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宇隆新材料

To be the largest and most superior FRP composite materials production base in China

宇隆新材料

Hubei Yulong Group Jinli New Materials Co., Ltd. is the first high-tech composite materials company in Hubei Province which produces FRP (Fiber Reinforced Polymer). The company was founded in 2011, with RMB 20 million registered capital. It covers an area of 12 thousand square meters, and owns 12 automatic production lines with 20 tons production each year. In 2012, with the permission of local government, the company is going to invest more than RMB 2 billion for the new large-scale composite materials production base. Once the new base is completed, the annual production will reach 75,000 tons FRP Ribs, 10 million meters FRP Bars, and 50,000 cubic meters FRP Profiles, which would be the largest and most superior FRP new composite materials production base in China. This new base project has been approved already, and it will be fully operated in 2014.

Our company is located in Yiling District Yichang City, "the capital of hydroelectric power in the world". It is 25 km from the Three Gorges International Airport, and 5 km from Yichang Port of Yangtze River and Yichang Railway Station. With Yichang-Huangshi Expressway, Jingmen-Yichang Expressway, Wuhan-Yichang High-Speed Railway, and Yichang-Wanzhou Railway, the transportation is very convenient.

Our company is a subsidiary of Hubei Yulong Group. The group is a trans-regional and multi-industry integrated enterprise, mainly operating real estate, mall rental, and construction and installation. It owns 11 subcompanies with total 2 billion registered capital and 3.2 billion fixed assets. In the passing years, the group has taken full advantages of the cooperation with famous universities and academies to enhance the technology and quality.

Our excellent technology team owns 2 professors, 3 senior engineers and 8 doctors, possessing 16 advanced technical patents. In 2012, our company established a technical research center with HUST (Huazhong University of Science and Technology) to develop and utilize the FRP new materials.

We adhere to the mission of "providing high-quality and reliable production to our customers". Keep the tenet of "integrity, mutual benefit, objectivity, innovation". Insist on the concept to "be truly and sincerely, and pursuit perfect". For the purpose of bringing benefits to the customers, sending happiness to the staff, creating values to the society, we will propel the development and utilization of the FRP new technical production unswervingly.



Yulong FRP Anchor Bolt

- ◆ Using the superiority of the composite materials, enhanced with the patent self-developed materials
- ◆ Applies to tunnel excavation, slope support, railway temporary support, etc..



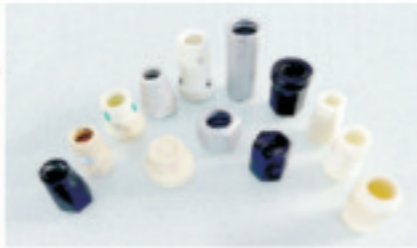
Product Appearance



Supporting Application



Anchor Bolt



Nut

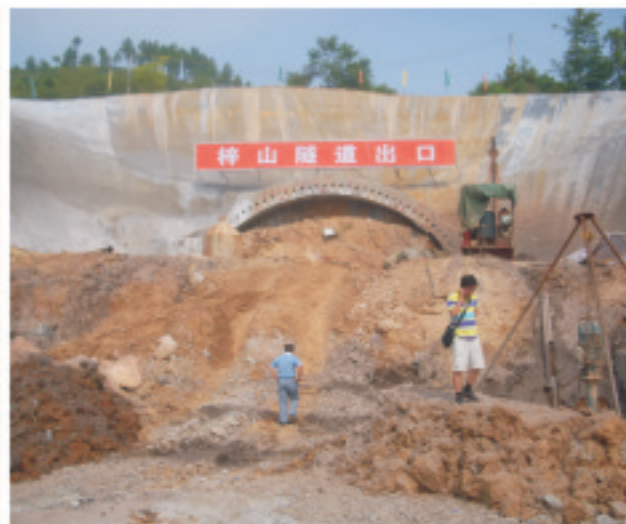
Superior Features

- ◆ Advance continuous formation, advanced technology.
- ◆ Full thread, no distinction of the head and end, equal intensity.
- ◆ Highly tension, $\geq 700\text{Mpa}$ (equal with 20MnSi threaded steel anchor bolt); $\geq 70\text{KN}$ (combined with FRP nut)
- ◆ Easy to cut, no sparkle, cutting machine directly.
- ◆ Strong anti-corrosion, long service life (resistible for chlorine, acidity and alkalinity).
- ◆ Non-conducting, athermic, superior impact resistance.
- ◆ High thermostability; compared with steel, closer to concrete thermal expansion index.
- ◆ Better combination with capsule resin in tunnel construction and mining; stronger anchorage force, higher cementation, and faster anchorage speed.
- ◆ Lighter, weigh only quarter of steel bolt; convenient transportation; reduce the labor intensity.

Technical Index:

diameter (mm)	weight (kg/m)	tensile strength (Mpa)	shear strength (Mpa)	anchorage force (KN)	torque (N.m)	rear thread tolerance (KN)
< $\phi 16$	0.615	≥ 600	≥ 110	70	≥ 60	70
$\phi 16$	0.745	≥ 550		80		80
$\phi 18$	0.904			90		90
$\geq \phi 20$	0.981			95		105

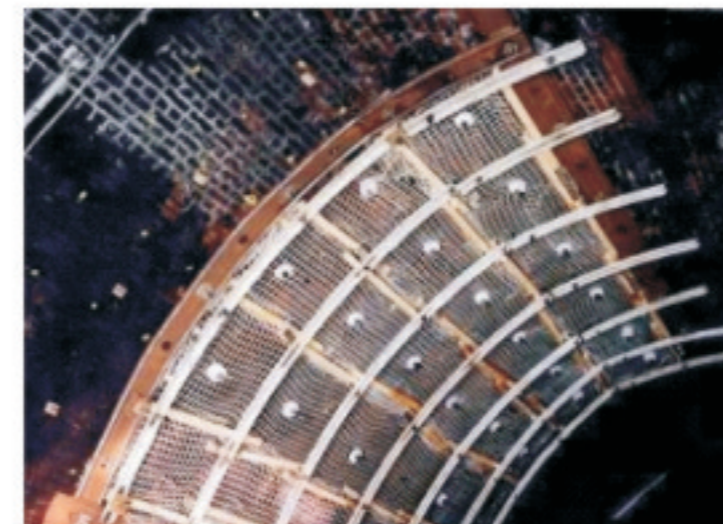
应用实例



Yulong FRP Anchor Bolt used in High-Speed Railway Tunnel in Zishan in Jiangxi Province



Yulong FRP Anchor Bolt used to reinforce the slope in the Fire Brigade Headquarters of Yiling District Yichang



Yulong FRP anchor used in coal mining



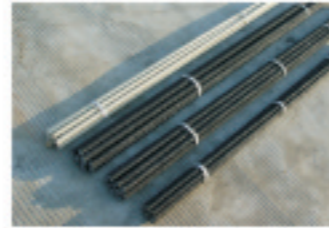
Yulong FRP anchor used in tunnel construction in Longyan in Fujian Province

Yulong FRP Rib Material



◆ Using the stainlessness, nonmagnetic, high-strength and light weight of the fibrous composite materials, enhanced with the patent self-developed materials.

◆ Applies to concrete structure ribs, prestress concrete structure prestressing rib, etc.. Includes carbon fiber ribs, glass fibre ribs, basalt fibre, aramid fiber, etc..



Superior Features

- ◆ Advanced continuous formation and technology.
- ◆ Full thread, no distinction of the head and end, equal intensity.
- ◆ Highly tension, $\geq 700\text{Mpa}$ (equal with 20MnSi threaded steel anchor bolt); comparable with Q235 steel rib or prestressing steel strand.
- ◆ Match with corresponding-size FRP cylindrical pattern.
- ◆ Strong anti-corrosion, long service life (resistible for chlorine, acidity and alkalinity).
- ◆ Superior impact resistance.
- ◆ High thermostability; compared with steel, closer to concrete thermal expansion index.
- ◆ Lighter, weigh only quarter of steel bolt; convenient transportation; reduce the labor intensity.

Technical Index

尾部螺纹承载

Yulong GFRP Technical Index (glass fiber ribs)

diameter (mm)	weight (kg/m)	tensile strength (Mpa)	shear strength (Mpa)	rear thread tolerance (KN)
< $\phi 16$	0.615	≥ 700	≥ 110	85
$\phi 16$	0.745			95
$\phi 18$	0.904			105
$\geq \phi 20$	0.981			135

Yulong CFRP Technical Index (carbon fiber ribs)

specification (mm)	elasticity modulus (Gpa)	shear strength (Mpa)	shear strength (Mpa)	mating anchorages tolerance (KN)
6	200	≥ 2600	≥ 800	2000 anchoring 10 posts of 6 bundle
19 posts of 6	200			

Application Examples



Yulong FRP rib materials used in Songshuao Bridge in Zigui Yichang (20-meter Prestress Hollow Slab)



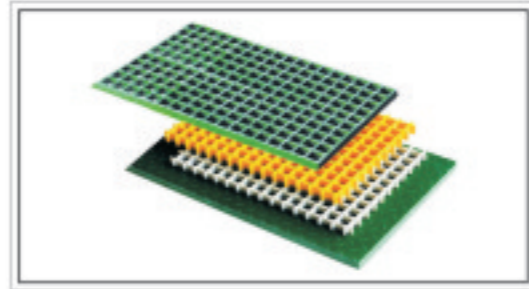
Yulong FRP rib materials in the site construction



Yulong FRP rib materials used for Bridge construction

Yulong FRP Profile

- ◆ Using the advanced pultrusion; pulling the reinforcer, soaked into resin, under the traction of motive power machine; though the heated moulding cavity; shape to various profiles, such as stick, tube, angle, sink, etc..
- ◆ Applies widely to electric, building materials, anti-corrosion equipments, sports and entertainment, stationery commodity, agriculture, etc..



Yulong FRP Profile Series

Superior Features

- ◆ Lighter, weigh only quarter of steel; compact fiber center ply makes the profile tough and tensile.
- ◆ Strong anti-corrosion; resistible for gaseous or liquid acidity, alkalinity, salt and organic solution.
- ◆ Ageing-Resistance; high-quality matrix resin with inhibitor ensure the durable ageing-resistance, keeps the luster and high strength more than 20 years.
- ◆ Excellent designability; the color and size can be designed according to customers' requirements, as well as grotesque shpes.
- ◆ Non-magnetic; safety use in anti-electromagnetic and anti-explosive atmosphere.



Yulong FRP profile used for chemical industry



Yulong FRP profile used for expressway guardrail



Yulong FRP profile used for bridge



Yulong FRP profile used for municipal piling



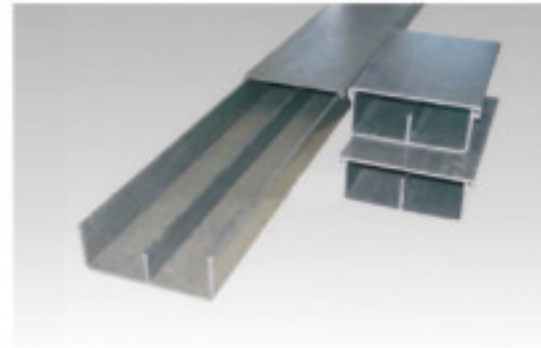
Yulong FRP profile used for enclosure



Yulong FRP profile used for school piling

Yulong FRP Cable Bridge

- ◆ Formed at one stroke by compacting high density glass fiber and high strength materials for required shapes, such as sink, tray, multistep, combined, etc..
- ◆ Applies widely to railway, highway, subway, tunnel, municipal construction, bridge, electrical, petroleum, chemistry industry, computer cable, post and telecommunication, etc..



Yulong FRP Cable Bridge

Superior Features

- ◆ Excellent insulativity. Heat insulation and antflaming. Ageing-resistance and anti-corrosion.
- ◆ Strong vertical structure. Better impact resistance.
- ◆ Lighter, weigh only quarter of steel cable trough, and one in ten of cement cable trough.
- ◆ Automatic processing. Having improved the processing speed and shortened the supply cycle.
- ◆ Quick and convenient installation style, saved resource
- ◆ Multiple surface treatment modes, such as spraying, electrogalvanizing, hot-dipped galvanization, etc.. High glossiness, plumpness, surface planeness, and favourable adhesion.
- ◆ Streamline and artistic appearance.
- ◆ Long service life. Can be used more than 30-50 years in Alpine region, Plateau region and high mountain region.



Yulong FRP Cable Bridge used for the railway project



Yulong FRP Cable Bridge used for building construction



Yulong FRP Bar

- ◆ With high-fibre content (about 70%), it would reach higher rigidity at the same weight.
- ◆ Applies widely to tree support, grapes growing, kite framework, and other framework support bars and gardening guardrail.

Specification Index

- ◆ Specification $\phi 1 \sim \phi 32\text{mm}$

Superior Features

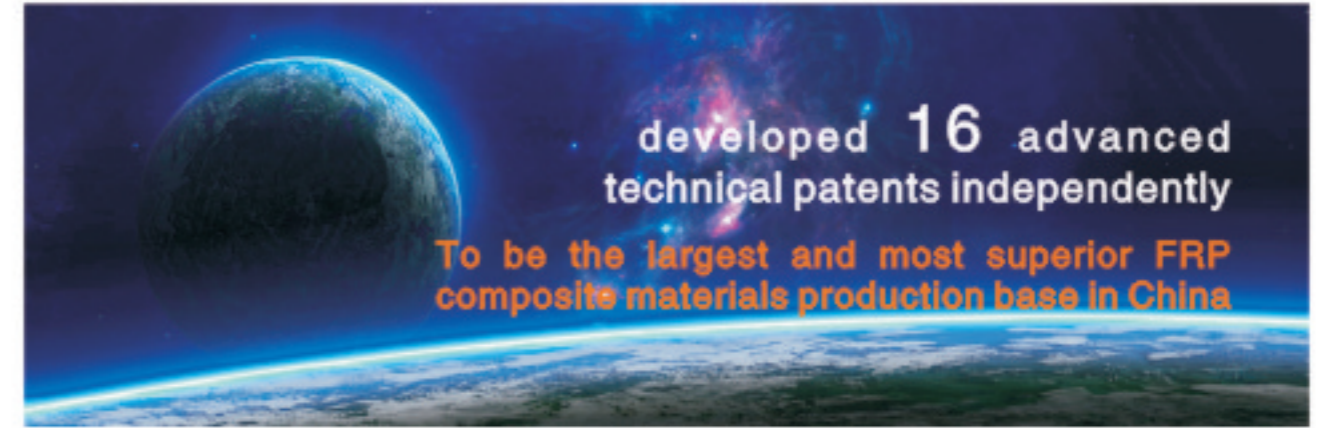
- ◆ High strength and elasticity.
- ◆ Strong anti-corrosion. Recycling.
- ◆ Coincident diameter. Convenient for mechanized installation and save labor cost.
- ◆ Light specific gravity. To save transport cost.
- ◆ Ageing-Resistance. To save maintain cost.



Large-Scale Product



workshop





◆ DEVELOPMENT OBJECTIVE ◆

To be the largest and most superior FRP composite materials production base in China

◆ OPERATIONAL CONCEPT ◆

Be True and Sincere / Pursuit of Perfection
Honesty and Abiding / Service Paramour

◆ QUALITY PRINCIPLE ◆

Scientific Management / Keep Improving

