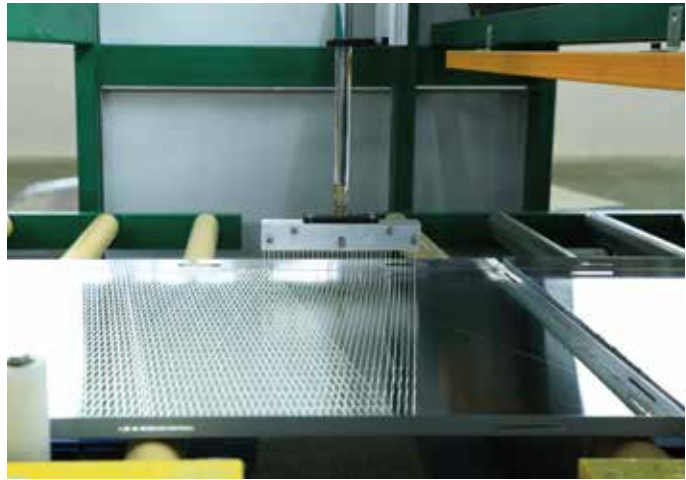
设备与工艺

EQUIPMENT & PROCESS



安全生产、质量第一，以人为本，为墙煌科技创辉煌
Safety production, Quality first, People-oriented, Creating brilliance for Wonderful-wall Science Technology.

高效节能、低碳环保，科学发展，为和谐社会做贡献
Efficient energy-saving, Low-carbon environmental protection, Scientific development, Making contribution to the harmonious society.



系统材料

系统材料一：非金属面装饰节能一体化系统

是由通过微孔渗入式发泡热合工艺生产的薄型陶瓷面装饰节能复合板、固定连接层、连接支承构造、嵌缝密封材料共同组成；适用于建筑物首层及商业裙楼，抗冲击强度高，可替代天然石材幕墙，完美还原天然石材的颜色、纹理，不吸附任何粉尘、油污，耐久性可达“万年不腐”、历久弥新。

系统材料二：金属面装饰节能一体化系统（企口型）

是由通过微孔渗入式发泡热合工艺生产的金属面装饰节能复合板、固定连接层、嵌缝密封材料共同组成；企口式金属面装饰节能复合板是经过数十道成型轮组，逐级压延成型，饰面板自身应力得到完全释放。适用于建筑物首层及商业裙楼以上部位，企口连接采用传统“榫卯”互锁原理，板间平整度偏差几乎为零，可替代传统金属板幕墙、石材幕墙，除了有单色外，还可以仿制天然石材的颜色、纹理，不吸附任何粉尘、油污，板材自身轻质、高强，极大程度上减小了建筑物外立面的线性荷载，耐候性和耐久性可与建筑物同寿命。

系统材料三：金属面装饰节能一体化系统（四折边型）

是由通过微孔渗入式发泡热合工艺生产的金属面装饰节能复合板、固定连接层、嵌缝密封材料共同组成；四折边型金属面装饰节能复合板是经过剪板、弯折成型，饰面板自身应力适用于建筑物首层及商业裙楼以上部位，产品规格与布板方式不受模具限制，除了有单色外，还可以仿制天然石材的颜色、纹理，不吸附任何粉尘、油污，板材自身轻质、高强，极大程度减小了建筑物外立面的线性荷载，耐候性和耐久性可与建筑物同寿命。

系统材料四：金属单板配套系统

与金属面、非金属面装饰节能一体化系统配套使用，完美解决上述系统中二维、三维空间内的轻质出挑、特殊节点部位及异形装饰线条等收口问题。

SYSTEM MATERIALS

System material 1:
Nonmetallic surface decorative energy-saving integrated system

It is composed of thin ceramic decorative energy-saving composite panel, produced by microporous infiltration foaming heat sealing process, fixed connection layers, connection support structures, and caulking sealing materials ; it is suitable for the first floor and commercial podiums buildings. High impact strength, replace the natural stone curtain wall, perfectly restore the color and texture of natural stone. It does not absorb any dust and oil, and its durability can reach "incorrosive for ten thousand years" and unfading.

System material 2:
Metal surface decorative energy-saving integrated system (groove type)

It is composed of metal surface decorative energy-saving composite panel that produced by microporous infiltration foaming thermocompression technical, fixed connection layers, and caulking sealing materials; tongue-and-groove metal decorative energy-saving composite panel is formed by rolling step by step through dozens of forming wheel sets, so that the adaptability of decorative panel has been released completely. It is suitable for the first floor of the building and the above of commercial podium. The tongue-and-groove connection adopts the traditional "mortise and tenon" interlocking principle, and no flatness deviation between the panels. It can replace the traditional metal curtain wall and stone curtain wall. It is with solid color and also imitate the color and texture of natural stone, and does not absorb any dust and oil. The panel is light-weight and high-strength, which greatly reduces the linear load on the facade of the building. Weather resistance and durability can last as long as the building.

System material 3:
Metal surface decorative energy-saving integrated system(four-fold edge type)

It is composed of metal surface decorative energy-saving composite panel that produced by microporous infiltration foaming thermocompression technical, fixed connection layers, and caulking sealing materials; the four-folded metal surface decorative energy-saving composite panel is formed by shearing and bending, so the stress of the panel is applicable to the first floor of the building and the above of commercial podium. The product specifications and layout methods are not limited by the mold. It is with solid color and also imitate the color and texture of natural stone, and does not absorb any dust and oil. The panel is light-weight and high-strength, which greatly reduces the linear load on the facade of the building. Weather resistance and durability can last as long as the building.

System material 4:
Solid metal sheet supporting system

Matching with the metal surface and non-metallic surface decorative energy-saving integrated system, which perfectly solves the convergence problems of light overhangs, special node parts and special-shaped decorative lines in the two-dimensional and three-dimensional spaces of the above-mentioned systems.

系统材料

非金属面装饰节能一体化系统

由非金属面装饰节能复合板、固定连接材料、嵌缝密封材料共同组成；是建筑首层、商业裙楼装饰首选的功能性材料。

其中：非金属面装饰节能复合板采用天然花岗岩薄板、超薄陶瓷板为饰面，以热固性有机或无机类绝热材料为保温芯材，玻纤增强型有机基卷材或穿孔无机板为背衬材料，在生产流水线上，采用微孔渗入式在线热压复合工艺生产成型。通过胶粘剂粘贴、机械固定连接件锚固和金属承托件承托的组合固定方式进行施工安装。

Nonmetallic surface decorative energy-saving integrated system

It is composed of nonmetallic decorative energy-saving composite panel, fixed connection material, and caulking sealing materials ; it is the first option functional material for the first floor and commercial podiums buildings.

Additionally, nonmetallic surface decorative energy-saving composite panel take natural granite sheet, ultra-thin ceramic sheet as surface panel, the insulation core is thermoset organic or inorganic thermal insulation material, and glass fiber reinforced organic base coil or perforated inorganic plate as the backing material, in the production line, using microporous infiltration foaming heat sealing process to produce and shaped. It is used adhesive pasting, mechanical fixing connection anchoring and metal support to do construction and installation.



陶瓷面装饰保温一体化系统建筑构造节点
Ceramic surface decorative and thermal insulation integrated system building construction node

SYSTEM MATERIALS

较之传统的石材幕墙系统具有：
Compared with traditional stone curtain wall systems:

- 装饰效果好：可以仿制大多数常用天然石材的颜色和纹理。
Good decorative effect: can imitate the color and texture of most natural stone.
- 线性荷载轻：单板重量不足30kg/m²，完全满足现行行业规范要求，大大减轻了建筑外装系统的线性荷载。
Light linear load: solid sheet weight is less than 30 kg / m², fully meet the current industrial standard requirement, the linear load of the building exterior installation system is greatly reduced.
- 抗冲击力强：经测试，抗冲击性能超过10J，大大超过30mm厚的石材幕墙。
Strong impact resistance: After testing, the impact resistance exceeds 10J, which greatly exceeds the 30mm thick stone curtain wall.
- 无纹理色差：采用喷墨打印，雾化造粒、高温烧结工艺，完美还原天然石材纹理。
No texture color difference: using inkjet printing, atomization granulation, high-temperature sintering process, perfect restoration of natural stone texture.
- 绿色环保：采用高岭土、石英石、长石等原料高温烧结而成，无有害物质挥发，不吸附任何粉尘、油污。
Green environmental : made of high temperature sintering of kaolin, quartz stone, feldspar and other raw materials, no volatilization of harmful substances, and no adsorption of any dust and oil.
- 性价比高：与石材幕墙功能、效果相同，成本最少节约三分之一。
Cost-effective: the same function and effect as the stone curtain wall, the cost is saving by one-third at least.
- 耐候性与耐久性超长：不受任何化学物质侵蚀，可与建筑物主体结构同寿命。
Weather resistance and durability: non-erosived by any chemicals, the same life as the building.

系统材料

彩涂铝板 PPAL

装饰节能复合板外层为辊涂氟碳漆铝板，除了装饰效果及防护作用外，还担负机械固定连接作用，将系统自身荷载及环境附加荷载传递到建筑主体结构上。

The surface of decorative energy-saving composite panel is PVDF PPAL with decorative effect and protective function,also take function of mechanical fixation joint,transfer the system load and environmental additional load to the main structure of building.

铝箔 Aluminum Foil

装饰节能复合板内表层材料，用于挂板式系统时，同时具有保持保温芯材整体性和良好的反热辐射功能。
It is the inner layer material of the decorative energy-saving composite panel,when used for APKM Type system,maintain insulation core integrity and with good reverse thermal radiation function.

水泥基卷材 Cement Base Coil

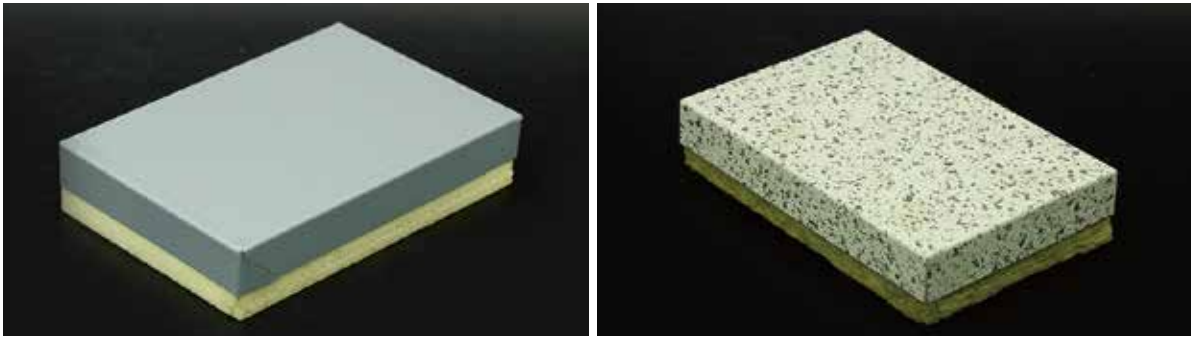
装饰节能复合板内表层材料，是一种纤维增强水泥基复合材料(FRC)，是由水泥净浆、砂浆或水泥混凝土作基材，以非连续的短纤维或连续的长纤维作增强材料组合而成的一种复合材料。用于挂板式系统时，同时具有保证保温芯材整体性和增强粘贴界面联结功能。

It is the inner surface material of the decorative energy-saving composite panel, is a fiber reinforced cement composite material (FRC), with cement paste, mortar or cement concrete as the substrate, non-continuous short fiber or continuous long fiber as the reinforcement. When used for APKM Type system,maintaining the insulation core integrity and enhancing the interface connection.

保温层 Insulation Layer

装饰节能复合板绝热芯材，分无机、有机、复合材料三类，分别适用于不同防火设计需求的单项工程。
The insulation core material of the decorative energy-saving composite panel, classified three types: inorganic, organic, composite materials, suitable for individual projects with different fireproofing design.

SYSTEM MATERIALS



墙煌装饰节能复合板基本规格 Basic Specifications

产品厚度规格 Thickness (mm): 30、40、50、60、70、80、100、120、150；

宽度规格 Width (mm): 400 ~ 1200；

长度规格 Width (L):

- (1) 满足单项工程设计要求；Meet the requirements of single project design；
- (2) 单项工程特殊规格可根据客户要求单独设计。Special specification for special design.

● 墙煌装饰节能复合板规格生产与设计公差范围
Production and Design Tolerance

项目 Item	长度 Length		宽度 Width	厚度 Thickness	对角线差 Diagonal tolerance	
	≤3000	>3000			≤3000	>3000
允许偏差 Allowable	±3	±4	±1. 5	±1. 5	±2	±3



系统材料

金属面装饰保温一体化系统

金属面装饰保温一体化系统是由基层墙体、固定连接层、金属面装饰保温复合板、和嵌缝密封材料共同构成。具有装饰、保温、隔热、防水功能的非幕墙类建筑保温装饰构造体系。

因板型不同，分为“企口式”和“四折边”两种不同的系统构造形式。

因建筑效果不同，分为“有工艺缝”和“无工艺缝”两种不同拼接形式。

因安装方式不同，分为“粘贴式”和“挂板式”两种不同的系统构造形式。

Metal surface decorative energy-saving integrated system

It is composed of the base wall, fixed connection layer, metal surface decorative insulation composite panel, and caulking sealing material. It is a non-curtain wall building insulation decorative structural system, with decorative、thermal insulation、waterproof function.

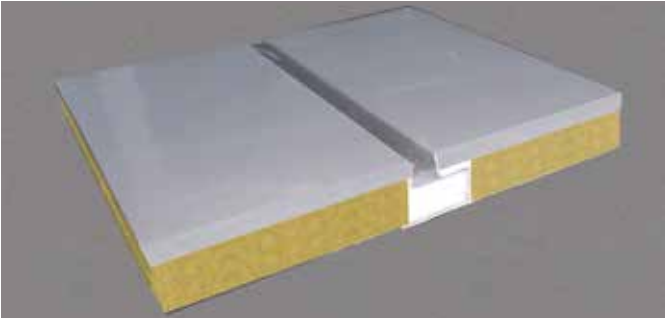
According to different panel type, divided into two different system structural, “groove type” and “four-fold edge type”.

According to different architectural effect, divided into two different joints, “with process joint” and “without process joint”

According to different installation, divided into two different system structural, “ACKM” and “APKM”



四折边
Four-fold edge type



企口式
Groove type

SYSTEM MATERIALS

装饰保温复合板构造

双边企口型金属面装饰保温复合板是在引进国外罗宝板外墙节能系统先进技术的基础上，根据我国国情及建筑应用基础，采用辊涂氟碳漆涂层铝板在连续自动生产线上，经企口压延、连续高压发泡、一次性热合成型的，集装饰、保温、防水等多功能于一体的新型外墙装饰板材。

Decorative insulation composite panel structure

Bilateral groove type metal surface decorative insulation composite panel is based on the introduction of foreign Luobao board exterior wall energy-saving system advanced technology, according to China's national conditions and building application base, the use of PVDF PPAL on the continuous automatic production line, through groove calendering, continuous high-pressure foaming, one-time thermal synthesis type, focus on decoration, insulation, waterproof and other multi-functional new exterior wall decorative panels.

主要物理性能 Main physical properties		
表观密度 Appraent density	无机芯材 Inorganic core	≥100kg/m³
	有机芯材 Organic core	≥30kg/m³
抗冲击强度 Anti-impact strength	3J、10J	
拉伸粘结强度 Tensile adhesive strength	Ⅰ型板≥0.10，Ⅱ型板≥0.15 Ⅰ型≥0.10 Ⅰtype≥0.10	
燃烧性能等级 Combustion performance	无机芯材 Inorganic core	A级 Grade A
	有机芯材 Organic core	B1级 Grade B1
适用温度 Applicable temperature	无机芯材 Inorganic core	-50℃~+150℃

金属面装饰保温复合板

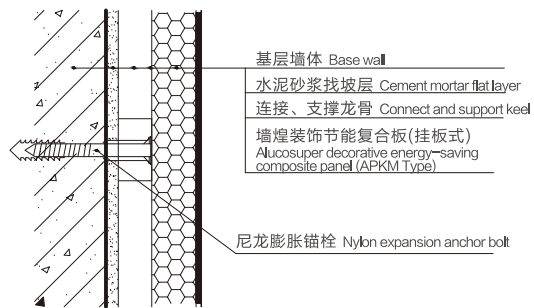
“金属面装饰保温复合板”是以金属薄板为装饰面层，以高效保温材料为保温隔热芯材，以玻纤增强水泥基卷材或纤维增强无机板为背衬，经连续高压发泡、一次性热合成型的，集装饰、保温、防水等多功能于一体的外墙装饰板材。

Metal surface decorative insulation composite panel

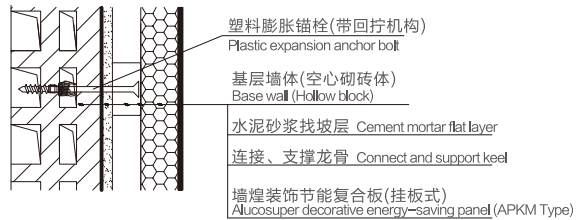
It is an exterior decorative panel focus on decoratiion, insulation, waterproof and other multi-function, with metal sheet as decorative surface layer, high efficiency thermal insulation material as core material, glass fiber reinforced cement base coil or fiber reinforced inorganic panel as backing, through high pressure foaming, one-time thermal synthesis.

系统构造 | 企口型
tongue-and-groove structure

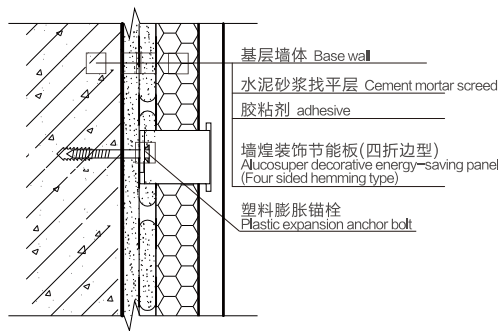
四折边型 | SYSTEM STRUCTURE
Four sided hemming type



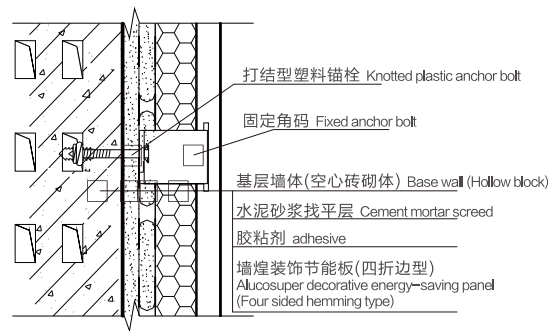
1) 外墙保温构造 (砼、钢筋砼结构)
Exterior thermal insulation structure
(concrete and reinforced concrete structure)



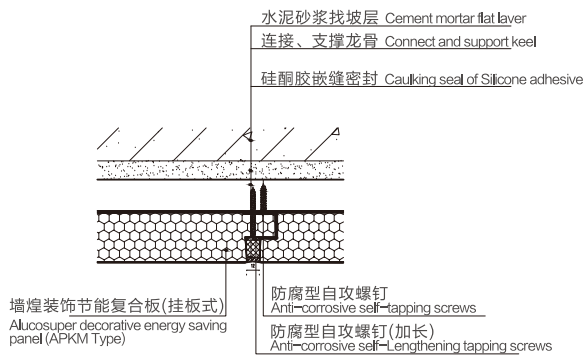
2) 外墙保温构造 (加气砼、空心砌砌体)
Exterior thermal insulation structure
(aerated concrete, hollow brick masonry)



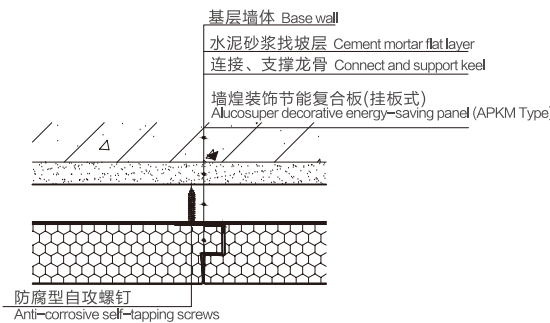
1) 系统构造 (砼、实心砌体结构)
System structure (concrete, solid masonry structure)



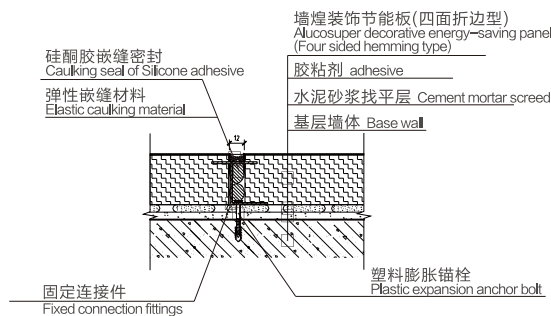
2) 系统构造 (加气砼、空心砌体结构)
System structure (aerated concrete, hollow masonry structure)



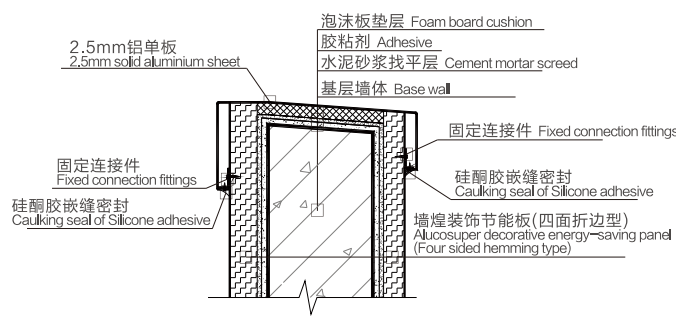
3) 板边接缝构造 (有工艺缝)
Edge joint structure (With process joint)



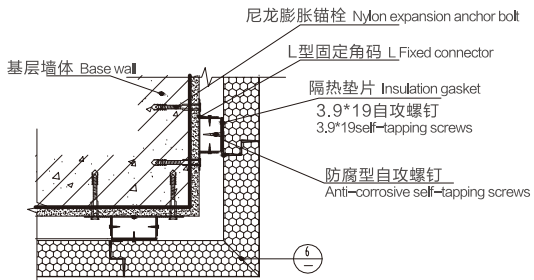
4) 板边接缝构造 (无工艺缝)
plate edge joint structure (Without process joint)



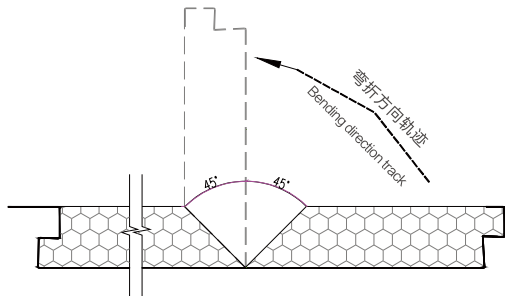
3) 板边接缝构造 (有工艺缝)
Plate edge joint structure (With process joint)



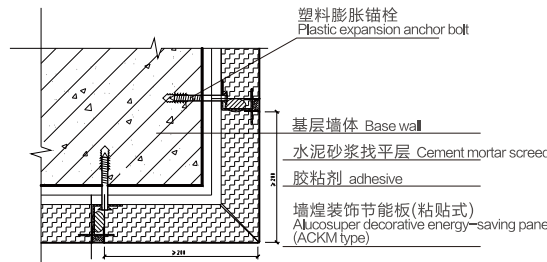
4) 女儿墙压顶构造
Parapet roof structure



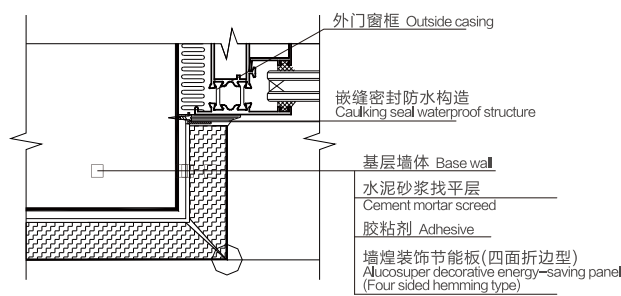
5) 墙煌装饰节能系统阳角构造
Alucosuper decorative energy-saving
system external corner structure



6) 墙煌装饰节能板弯折工艺
Alucosuper decorative energy-saving panel bending



5) 阳角部位转角构造
External corner position Angle structure



6) 外门窗洞口侧边构造
Lateral structure of outer door and window openings

施工流程

CONSTRUCTION PROCESS

“粘贴式” 施工流程

“ACKM” CONSTRUCTION PROCESS



总结：工期比传统工艺节约1/3，缺点是雨天不能施工。
CONCLUSION: LESS 1/3 TIME THAN TRADITIONAL PROCESS, BUT CAN NOT BE CONSTRUCTED ON RAINY DAYS.

“挂板式” 施工流程

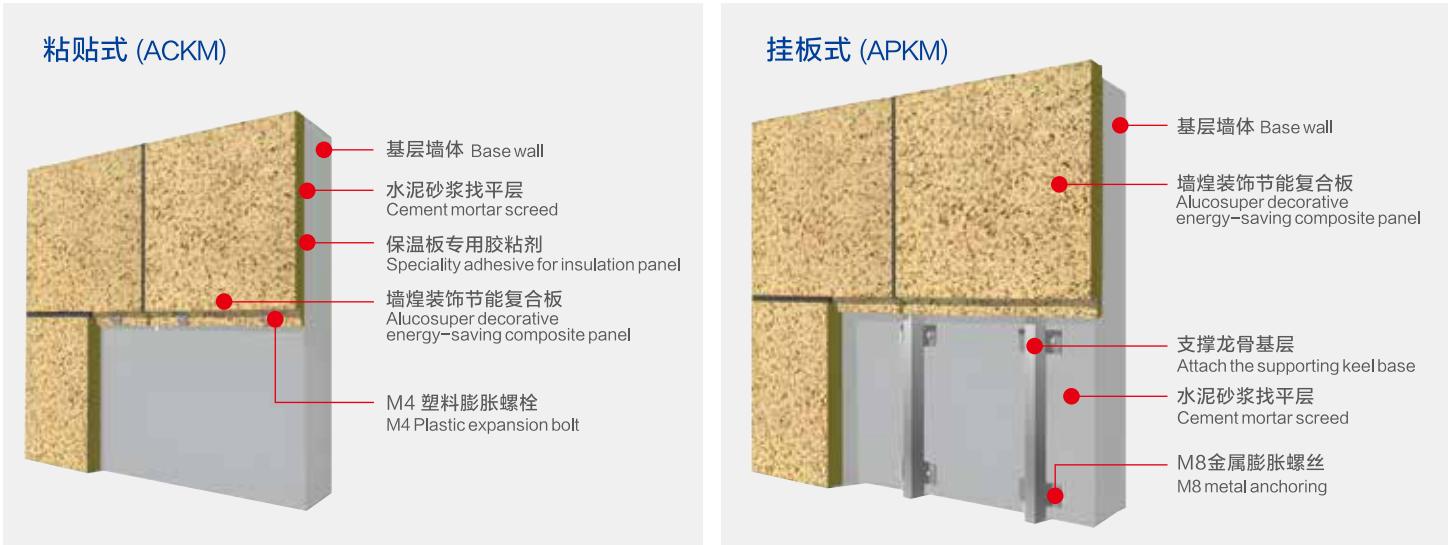
“APKM” CONSTRUCTION PROCESS



总结：工期比传统工艺节约1/2，除打胶密封工序外，基本上不受任何气象条件影响。
CONCLUSION: LESS 1/2 TIME THAN TRADITIONAL PROCESS, IN ADDITION TO GLUE SEALING, NOT AFFECTED BY ANY METEOROLOGICAL CONDITION.

INSTALLATION METHOD

安装方式



系统构造对比

System Structure Comparison

项目 Items		铝板幕墙+外保温 Aluminum Curtain Wall + External Thermal Insulation	墙煌·装饰节能一体化系统 Alucosuper decorative energy-saving Integrated System
1	饰面板 Surface material	2.5mm及以上厚度纯铝板 Aluminium sheet with thickness over than 2.5mm	墙煌装饰节能复合板 Alucosuper decorative energy-saving composite panel
2	支撑龙骨 supporting keel	主、次龙骨为较大规格方钢管 The main and secondary keel are large size square steel tube	25*38mm金属方管（APKM）；（ACKM）不含25*38mm metal square tube (APKM); None (ACKM)
3	保温系统 Thermal Insulation system	视工程设计 Min 2.5mm aluminum sheet Depending on project design	饰面板已复合保温层 Surface metal composited with insulation layer
4	其它配件 Other accessories	预埋件或后置件、大型角码转接件、不锈钢螺栓、自攻螺钉、角码、铆钉、厚镀锌钢板、岩棉带、结构胶、双面胶条、防火密封胶、泡沫棒、密封胶。 Embedded parts or rear parts, large corner code adapter, stainless steel bolts, self-tapping screws, corner code, rivets, thick galvanized steel, rock wool tape, structural adhesive, double-sided adhesive strip, fireproof sealant, foam rod, sealant.	自攻螺钉，支撑龙骨或胶粘剂、塑料膨胀螺栓、泡沫棒、美纹纸、耐候密封胶。 Tapping screws, support keel or adhesive, plastic expansion bolts, Foam rod, paper, weather resistant sealant.

综合对比

Comprehensive Comparison

项目 Items		铝板幕墙+外保温 Aluminum Curtain Wall + External Thermal Insulation	墙煌·装饰节能一体化系统 Alucosuper decorative energy-saving Integrated System
1	装饰效果 Decorative effect	金属质感、光泽度高、蕴含商业气息，装饰效果丰富。 Metallic texture, high gloss, full of commercial element, rich decorative effect.	与铝板幕墙相同，且自洁性好，耐久性好。 Same as aluminum curtain wall, meanwhile with good self-cleaning, long durability performance.
2	功能 Function	建筑装饰功能 Architectural decoration function	建筑装饰和节能双重功能 Decoration and energy-saving dual functions
3	保温性能 Thermal Insulation	无保温层，且热桥较多 No insulation layer, with more thermal bridge	保温材料已与面板复合 Insulation material combined with surface metal
4	工期 Construction period	幕墙与保温需分部分项施工，工期较长 Curtain wall and thermal insulation need to be constructed separately, the construction period is long	流水线生产、装配式施工、工时少，施工工期短 Assembly line production, assembly construction, less working hours, short construction period
5	防水 waterproof	平面变形量大，防水密封处理难以持久 The quantity of panel deformation is large, and the waterproof sealing treatment is difficult to last.	独特企口拼接紧密，水密性和气密性优异 Unique groove stitching tight, excellent water tightness and air tightness
6	使用寿命 Service life	不少于25年 Not less than 25 years	不少于25年 Not less than 25 years

建筑应用系统

BUILDING APPLICATION SYSTEM

DOORS AND WINDOWS,
SPECIAL JOINT AND DECORATIVE MOLDING

“Basket knitting, focus on the closing”, The closing treatment of special nodes is an important evidence for considering the performance and function of a set of building exterior installation system. Alucosuper metal surface decorative energy-saving intergrated system uses the overall bending for metal surface decorative energy-saving composite panel to replace the traditional metal panel window cover closing, making the building facade more concise, waterproof sealing more direct and effective; Alucosuper matching solid aluminum sheet is in the lifting part of building, decorative line processing is also more practical and perfect, without extra decorative line, save the quantity, and reduce the difficulty of cooperation in division parts on project construction. All products are produced by Wonderful-wall Science Technology, The main body of system quality responsibility is clear.

GROUND FLOOR OR ABOVE PODIUM

The first floor of the building and the above commercial podium (commonly known as large surface), basically accounting for more than 70% of the building decoration energy-saving integrated system, the use of Alucosuper metal surface decorative energy-saving groove composite panel and four-fold edge composite panel combination, can effectively solve the problem of many plate specifications caused by the complex shape of the building façade, batch production capacity can not be effectively released, the use of the groove type with high production efficiency and four-fold edge plate type, flexible specifications of the advantages of collaboration, while greatly shortening the response cycle of a single project, Material utilization and cost-effectiveness of the system are further optimized and improved.

GROUND FLOOR OR PODIUM

Based on the function and environment of the first floor and the commercial podium, in addition to the high impact strength of the building exterior system, it must also reflect a solid and stable texture. Most of the traditional practices are to use natural stone curtain wall or stone hanging sticker, but the cavity of the stone curtain wall system leads to poor impact strength of the system, and the color difference of natural stone texture is difficult to control;The use of Alucosuper thin ceramic surface decorative energy-saving integrated system, perfectly solved these problems, with high cost performance , compared with the natural material 50~2000 yuan/m² price difference, achieve equal mechanical properties and decorative effect at the same time, can fully reflect the highest grade, the lowest cost price advantages.

门窗、特殊节点与装饰线条

“编筐编篓、重在收口”，特殊节点的收口处理是考量一套建筑外装系统性能和功能重要依据，墙煌金属面装饰节能一体化系统利用金属面装饰节能复合板整体弯折的方式替代了传统的金属板窗套收口，使得建筑外立面显得更简洁，防水密封更加直接有效；墙煌配套的铝单板体系在建筑出挑部位、装饰线条处理上也更加的实用和完美，在不增加装饰线条、节省装饰造型建筑体量的同时，也减少了分部、分项工程施工配合的难度。全部产品均系墙煌配套生产，系统质量责任主体清晰。

首层或裙楼以上

建筑物首层及商业裙楼以上部位（俗称大面），基本上占建筑装饰节能一体化系统的70%以上，采用墙煌金属面装饰节能企口型复合板与四折边型复合板相结合使用，能有效解决因建筑外立面造型复杂带来的板材规格多，批量产能不能有效释放的问题，利用企口型同规格生产效率高和四折边型板型、规格灵活多变的优势搭配，在大大缩短单项工程相应周期的同时，还进一步优化、提高了材料利用率及系统性价比。

首层或裙楼

基于建筑物首层及商业裙楼的功能及使用环境，除了要求建筑外装系统抗冲击强度高外，还要能体现出坚实、稳固的质感。传统的做法大多是采用天然石材幕墙或石材挂贴，但石材幕墙系统的空腔导致系统抗冲击强度较差，天然石材纹理色差也很难控制；采用墙煌薄型陶瓷面装饰节能一体化系统，完美解决了这些问题，而且性价比很高，较之于天然材质50 ~ 2000元/㎡价差，在达到同等力学性能和装饰效果的同时，能充分体现出最高档次、最低成本价的优势。

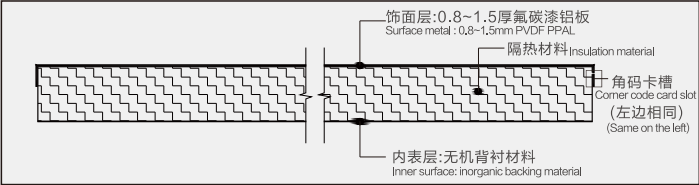
产品性能 PERFORMANCE

墙煌装饰节能复合板（简称：墙煌板）一般由三部分构成，外饰面防护层为辊涂氟碳层并具备多种颜色、纹路等装饰效果的铝板（厚度为0.8~1.5mm），中间保温芯层为有机类、无机类和复合型高效绝热材料，背衬层是一层具有反热辐射作用的铝箔(挂板式安装)或具有良好界面连接性能的玻纤增强性水泥基卷材（粘贴式安装）。

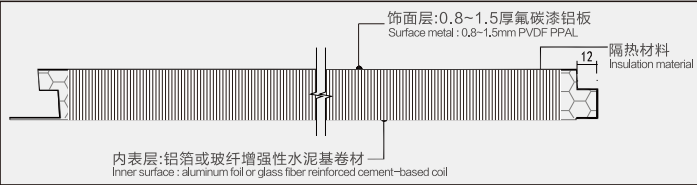
产品类型分“四面折边”型和“企口”连接型；根据单项工程设计的需要，分为有装饰工艺胶缝（四面折边型和企口凸榫加长）和无装饰工艺胶缝（密拼）两种。

Alucosuper Decorative Energy-saving Composite Panel,composed of three parts: the surface layer is PVDF PPAL with various colors and patterns (thickness 0.8~1.5mm), the intermediate core layer is organic, inorganic and compound high efficiency insulation material, the back layer is aluminum foil with reverse thermal radiation effect(APKM Type installation) or glass fiber reinforced cement base coil with good interface connection performance(ACKM Type installation).

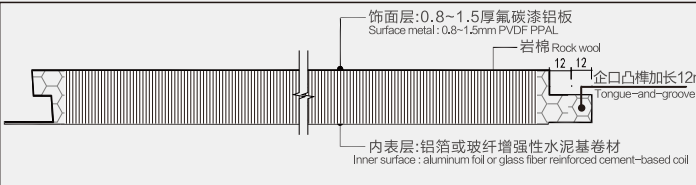
Product types are divided into "four-sided hemming" type and "tone-and-groove"connection type; according to the needs of individual project design, it is divided into two kinds of decorative processing: glue decorative joint (four sided folding type and tongue-and-tenon lengthening) and no decorative process glue joint (seamless).



墙煌装饰节能复合板构造一(四面折边)
Alucosuper Decorative Energy-saving Composite Panel I Structure 1 (Four-sided Hemming)



墙煌装饰节能复合板构造二(无工艺缝)
Alucosuper Decorative Energy-saving Composite Panel I Structure 2 (No Process Joint)



墙煌装饰节能复合板构造三(有工艺缝)
Alucosuper Decorative Energy-saving Composite Panel Structure 3 (With Process Joint)

► 墙煌·装饰节能一体化系统性能要求 Alucosuper·Decorative Energy-saving Integrated System Performance

项目 Items		指标 Index
耐候性 Weather resistance	外观 Appearance	无粉化、起鼓、起泡、脱落现象，无宽度大于0.10mm的裂缝 No chalking, bulge, bubbling, peeling, no crack width more than 0.10mm
	面板与保温材料拉伸粘结强度/MPa Tensile adhesive strength between surface metal and insulation material	I 型板≥0.10，II 型板≥0.15 I Type plate ≥0.10, II type plate ≥0.15
拉伸粘结强度 / MPa Tensile adhesive strength		破坏发生在保温材料中 Damage occurred inside of the insulation material
单点锚固力 / kN Single point anchorage force		≥0.30
抗冲击性 / J Impact resistance		用于建筑物首层10J冲击合格，其他层3J冲击合格 For the first floor impact 10J pass, other floors impact 3J pass
抗弯荷载 / N Bending load		不小于板材自重 Not less than panel weight
热阻 / (m2·k / W) Thermal resistance		符合单项工程设计值 Meet the design value of individual project

► 墙煌装饰节能复合板性能要求 Alucosuper·Decorative Energy-saving Composite Panel Performance

项目 Items		指标 Index	
单位面积质量 / (kg/ m²) Mass per unit area		I 型板<20，II 型板 20~30 I Type plate< 20, II Type plate 20~30	
拉伸粘结强度 / (MPa) Tensile adhesive strength		I 型板≥0.10，II 型板≥0.15 I Type plate ≥0.10, II type plate ≥0.15	
吸水量 / (g / m2) Water absorption		≤500	
不透水性 Watertightness		系统内侧未渗透 No permeation inside of the system	
保温层 Thermal insulation layer	燃烧性能等级 Combustion performance class	无机材料 Inorganic material	A级 Grade A
		有机材料 Organic material	B1级 Grade B1
	导热系数 W / (m·k) Thermal conductivity	无机材料 Inorganic material	≤0.046
		有机材料 Organic material	≤0.030

► 机械固定件 Mechanical Fastener

项目 Inspection item	性能指标 Performance Index	试验方法 Test Method
锚栓的直径 Diameter of anchor bolt 6~8mm JGJ144	6~8mm	JGJ144
锚固深度(C25混凝土基层) Anchorage depth (C25 concrete base)	≥50mm	JG/T350
单个锚栓抗拉承载力标准值 Standard tensile capacity value of single anchor bolt	≥0.30kN	JG/T350
单个锚栓对系统传热增加值 System heat transfer increment of single anchor bolt	≤0.004 [W/(m²·K)]	JGJ144
固定单元承载力标准值 Bearing capacity of fixed element	≥0.15kN	JG/T350

► 纤维增强性水泥基卷材 Fiber Reinforced Cement Based Coil

项目 Inspection item	性能指标 Performance Index
锚栓的直径 Diameter of anchor bolt	6~8mm
断裂强度(N/50mm) Fracture strength	≥300
透气阻力(S) Breathability resistance	符合设计要求 Comply with the design requirement
含水率(%) Moisture content	≤10
燃烧等级 Combustion performance class	A级 Grade A

► 彩涂铝板 PPAL

涂层技术指标 Coating technical data

项目 Items		技术指标 Technical Index
涂层厚度(um) Coating thickness(um)		≥25
光泽度偏差 Gloss deviation		光泽度≥70，极限值的误差≤5 Gloss≥70, limit value tolerance ≤ 5
		光泽度<70，极限值的误差≤3 Gloss<70, limit value tolerance ≤ 3
铅笔硬度(划伤 / 剥离) Pencil hardness (scratch/peeling)		H/3H
涂层柔韧性 Coating flexibility		≤2T
附着力 Adhesion		不次于1级 Not less than Level Grade 1
耐冲击性 Impact resistance		50kg · cm不脱漆 50KG · cm no peeling
耐磨耗性(L / um) Attrition resistance		≥5
耐化学稳定性 Chemical stability	耐沾污性 Stain resistance	≤15%
	耐酸性 Anti-acid	无变化 No change
	耐碱性 Anti-alkali	无变化 No change
	耐油性 Anti-oil pollution	无变化 No change
	耐溶剂型 Solvent resistance	无变化 No change
	耐洗刷性 Scrub resistance	≥10000次无变化 ≥10000times No change
人工老化 Artificial Aging	色差 Color difference	≤3,0
	失光等级 Gloss loss level	不次于2级 Not less than level 2
	耐粉化级 Chalking resistance	0级 Grade 0

力学性能技术指标 Mechanical properties of aluminum sheet

牌号 alloy type	硬度 hardness	抗拉强度 (MPa)Tensile strength	非等比伸长应力(MPa) Specified non-proportional elongation stress	伸长率(50m定距) Elongation (The distance set at 50 meters)
3003	H18	≥155	≥120	≥2
3004	H24	140~180	≥120	≥2

► 铝箔 aluminum foil

力学性能技术指标 Mechanical properties of aluminum sheet

牌号 alloy type	硬度 hardness	厚度 (mm) thickness	宽度 (mm) width	抗拉强度(MPa) Tensile strength	伸长率 Elongation
1100、1200	H26	0.06	符合设计要求 Comply with the design requirement	125~180	≥1
3003	H14、H24	0.06		140~170	≥1



► 胶粘剂 Adhesive

胶粘剂技术指标 Technical data of adhesive

项目 Items		性能指标 Performance
拉伸粘结强度(与水泥砂浆) / MPa Tensile adhesive strength (with cement mortar)	原强度 Original strength	≥0.60
	耐水 Water resistant	≥0.40
拉伸粘结强度(与复合板) / MPa Tensile adhesive strength (with composite panel)	原强度 Original strength	≥0.10破坏在保温层内 The damage is inside of the insulation layer
	耐水 Water resistant	≥0.10破坏在保温层内 The damage is inside of the insulation layer
可操作时间 / h Operational time		1.5~4.0

► 面板质量 Surface metal quality

面板技术指标 Technical data

项目 Items	缺陷规定 Defect rules	允许范围 Allowed scope
划伤 Scratch	总长度 Total Length	≤100mm / m²
擦伤 Scrape	总面积 Total area	≤300mm / m
损伤总数/处 Total number of injuries	—	≤4处 / m²
鼓泡 Bubble	≤10mm	不超过1个 / m² Not more than 1 / m²
疵点 Defect	≤3mm	不超过10个 / m² Not more than 10 / m²
色差 Aberration	无明显色差：用色差仪测量 ΔE≤3 No obvious aberration, ΔE≤3 measured by colorimeter	



产品优势

PRODUCT ADVANTAGES

01 集保温、装饰功能于一体，施工工艺简单，能有效地加快施工进度、缩短工期；氟碳漆面层的铝板，装饰性能好。

It have been integrated with insulation and decoration function with simple construction process, effectively accelerate the construction process and shorten the schedule; surface metal is PVDF PPAL with good decorative performance.

02

墙煌装饰节能复合板装饰效果好，保温隔热功能、防火性能优异。

Alucosuper decorative energy-saving composite panel has good decorative effect, excellent thermal insulation function and fire prevention performance.

03 系统主材采用国内外行业先进自动化流水线生产，生产效率高，产品质量稳定如一。

The system main material is produced in automatic production line, which is an advanced industry at home and abroad, with high production efficiency and stable product quality.

04 墙煌装饰节能复合板是真正的节能环保型绿色建材，生产、施工所产生的余料均可进行回收，真正做到绿色无污染。

Alucosuper decorative energy-saving composite panel is a real energy-saving environmental friendly green building material, production residual material can be recycled, pollution-free.

05

墙煌装饰节能复合板颜色、纹理多样，规格种类齐全，极大程度上丰富了建筑师设计选材范围，系统材料轻质高强，大大减轻了建筑主体结构线性荷载。

The color and texture of the Alucosuper decorative energy-saving composite panel are diverse, and the specifications are complete, which greatly enriches the range of materials selected by architects. The system material is light and high-strength, which greatly reduces the linear load of the main structure of the building.

06

系统构造简单，施工简便快捷，大大缩短了施工周期。

The system structure is simple, the construction is convenient, which greatly shortens the construction period.

07

根据同类系统在德国近40年应用实践及相关检测结果，超过了现行规范：外保温系统使用年限不少于25年的规定。

According to the application practice and relevant test results of similar systems in Germany for nearly 40 years, it exceeds the current standard: the service life of the external insulation system is not less than 25 years.

08

系统固定安全性高，意外损坏引发的维修更换简便；墙煌金属面装饰保温板外墙节能一体化系统独特的四边辅助机械固定、龙骨分仓密闭、企口拼接、双边机械固定方式，使系统具备较高的固定安全性及抗风荷载能力。

High system fixation security, easy maintenance and replacement for accidental damage; unique keel silo sealing, tongue-groove-joint and double-sided mechanical fixation ensure system with high safety and wind load resistance.

09

独特的密封与防水榫槽构造，为系统构筑两道防水屏障。

Unique sealing and waterproof mortise structure, provide two waterproof barriers for the system.

10

系统构造配件种类少，节省材料，减少安装费，节约施工成本，性价比高，成功地对现有的非透明类建筑幕墙进行了升级替代。

Less types of system construction accessories, save material, reduce construction and installation cost, cost-effective, successfully upgrade and replace the existing non-transparent curtain wall material.

5 PROJECT CASES
工程案例

1 公建项目
Public construction projects

2 房地产项目
Real estate projects



公建项目 Public construction projects



六安市第二人民医院
The Second People's Hospital of Lu'an City



安徽阳光电源
Anhui Sunshine Power Supply



六安市妇幼保健院
Lu'an Maternal and Child Health Hospital



六安市叶集党校
Lu'an Yeji Party School



六安市中医院
Lu'an Traditional Chinese Medicine Hospital

房地产项目 Real estate projects



上海仁恒81号（在建）
No. 81, Renheng, Shanghai



石家庄新利广场
Shijiazhuang Xinli Square



山东潍坊271教育大楼
Shandong Weifang 271 Education Building



徐州招商金融（在建）
Xuzhou Merchants Finance



南京华润G39（在建）
Nanjing CR G39



西安上林西苑
Xian Shanglin Xiyuan

房地产项目 Real estate projects



西宁银泰公寓
Xining Yintai Apartment



西宁银色家园
Xining Silver Homeland



郑州凤凰悦府
Zhengzhou Phoenix Yuefu



盘锦精工福地
Panjin Seiko Blessed Land



合肥融创滨湖印
Hefei Rongchuang Binhu Seal

墙煌科技 与您共同呵护人类家园
ALUCOSUPER TOGETHER WITH YOU CARING FOR OUR HUMAN HOMELAND