Provision Of Frp Covers To Primary Sedimentation Tanks Of Sha Tin Sewage Treatment Work The Memorable First Project Of FIBRPRO® **@2010-2011**

FIBRPRO®
MANUFACTURING | PRECAST | CONTRACTOR

YOUR FRP SPECIALIST
FIBRPRO® International Limited

Products And Services Brochure

ABOUT US

A tale of incessant improvement

Headquartered in Hong Kong,

FIBRPRO® comprises a team of engineers in the fields of materials, production techniques, mechanics, structures, construction methodologies and management.

It is with this unique foundation that FIBRPRO® has been at the forefront in the design and fabrication of Fibre Reinforced Polymer (FRP) products for the construction industry since its establishment in 2010.

Certified as an Approved Supplier of Materials and Specialist Contractor for Public Works of Hong Kong SAR (in 2020), Fibrpro is a one-stop contracting service provider and offers design, engineering, manufacturing, delivery, installation and commissioning for a comprehensive range of FRP related products and works both to our proprietary design and customers specific requirements. We take much pride in our involvement in numerous innovative and challenging projects including some singular customised works.

With our extensive knowledge of composite materials, manufacturing techniques, engineering skills and contracting requirements, we expanded our service scope to proprietary engineered prefabrication products in 2015, and since then have been offering innovative and cost-effective solutions to address complex construction and architectural challenges and to overcome the high labour costs in the construction market. Going from strength to strength, FIBRPRO® set up a dedicated FRP manufacturing plant in Guangdong in 2018 with research and development (R&D) capability, taking the development path that integrates education, research, production, and application.

In considering the outstanding performance for all criterions of boosting productivity, uplifting built quality, improving site safety and enhancing environment performance.

FIBRPRO® proprietary SYNTHETEC® stone grating and tree pit are certified as innovation products under the Construction Innovation and Technology Fund in 2020, which is established by the Development Bureau of Government of Hong Kong SAR and implemented by the Construction Industry Council (CIC).

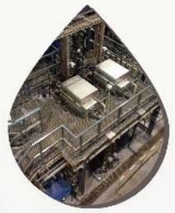
How are we able to read your minds and to realize your thoughts?
Because we are manufacturer, engineer and contractor integrated as one!

CONTENTS

DISCOVERY MILEAGE TRANSFORMATION DECADE

2010 Provision of FRP covers to Primary Sedimentation Tanks of Sha Tin Sewage Treatment Works, Drainage Services Department, Hong Kong

2011 Provision of FRP covers to Filter Beds of Sha Tin Water Treatment Works, Water Supplies Department, Hong Kong



2012 Construction of FRP units at Sludge Treatment Facilities of Nim Wan, Environmental Protection Department, Hong Kong

2013 Provision of FRP lighting signage at The Cube of Tsuen Wan, approved by Building Department, Hong Kong

2014 Provision of FPR working platforms to the Cube Oceanarium of Chengdu Jiaolong Port, China

2015 Provision of FRP formwork to the sewage conveyance tunnel across Victoria Harbour, Drainage Services Department, Hong Kong

2016 Construction of FRP dock of the Thyne Reid Boat Shed of Sydney University, Australia

2017 Construction of FRP plank to utility trough of Hong Kong - Zhuhai - Macao Bridge, Highways Department, Hong Kong

2018 Construction of FRP platform at KMG ultrapure chemicals refinement facilities at Jurong Island, Singapore

2019 Construction of FRP units at Organic Waste Treatment Facilities of Siu Ho Wan, Environmental Protection Department, Hong Kong

2020 Construction of FRP units at San Wan Sewage Treatment Works, Drainage Services Department, Hong Kong

01

FIBRPRO® profiles are pultruded FRP shapes which consist of glass rovings, continuous strand mat and surface mat or other veil materials.

The four major components are impregnated with resin and heat-formed by the pulling action of pultruders.

PROFILES

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LADDERS & RAILINGS

Being corrosion resistant, FIBRPRO® profiles are ideal substitutions for steel or even stainless steel components.

They can be assembled to form a wide range of FRP products such as ladders and rails.

FIBRPRO® Gratings are divided into three groups :

Pultruded FRP gratings are assembled of pultruded FRP profiles, with I bars, T-bars, as load bearing members, circular rods as connecting members and circular tubes as spacers between load bearing members.

[PULTRUDED FRP GRATINGS]

Moulded FRP gratings are in form of regular mesh or slot types. They are formed in large metal moulds with hand-laid glass fibres as reinforcement and resins as matrix.

[MOULDED FRP GRATINGS]

Casting Stone Grating is a precast unit fabricated using low content (about 15% by weight) of resin / polymer material as binder and quartz sand or crushed stone as aggregate, the mixed compound with designated color is filled into moulds and compacted to form panels to any shapes and architectural features through an advanced state of the art vacuum and compression process.

[CASTING STONE GRATING]

In July 2020,
FIBRPRO® Synthetec® stone grating and tree pit, as an innovation technology / product, is certified to be included in the Pre-approved list of the Construction Innovation and Technology Fund (CITF)in considering the outstanding performance in accordance with factors of boosting productivity, uplifting built quality, improving site safety and enhancing environmental protection.

發展局
Development Bureau

CONSTRUCTION INDUSTRY COUNCIL
建造業議會

CITF 建造業創科基金
CITF Pre-approved Product

04

PLATFORM & STAIRCASE

Being corrosion resistant,
FIBRPRO® profiles, gratings ladders and railings can be assembled to form comprehensive shape of platforms and staircases.

05

COVER & DECK

FIBRPRO® FRP covers are perfect solution to enclosing sewage tank, chamber, pit and channels as the major part of the odour control system. They can be gas-sealed or non-gas-sealed design.

They can also be used to from an interlocked and continuous solid surface as a decking system.

06

BAFFLE PANEL

FIBRPRO® FRP baffle panels are ideal for underwater flow control applications due to its lightweight and high strength integrated. They have a much longer life cycle than wood, concrete, steel and other traditional materials that are subject to rot and corrosion.

The lightweight panels are easy to install and can be easily removed for cleaning and

07

LOUVER

FIBRPRO® FRP louvers are assembled of pultruded FRP profiles such as S bars and C channels of the load bearing members.

They are the key element for the ventilation system of effective air control and long service life to the exposures and high windstorms.

08

FIBRPRO® FRP Rebars are manufactured using the pultrusion process. They are used as concrete rebar due to their corrosion resistance or electromagnetic transparency.

For the GeoTech and Mining industries, these same advantages are having, but with the added benefit that they can be "removed" by Tunnel Boring Machines and mining equipment when used in the "Sequential Excavation Method" or "New Austrian tunnelling Method.

REBAR

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PROTECTIVE LAYER

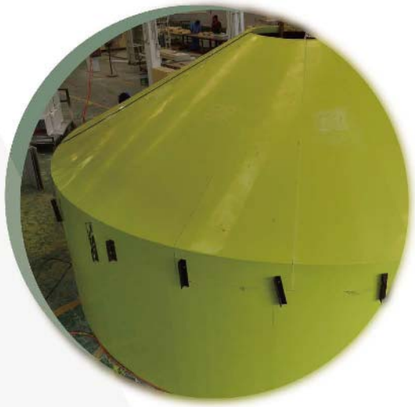
FIBRPRO® composite matrix can be used as an anti-corrosion protective layer. The most common application is to apply as a coat to steel profiles and the assembly of these components can be placed in high corrosion or extreme environments.

Due to its unique combination of fiber and resin, the protective layer can break through the limitations of general measures such as galvanizing, paint, and epoxy coating to form a larger thickness protective layer.

CONCRETING FORMWORK

FIBRPRO® FRP formwork is an economical solution for concreting specialist designs.

They fulfil the most demanding architectural requirements and have no limitation on object shapes.



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CLADDING & SIGNAGE

FIBRPRO® FRP is an ideal cladding material has aesthetic properties, durability, impact resistance, ease of installation, versatility and overall weight savings on the structure.

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FIBRPRO® composite is an ideal material for artistic sculpture products. It can be formed to Indoor decorations, outdoor furniture, theme park accessories and others almost no application restrictions.

FEATURES

GENERAL ADVANTAGES

Non-corrosive nature and impervious to chemical attack

Longitudinal tensile strength is greater than steel

Manufacturing processes are versatile and mechanical properties are adjustable

Low transverse resistance undergrinding: cutting ability as temporary reinforcement

1/4th weight of steel: reduction of dead load, easier handling for quicker construction

Transparent to magnetic fields & radio frequencies

Electrical and thermal Non-Conduction (fiberglass)

High fatigue resistance

KEY ADVANTAGES FOR APPLICATIONS IN THE CONSTRUCTION INDUSTRY

- CURRENT

Time + Labour Saving = **COST SAVING**

LIGHT WEIGHT
FRPs add limited dead load to existing construction.

EASE OF HANDLING
FRPs are saving labours to erected.

QUICK ERECTION
FRPs can be fast implemented due to modular, pre-fabricated, and light weight units.

VERSATILE TO SHAPES
FRPs have no limitation on object shapes

- FUTURE

Long Service Life = **COST SAVING**

GOOD DURABILITY
Excellent resistance to chemicals and weathering.

GENERAL DISADVANTAGES

Slightly higher initial costs.

A brittle material

Can be fire retardant, but not non-combustible

Limited experience by design professionals and contractors.

Lack of data on long-term field performance.

Absence of full spectrum of codes and specifications

FIBRPRO® INSIGHTS

DESIGN AND ENGINEERING SHALL FULLY UNDERSTAND THEMATERIALS AND MECHANICS, EXPLOIT STRENGTHS AND AVOID WEAKNESSES AND MAKE SOMETHING DIFFERENCE.

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www.fibrpro.com

(852) 3568 3418

(852) 3568 5519

wting@fibrpro.com

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