



AI INTER GROUP



GRG PRODUCTS

GRG: Glass Fibre Reinforced Gypsum



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What is GRG

GRG stands for Glass Reinforced Gypsum or sometimes called Glass Fibre Reinforced Gypsum (GFRG). It is generally a hand laminated product manufactured from hard casting plasters and continuous filament glass fibre matting, with reinforcing timbers or metal sections As required.

It is often used to build interior ceiling features, atrium linings or circular column casings. And it is more durable than traditional Fibrous Plasterworks, offering smoother finishes and higher impact resistance.

GRG products are customized for different projects. Designers can realize their design ideas through GRG products. GRG materials make the perfect combination of architecture and art, and provide realistic wings for talented designers to realize their bold, avant-garde, and even crazy design dreams. Due to the waterproof performance and good acoustic performance of GRG materials, it is especially suitable for places with frequent cleaning and sound transmission, such as schools, hospitals, shopping malls, theatres and other places. GRG materials, as interior decoration materials of buildings, are widely used by designers and architects on ceilings, partitions, signboards, panels, columns, vaults, domes, cornices and wallboards.



GRG APPLICATION RANGE

GRG plasticity, modelling is rich, can satisfy the shape and texture of the randomness, the product can be customized single surface, hyperboloid, 3D format and so on various geometries, hollowed out pattern, relief pattern, and so on any art form, can fully meet the requirements of the designer's personality. Not only high hardness but also good flexibility, can be made from various sizes, shapes and shapes, easy to use, can be used in the complex ceiling of the ceiling, wall decoration. The design effect of the inner surface of the building can be achieved by the use of the GRG product. Widely used in the conference hall, kindergartens, sales center, leisure center, hotels, media center, gym, bar, exhibition halls, museums, landmark large buildings and so on; even can be applied in the production of furniture, sculpture art.

GRG products out of mold time needs only 30 minutes, the drying time of 4 hours. So it can shorten the construction period.

According to the designer's design requirements, create arbitrary shape, can block production and segmentation. The field is good, the installation is quick and flexible, it can be seamless and connected in large area, forming the complete model. Especially for arc, hole shape, angle and other shapes can ensure zero error construction and installation



GRG FEATURE

It is a new type of new decorative material made of high quality natural modified gypsum as the basic raw material, adding gypsum special reinforced glass fiber and environmental protection micro additive.

This material can be made into a variety of flat panels, a variety of functional products and various art modeling. Early all prefabricated completed, after stripping surface smooth, high whiteness, do not need to second site processing, installation the use of embedded parts hoisting construction, is currently the most new building materials products.

As a new material, GRG has the following advantages and features:

1. Advocate gypsum of glass fiber without corrosive effect, and the shrinkage rate of less than 0.01%, so it can ensure product performance is stable, durable, Non-cracking, deformation
2. Quality light. The standard thickness of the GRG product plane part is 3.2-8.8mm, and the weight per square meter is only 4.9-9.8KG.
3. High strength. Through the experiment, the fracture load of GRG product is more than 1200N, and the fracture load of 118N is 10 times more than that of standard JC/T799-1996.
4. Temperature regulation. GRG is a plate with a large number of porous structure, in which the porous body can absorb or release water from the natural environment.. When the indoor temperature is high and humidity is small, the plate gradually releases the moisture in the micro hole. When the indoor temperature is low, the humidity will absorb the moisture in the air. This release and absorption form what is called "breath". ". This cycle of absorption and release plays a role in regulating the relative temperature of the interior.
5. Fire prevention. GRG material belongs to the A1 level of fire material, in addition to energy, but also release the weight of its own 15%-20% moisture, can greatly reduce the ignition temperature, reduce the loss
6. Environmental protection. GRG material has no harmful smell, the radioactive radionuclides limited in accordance with the provisions of the class a decorative material GB6566-2001 standards, can be recycled
7. Good acoustics. The detection shows that: 4mm thick GRG material, through the loss of 23db. 100Hz/27db 500Hz/; gas dry weight 1.88, in accordance with professional acoustic reflection requirements. After a good design, can constitute a sound absorption structure quality, achieve the sound insulation, sound-absorbing effect



GRG ENGINEERING CASE

GRG案例欣赏 Dongdaemun Plaza



The big east square design (DDP) is the first Korean in the construction of 3D building information model (BIM) and other digital tools for public projects. In the whole process of design, each construction requirements are treated as a series of interrelated spatial relations, social interaction and behavior determines the structure of the project itself and the surrounding. These relations not only constitute a design framework, but also shows the project a lot of out of the ordinary aspects, such as space structure, integration of planning and engineering

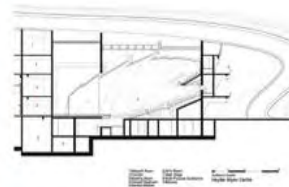
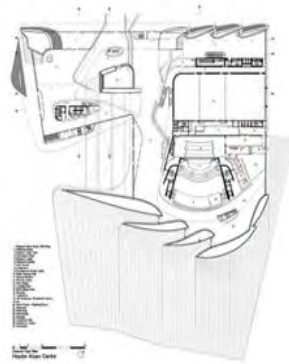
By using the parameters of building information modeling software and design calculation, we can continue to carry out the test, adjust the design to meet the different requirements of the owner, and meet the requirements of engineering and architecture. These techniques ensure that the original design did not change his mind in the whole process of project construction, and supervision and consultation to regulate the process of architectural design. Parameters of building information model not only improves the efficiency of work flow, and help the designers to choose the design the most sensible in a tense period, guarantee the development prospects of DDP.

DDP continuation of Korean traditional architecture and technology, at the same time, walk in the forefront of science and technology, the design team skills and enthusiasm, as people have such a wonderful building.



GRG ENGINEERING CASE

GRG案例欣赏 Heydar Aliyev Centre



The design of the Heydar Aliyev Center establishes a continuous, fluid relationship between its surrounding plaza and the building's interior.

The Plaza, as the ground surface: accessible to all as part of Baku's urban fabric, rises to envelop an equally public interior space and define a sequence of event spaces dedicated to the collective celebration of contemporary and traditional Azeri culture.

Elaborate formations such as undulations, bifurcations, folds, and inflections modify this plaza surface into an architectural landscape that performs a multitude of functions: welcoming, embracing, and directing visitors through different levels of the interior.

With this gesture, the building blurs the conventional differentiation between architectural object and urban landscape, building envelope and urban plaza, figure and ground, interior and exterior. The Heydar Aliyev Center principally consists of two collaborating systems: a concrete structure combined with a space frame system. In order to realize no main large space, let people experience the internal mobility and free space,

the whole building is composed of two sets of structure systems: the concrete domain space frame system. Geometric surface is applied to a cantilever beam tapering. Space frame system ensures free form building, glass fiber reinforced gypsum board is the ideal free interior decorative material, perfect realization of the plaza building, the interior space, transition.



GRG ENGINEERING CASE



Roca Hall consists of single Hall of London, an area of 1100 square meters, as Zaha-Hadid Studios wanted, it looks as if every detail is formed by the water-carved and defined. Architectural appearance clearly depict musicians committed to innovative design and commitment, its distinctive and unique façade is a London exhibition hall's unique identity. Le London showroom, water sports are the most important topics- exterior and Interior full of water and convergence. Interior decorated with white concrete sculpture, the most advanced lighting will each connect different regions together.



Roca London showrooms is not just an exhibition, it will also become a center of London, is used to organize activities, such as domestic and international exhibitions, conferences, lectures, seminars and debates. Themes reflected in all aspects of water and make the space look like a spaceship-like futuristic. Entrance of ripple is like. Big circle entrance and Windows that let in the distinction between interior and exterior weakened. Internal flow of bright, lighting, shelving, furniture seating, dynamic lines. 2..2 meters high GRG panel manufacturing and construction in the field. Outer epidermal cell size was 2x4 meters, 0.8 tones of load. Furniture and reception is made from reinforced glass fiber reinforced plastic. Lighting light into direct and create atmosphere of splicing lights.



GRG ENGINEERING CASE



The Puerta America Hotel it is a five stars Hotel, rather it is a twenty-first Century design culture museum. The world-famous “Design Hotel”, Madrid has become the eyes of the people of design, The first floor is known as the queen of Zaha Hadid responsible for building. Just as her style or architecture, Hadid design the space as a mold made from the wall to the cupboard, bed, no gap between. The room looks more like a liquid in the flow, and not space itself. Metope modelling, furniture in the room, all the GRG panel made of formation water, the unique scenery line.



GRG ENGINEERING CASE



The bar can be traced back to 2006, a film director from Singapore and a musician is going to open a bar at the scene. Although the budget is very low, but the owner architect's concept for the liberal support. The design time is very tight, but the architect's first report let owner satisfaction. The idea seems complicated actually pretty simple, a digital space composed of sand. Through the rhino software making model and complete the design. In Europe, the realization of this design need to digital model factory to complete with digital cutting machine, the cost will be very expensive. But in China, with a laser projector projection, workers was make the GRG architects to appearance, and its cost is low for architects appalled.



GRG ENGINEERING CASE



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