

Glass-fiber Reinforced Concrete (GRC)

1. Introduction



Glass fiber Reinforced Concrete, also known as GRC, is made of alkali-resistant glass fiber as a reinforcing material. Sulphate-aluminate low-alkalinity cement is used as a cement material and is mixed with suitable aggregate to form a substrate. Lightweight, high-strength, high-tough, multi-functional new inorganic composite materials made by casting, extrusion, and slurry production.

2. Performance



GRC is made of special low-alkaline cement and special glass fiber composite materials through various processes. Its advantages including high strength, anti-aging, light weight, diversified molding, simple construction, fire resistance, weather resistance and acid resistance. The same performance and longevity as concrete make it the new favorite of local architecture and landscape projects.

Here are the merits in using GRC as building and construction material:

1. Infinite Mouldability: GRC products are made by mixing raw materials in a certain ratio and injection molding in the mold, which can produce products with rich shapes and various textures. According to the different needs of customers and designers, any artistic style can be carried out to perfectly realize the designer's design dream.
2. Light weight, high strength: GRC's bulk density is about 1800-1900kg/m³, 8mm thick standard GRC board weight is only 15kg, compressive strength exceeds 40MPa, bending strength exceeds 34Mpa, greatly exceeding the international standard requirements.

3. Ultra-thin technology, large size: GRC board can be 5mm thick or thinner, standard width is 900mm and 1200mm, the length is not limited, can meet the transportation conditions, can also be made 5mm to any thickness, any size.
4. Rich colors, diverse shapes: GRC products use homogenous and transparent mineral raw materials, can be made according to customer needs of a variety of different colors and different shapes of artistic effects.
5. Excellent texture and surface: GRC products can be made into sandblasted surface, litchi surface, marble surface, smooth surface and other different texture effects, can also be made into strips, hollow, relief and other different texture effects.
6. Environmental protection, no radiation: GRC is a renewable material, is conducive to environmental protection. The raw materials do not contain radioactive nuclear elements and are classified as Class A environmentally friendly materials for national radionuclide content.

3. Company Introduction

Yeung's Fiberglass started in 1983 with an aim to provide the best GRC, GRP and GRG products to the client with the best economical fixing solution. As one of the approved government specialist contractor since 1986, we have completed over 500 projects successfully co-ordinating with the client, main contractors in Hong Kong and around the world.

We have a team of experienced Architects, Engineers, RSE, Supervisors and skilled workers which can handle GRC works for any scale of project from preparing ship drawing, fixing details, calculation, RSE endorsement to achieve approvals from client and the Buildings Department. After the completion of project, we will provide technical information, test reports, O&M manual and as-built drawings.

4. Project Highlights

1. GRC Moulding



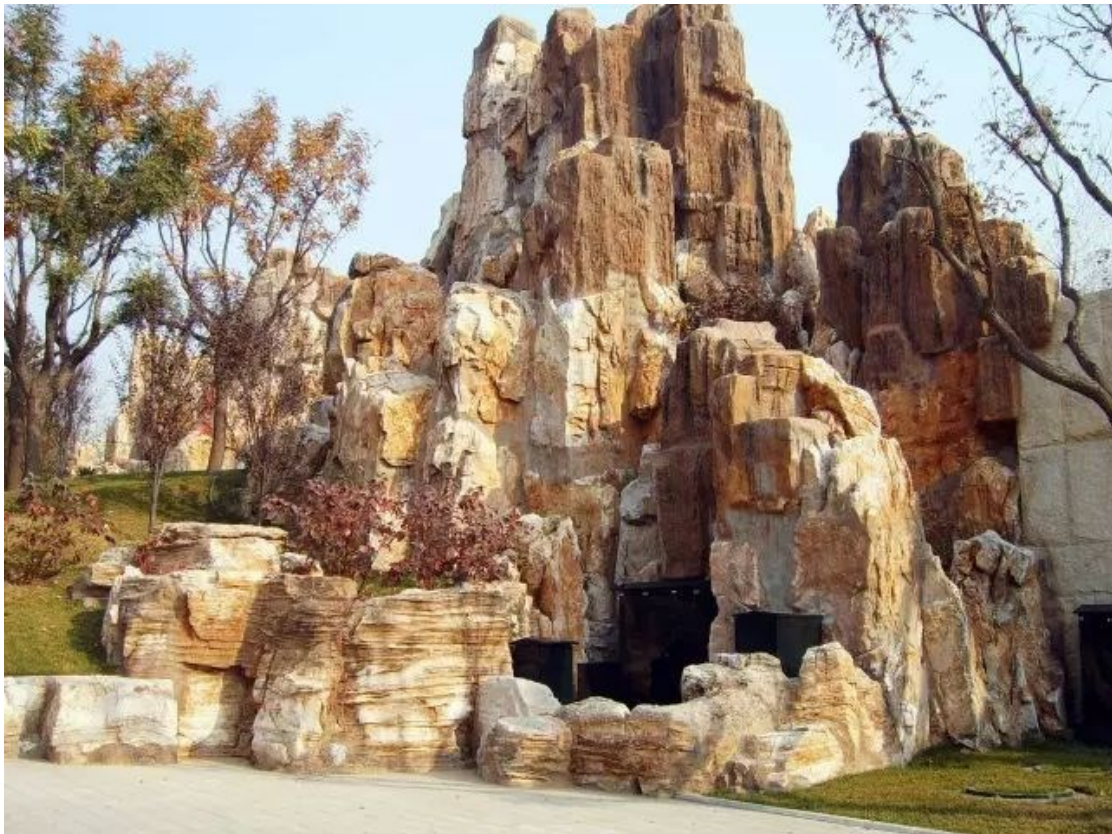
Building decoration components are the most used places in GRC. Due to the prevalence of European style in these years, various GRC components such as GRC Roman columns, GRC twist lines, GRC decorative lines, GRC corner lines, GRC door and window sets, GRC vase railings, etc.

2. GRC Cladding



GRC materials are almost unrestricted by shape or design. In modern architectural design, GRC building curtain walls are increasingly used by designers in large-scale single and hyperbolic nonlinear architectural designs to achieve their creative effects. The form requirements of the designer of the limit. At present, the largest single frame can reach about 20 square meters.

3. GRC Artificial Rockscape



Due to its light weight, high strength, anti-aging and water-resistant benefits, GRC is easy to be installed on site. At the same time, its surface can be highly imitated by various decorative processes such as sandblasting, pickling, spraying, fluorocarbon paint and imitation stone paint. The landscape rockscape provides a wider space and reliable material guarantee for the creation of rockery art.

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5. Project References



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