工程案例
Engineering Projects















佛山市中海锦城项目

佛山市中海锦城项目是润鼎金属制品公司铝模板系统的完美体现。其占地19.95万m^2，总建筑面积74.2万m^2（地上建筑面积：57.22万m^2，地下建筑面积：16.98万m^2），位于五丫口大桥北侧，隶属广东省金融高新技术服务区B区，东接广州荔湾区，为广佛同城的咽喉要地。打造成为佛山首个"低碳绿色"概念豪华精品住区，有望成为广佛核心区又一品牌标杆住区代表。

润鼎的专业团队在两个月内完成了项目运用铝模板系统的设计、生产和试安装。保证了项目的高效、优质、安全。在实际运用上，工人4天安装完成了第一层，并且保持着两天一层的安装速度。极大的提高了整个工程进度，受到了工地上的一致好评。未来润鼎更希望打造行业标杆，更优质的持续不断的服务于大众。











Xinye Eastern Park,Zunyi ,China
Contractor :China State Construction Engineering Corporation
Building stories: 33 stories
遵义市新浦新区新业东城
承包商：中国建筑总工程公司-中建四局
建筑层数：33层



佛山中海锦城
承包商：中国建筑总工程公司-中建四局
建筑层数：33层

China Overseas Jin park,Foshan ,China
Contractor :China State Construction Engineering Corporation
Building stories : 33 stories

Range of Application 应用范围



Tunnel 隧道



Bridge 桥梁



Swimming pool 游泳池



Tower 塔



Viaduct 高架桥



High-rise Building
高楼大夏



Gymnasium 体育馆



Dam 水坝

Manufacturing Procedure
生产流程



1.Melting



2.Billets



3.Billet Cutting



4.Moulding



5.Extruding



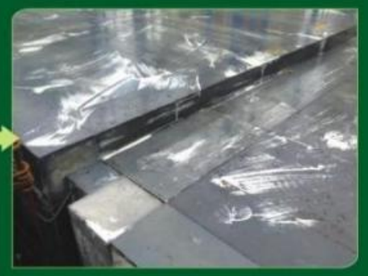
6.Cutting



7.Punching



8.Welding



9.Coating

1. Gather up metal scarps and melt them in the furnace.
2. The melted metal scraps become billets after the processing.
3. The prepared billets are cut into appropriate dimension.
4. The billets will be shaped differently by various types of moulds.
5. When a billet goes through a designated mould, a product will be extruded.
6. The extruded products will be cut into the right sizes.
7. Some products will be punched to make fastening holes.
8. Some products require additional welding works.
9. Finalized products will be coated with release with release agent.

具体信息
Specific Information



- Fabrication　Cutting, Welding, CNC, and Pressing
- 制 作　切割、焊接、计算机数字操控、压制

Aluminum Series Model: 铝合金系列型号：	6061-T6(GB5237-2008 standard) 6061-T6（GB5237-2008标准）
Aluminum thickness: 铝板横截面厚度：	4mm (Design can be strengthen) 4毫米，有加强设计
Steel support, Steel pins and other accessories Material: 钢支撑，销钉销片等配件的材料：	Q235 steel Q235钢材，销片为45#钢或Q235钢材
Al content/ m^2: 单方铝的重量：	20-28kg (Standards formwork) 20-28kg（标准板）
Surface treatment: 表面处理：	Hot light body 热压光身

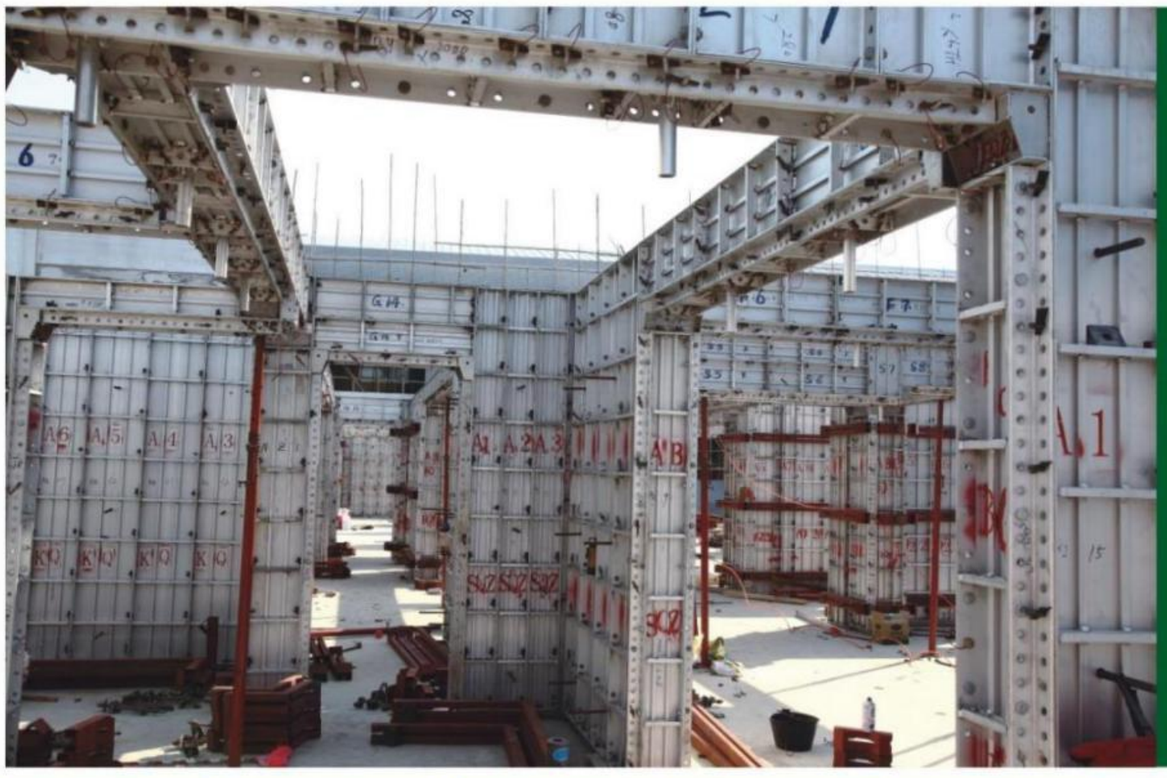










INTEGRAL ALUMINUM FORMWORK SYSTEM

整体式铝合金模板体系组成

模板系统：构成混凝土结构施工所需的封闭面，保证混凝土浇灌时建筑结构成型；
Composition system: the template system concrete structure forms the closed surface, ensure that the structure shaping when concreting.

附件系统：为模板的连接构件，使单件模板连接成系统，组成整体；
Attachment system: for template connection components ,composing of the whole and making each of templates connected into a system

支撑系统：在混凝土结构施工过程中起支撑作用，保证楼面，梁底及悬挑结构的支撑稳固；
Support system: a support role in the process of concrete structure construction, guarantee of the floor, the bottom of the beam and cantilever structure support firm.

紧固系统：是保证模板成型的结构宽度尺寸，在浇注混凝土过程中不产生变形，模板不出现涨模、爆模现象。
Fastening system: is the guarantee of template forming structure width, refuse deformation in the process of placing concrete, template does not appear higher mold or burst mold.












Components
组成部件



1、楼面板Slab Deck (D)
Width: 400/350/300/250/200/150/100mm
Length: 1100mm
Height: 65mm
Aluminum Profiles thickness: 4mm



2、墙板Wall Panel (W)
Width: 400/350/300/250/200/150/100mm
Length: 100mm-3000mm
Height: 65mm
Aluminum Profiles thickness: 4mm



5、外转角模块 Outer corner panel
Width: 65mm
Length: 100mm-1500mm
Height: 65mm



6、墙内转角 Wall inner corner
150(W)x150(H)x(150-1500)(L)mm
150(W)x100(H)x(150-1500)(L)mm
100(W)x125(H)x(150-1500)(L)mm
100(W)x115(H)x(150-1500)(L)mm
100(W)x100(H)x(150-1500)(L)mm



3、龙骨 Middle Beam / End Beam (MB / EB)
Width:100mm
Length: 300mm-1000mm
Height: 65mm



4、墙脚模块 Wall corner panel
Width: 35mm
Length: 200mm-2000mm
Height: 65mm

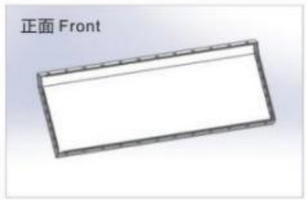


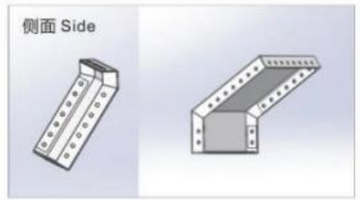
7、双内转角连接件 Soffit Length Corner (S.C)
150(W)x150(H)x300(L)
150(W)x100(H)x300(L)
150(W)x150(H)x250(L)
150(W)x100(H)x250(L)



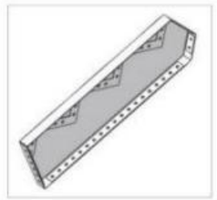
8、楼面撑柱中段模板 Deck Middle Prop (DMP)
Width: 100mm
Length: 200mm

Components
组成部件

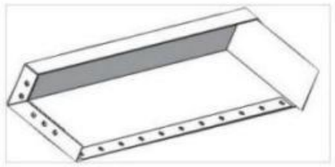


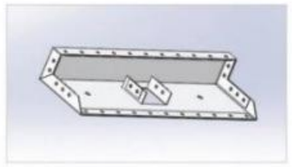


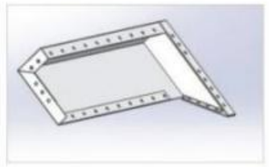
9、楼梯底板 Stair under panel



10、楼梯侧板 Stair side panel



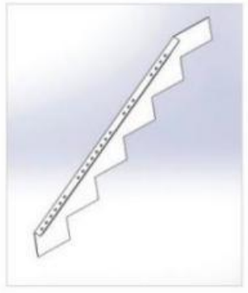




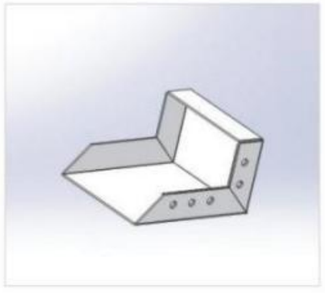
11、楼梯踏步 Step Tread (ST)



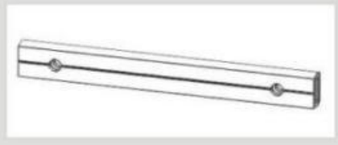
12、楼梯侧板上 Stair
由楼梯侧板+侧板踏步组成
Check of staircase+ Side step panel



13、楼梯侧板
Check of staircase

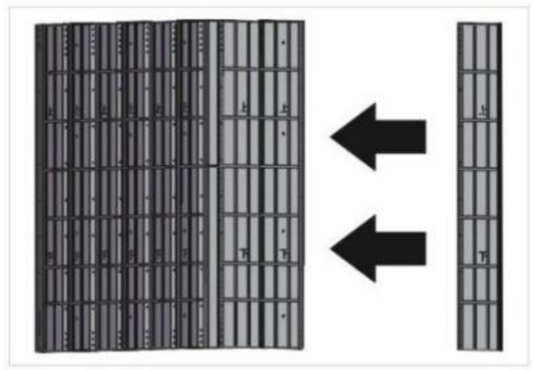


14、楼梯侧板踏步
Stair side step panel

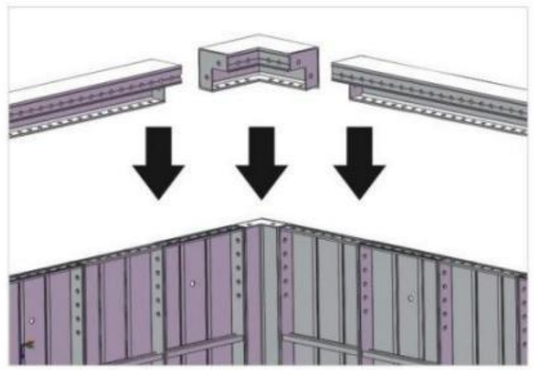


15、Beam Joint (BJ)
楼面撑柱中段模板连接件
400 (L)mm

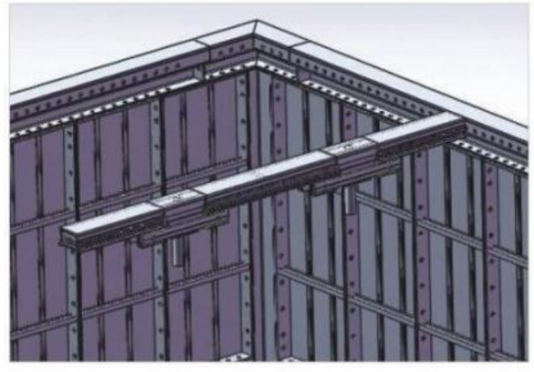
Installation of Wall and Slab Panels
安装墙板和楼面板



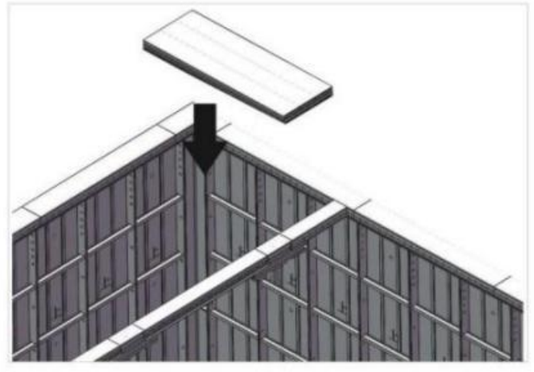
1 Installation of wall panels
1 安装墙板



2 Installation of soffit lengths (SL) and soffit corners (SC)
2 安装双内连接件和双内转角连接件

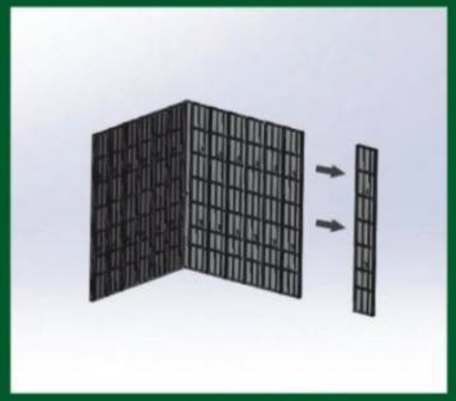


3 Installation of end beam (EB) and middle beams (MB)
3 安装端梁和龙骨



4 Installation of standard deck panels
4 安装标准楼面板

Dismantlement of Wall and Slab Panels
拆卸墙板和墙面板



1 Dismantlement of wall panels
1 拆除墙板



2 Dismantlement of beams
2 拆卸梁



3 Dismantlement of slab panels
3 拆卸楼面板



4 Dismantlement of soffit length
4 拆卸双内连接件



1ST Day
Lining up structural lines and installation of reinforcing bars
第一天：放线和装定位筋



2ND Day
Installation of wall panels
第二天：安装墙板



3RD Day
Installation of deck panels
第三天：安装楼面板



4TH Day
Installation of reinforcing bars on the slab panels before casting the concrete
第四天：砼浇灌前把钢筋安装在楼面板上

5TH Day
Casting and curing of the concrete
第五天：砼浇灌和固定



THE ADVANTAGE OF ALUMINUM ALLOY FORMWORK铝合金模板的优点

1、 施工周期短：铝合金建筑模板系统为快拆模系统，一套模板正常施工可达到四、五天一层，大大节约承建单位的管理成本。

2、重复使用次数多，平均使用成本低：铝合金建筑铝模板系统采用整体挤压形成的铝合金型材做原材（6063-T6或6061-T6），一套模板规范施工可翻转使用300-500次以上，平均使用成本低。

3、施工方便、效率高：铝合金建筑模板系统组装简单、方便，平均重量35KG/m，完全由人工拼装，不需要任何机械设备的协助（工人施工通常只需要一把扳手或小铁锤，方便快捷），熟练的安装工人每人每天可安装20-30平方米（与木模对比：铝模安装工人只需要木模安装工人的70-80%，而且不需要技术工人，只需安装前对施工人员进行简单的培训即可）。

4、 稳定性好、承载力高：铝合金建筑模板系统全部部位都采用铝合金板组装而成，系统拼装完成后，形成一个整体框架，稳定性十分好；承载力可达到每平方米60KN。

5、应用范围广：铝合金建筑模板适合墙体、水平楼板、柱子、梁、楼梯、窗台、飘板等位置的使用。

6、 拆模后混凝土表面效果：铝合金建筑模板拆模后，混凝土表面质量平整光洁，基本上可达到饰面及清水混凝土的要求，无需进行批荡，可节省批荡费用。

7、现场无施工垃圾：铝合金建筑模板系统全部配件均可重复使用，施工拆模后，现场无任何垃圾，施工环境安全、干净、整洁。

8、标准、通用性强：铝合金建筑模板规格多，可根据项目采用不同规格板材拼装；使用过的模板改建新的建筑物时，只需更换20-30%左右的非标准板，可降低费用。

9、回收价值高：铝合金建筑模板报废后，当废料处理残值高，均摊成本优势明显（每平方米的回收价大概在400元左右）。

10、低碳减排：铝合金建筑模板系统所有材料均为可在生材料，符合国家对建筑项目节能、环保、低碳、减排的规定。很多发达国家都已经规定建筑项目不准在使用木模板，需使用可在生材料的模板。

11、支撑系统方便：传统施工方法中楼板、平台等模板施工技术普遍采用满堂支架，费工费料。而铝模板支模现场的支撑杆相对少（采用独立支撑间距1200mm一支），操作空间大，人员通行、材料搬运畅通，现场易管理。

1. Short construction period: Aluminum formwork is a quick release system, a set of formwork construction can support four or five days per floor normally, thus save the management cost.
2. More recycle, low capitation: Aluminum alloy construction formwork system adopts the material of whole aluminum profile extrusion forming (6063-T6 or 6061-T6), a set of reversible template specification can use more than 300-500, low capitation.
3. Construction is convenient and high efficiency: aluminum alloy construction formwork system assembly is simple and convenient.it with 35k/m2 of average weight, completely by artificial assembly , did not need any mechanical equipment (usually construction works are only use a wrench or a small hammer, is convenient and quick), a installation of skilled workers can installed 20 -30 square meters per a day (compared with wood pattern: aluminum mold installation works only need to block 70-80% of the workers, and didn't need skilled worker, just need simple training before the installation.
4.Good stability and bearing capacity,all parts of the aluminum alloy construction formwork system are made of aluminum alloy plate assembly, after complating the formation, the bearing stability can reach 60 kn per square metre.
5. Wide range of application ：aluminum alloy construction formwork is suitable for wall floor level , columns, beams ,staircases , windowsill , floating plate and so on .
6. Concrete surface effect after dismantling: the surface of aluminum alloy construction formwork is bright and clean level off . Basically , achieved requirement of veneer and concrete ,no need to render ,so save cost .
7.No construction garbage left: all accessories of aluminum alloy construction formwork system are reusable, construction, the scene without any garbage left after dismantled, construction environment is safe, clean and neat.
8.Up to standard, strong commonality: plenty of specifications of aluminum alloy construction formwork , to fit for the project can use different size of panels; Used by the formwork in reconstructing new buildings, only need to change about 20%-30% of standard board, also can decrease the cost.
9.High recovery value: After Aluminum alloy construction template scrap, Waste treatment salvage value is high, the capitation cost advantage obviously, the recycling price per square meter is about 400 CNY.
10.Low carbon reduction: aluminum alloy construction template system all are use recycling material. Meet the national specification aboutenergy conservation, environmental protection, low carbon, emissions regulation. Many developed countries have banned use of wooden template, need to use the template of recycling materials.
11.Convenient support system : The traditional construction method of formwork construction technology , such as floor , platform ,and so on are widely used full framing , waste fee and material .
But less of the scene of the aluminum formwork support bar (1200mm adopt independent support space), the operating space is large , easy walking ,convenient handling material, easy to manage .

P K

TRADITIONAL WOODEN TEMPLATE STEEL TEMPLATE 最传统的木模板、钢模板









最传统的木模板，比较常见的是杨木模板和松木模板，这种模板相对而言比较轻，成本 略低，但其强度低，不防水，易霉变腐烂，重复使用率低，需要消耗木材资源，不利于生态 环境和森林资源的保护；竹模板的缺点也是重复使用率低，且不可回收。

The most traditional timber formwork, the common formwork is poplar and pine, is lighter than other ones, lower cost, but it is weak intensity, non water-proof, easy mildew or rot, low repetition usage-ration, timber resources consumption, unfavorable for the protection of our ecological environment and forest resources; the defect of bamboo formwork is low repetition usage-ration and unrecyclable.

钢模板，顾名思义是钢质的，强度非常大，拆模后混凝土表现非常好,但重量过重，施 工需机械设备协助，易生锈，且在混凝土浇注过程中易与混凝土粘合在一起，脱模困难。 三、塑料模板，不怕水，耐用，但刚性差，易变型，且成本高。

Sheet steel form, as the name suggests, it's high intensity, the concrete is good but overweight after form releasing, need to have machinery equipments to help construction , easy rusty, and easily cohere to concrete in the pouring concrete, difficult to demold. The plastic formwork, non water-proof, durable, but poor stiffness, easy deformation, cost more.

Comparison Diagram of construction formwork

建筑模板参数对比图



No	Iterm	Aluminum formwork	Combined steel formwork	Steel formwork	Heavy steel frame gluing template	Light steel frame gluing template	Timber formwork
1	Formwork material	4.0mm aluminum formwork	2.3~2.5mm thickness steel formwork	5~6mm thickness steel formwork	18mm thickness film face plywood	15mm thickness film face plywood	18mm thickness film face plywood
2	Formwork thickness	54	55	86	120	120	15~18
3	Formwork weight	25~27	35~40	80~85	56~68	40~42	10.5
4	Bearing capacity	≥30KN/m²	≥30KN/m²	≥60KN/m²	≥60KN/m²	≥50KN/m²	≥30KN/m²
5	Turnover times	300	100	250	200	150	8
6	Construction difficulty	Easy	Easier	Difficult	Difficult	Easy	Easy
7	Maintenance charge	Low	Lower	Expensive	Expensive	Expensive	Expensive
8	Efficiency of construction	High	Low	Higher	Low	Higher	Low
9	Amortization cost per square metre (RMB / time)	2.5	2.8	2.8	3.4	3	6.25
10	Concrete surface quality	Smooth and clean to finishing and decoration fair-faced requirements	Surface roughness accuracy is not high	Smooth and clean to fulfill the requirements of ordinary fair-faced	Smooth and clean to finishing and decoration fair-faced requirements	Smooth and clean to finishing and decoration fair-faced requirements	Rough surface
11	Recyclable value	High	Moderate	Moderate	Low	Low	Low
12	The dependency on hoisting machinery	Independence	Independence	Independence	Dependence	Dependence	Independence

Service Advantages 服务优势

Professional design, production, installation, sales as one, all-the-way tracking customer needs

专业的设计、生产、拼装、销售为一体，全程跟踪客户需求。

1.R&D

According to the building structure chart provided by customer, RunDing will give technical and commercial evaluation analysis to arrive at the best construction solutions on using aluminum template.

1.研发

根据客户提供的建筑图纸，润鼎会提供技术和商业评估分析以达成最优铝模使用的建筑解决方案。



2.Design

After entering into a cooperation intention with customer, RunDing's professional template design team will analog construction program through computer software. We also draw out the best aluminum template installation drawings and detailed list of materials, templates, installation instructions and other technical-documents, and then a detailed cooperation agreement will be signed with customer.

2.设计

这是进入与客户合作的阶段，润鼎专业的建筑模板设计团队通过计算机软件模拟施工程序。我们绘制好最合适的铝模安装图纸和列好详细的模板材料清单，安装说明以及技术性文件，最后才与客户签署详细的合同。



3.Producing

Professional and efficient production processes finished. After completion of the program design template system, will be produced in a factory run tripod, the entire production chain, with appropriate management personnel and quality control personnel, to ensure the production of high quality finished product.

3.生产

专业高效的生产流程。铝模系统设计方案完成后，下达生产命令进行生产。生产过程中，有适当的管理人员和质量控制人员的进行监控，以确保产品完成高质量生产。



4.Try to install

After the completion of a full set of aluminum formwork system design and production, Run Ding will have a professional installation team in the factory installation of a full range of test, customers can visit the on-site inspection tour guide. Overall test installation is complete, each component will run tripod template system to classify numbers packaged develop a detailed list of delivery for future fast and accurate at the construction site to check the installation.

4.试安装

完成设计及生产流程后，工程师团队首先在厂房开展试安装的全面测试，客户可到现场检查、指导工作。各类测试结束后，分类包装，运输进场。



5.Perfect----Follow up services

Follow-up services will be offered from RunDing after client uses aluminum tripod template. Including repair, replenish and recycle waste board templates and other services. Run Ding will build inventory file for customers, the new construction project for the customer technical services, reduce duplication of production and investment template.

5.跟进服务

润鼎为使用铝模的客户提供跟进服务。包括维修、补货、回收以及其他售后服务。润鼎为客户构建库存文件,新的建设项目为客户技术服务,减少重复生产和投资的模板。

