



GRP PRODUCTS

A viable alternative!



What do we offer?

Design, Supply and Installation of GRP products with full Technical Support.

All products are designed and qualified to Industry standards.



Why GRP Products?

- 50% Lighter than steel! Reduce the overall weight of structures!
- Low weight also reduces the construction costs – time and equipment needed
- Corrosion Resistant
- Reduce maintenance costs and down time!
- Ideal for Arctic, Desert as well as High Humidity areas!
- Electrically safe!



CONTENTS

- **Company Background**
- **Approved Distributor**
- **Product Description**
- **List of Products**
- **Product Offering**
- **Certifications**
- **Applications**
- **References**



COMPANY BACKGROUND

- PJNC Limited
 - Macclesfield, Cheshire, UK
 - Main Market Area : Oil & Gas, Water Treatment and Chem. Processing
 - Services
 - GRP consultancy including structural design
 - Project Management
 - GRP materials and products
 - Technical Support
 - MD - Philip Nieman - 22 years experience



COMPANY BACKGROUND

- Chinagrate Composite Structures
 - Nantong, China
 - Main Market Area : Oil & Gas
 - Services:
 - Design, manufacture and supply of products
 - Manufacturing facilities in Nantong, China and Brazil
 - MD - Steven Zhao – - 20 years experience



CHINAGRATE - NANTONG



APPROVED DISTRIBUTOR

Masterproofer Africa is an approved distributor throughout West Africa for the full range of Steel Replacement Products designed and manufactured for West Africa markets.



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PRODUCT DESCRIPTION

- **GRP = Glass Reinforced Plastic**
- **Fibres**
 - E glass fibres
- **Polymers (resins)**
 - Isophthalic Polyester
 - Vinyl Ester
 - Phenolic

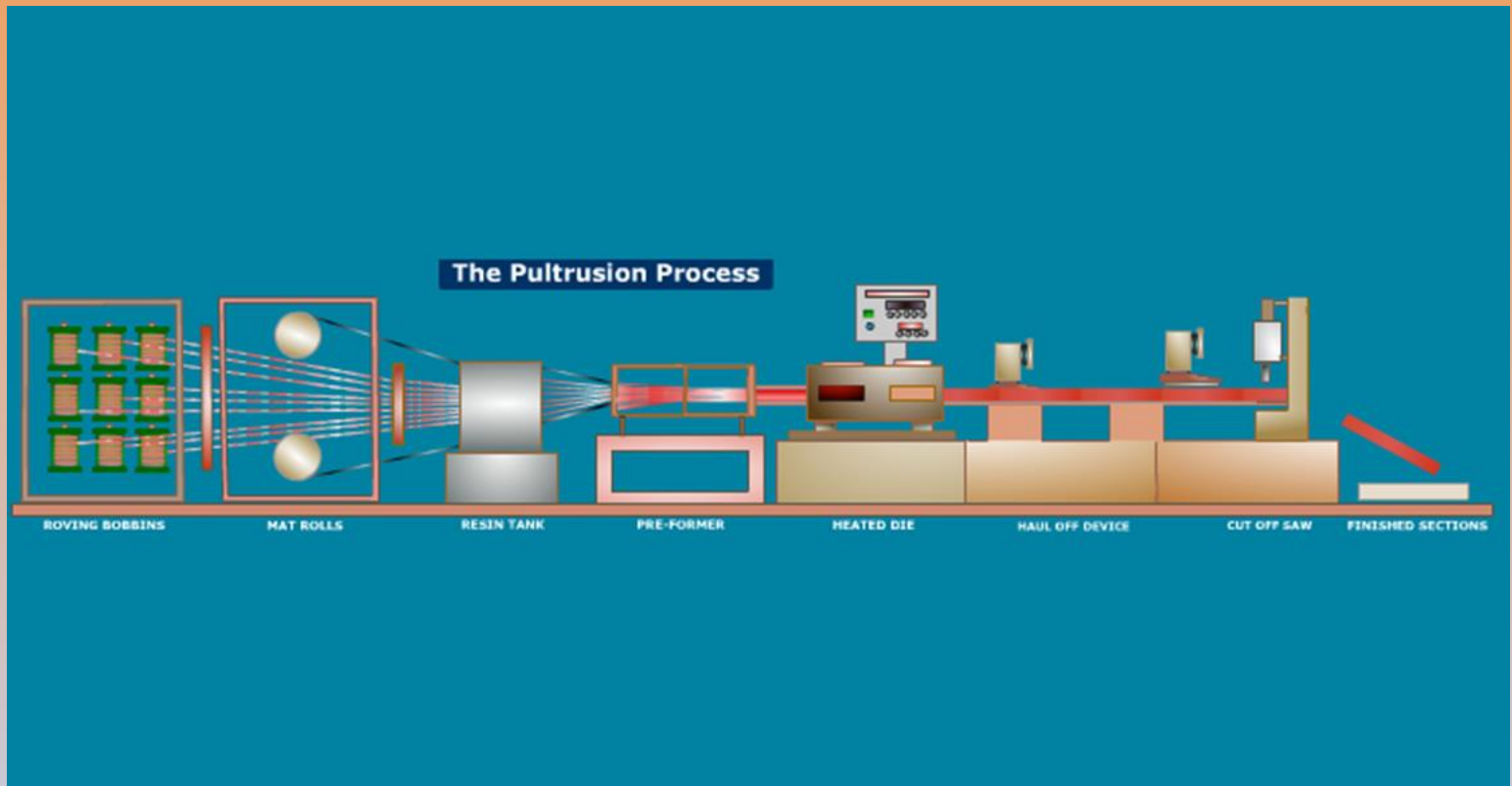


PRODUCT DESCRIPTION

- Majority of our GRP products are fabricated using Structural GRP Profiles.
- Profiles are produced via Pultrusion Process
- Pultrusion is a continuous manufacturing process to produce glass reinforced polymer products (GRP composites).
- It produces high quality, high fibre content and dimensionally stable structural profiles.



PULTRUSION



PULTRUSION



LIST OF PRODUCTS

- Structural GRP Profiles
- GRP Grating & Stair Treads
- GRP Access Ladders
- GRP Handrail
- GRP Platforms
- GRP Staircases
- GRP Cable Management
- GRP Tank Covers and Enclosures
- GRP Sub Sea Covers
- GRE Pipes



PRODUCT OFFERING

- Engineering
 - Concept design via AutoCAD or SolidWorks
 - Structural Verification via FEM
 - GA drawings for approval
 - Detail Fabrication and Installation Drawings
- Manufacturing
 - Pultrusion in China or Brazil
- Fabrication
 - GRP Fabrication in China or UK
- Installation
 - If required
- Product Support



CERTIFICATIONS

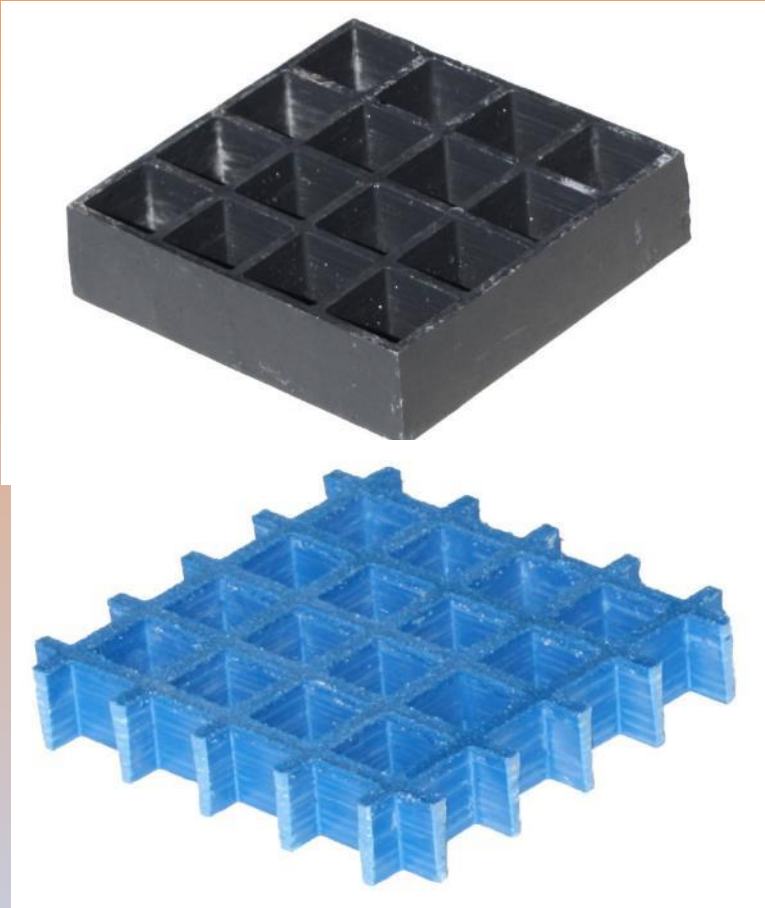
- ISO 9001:2008
- DNV Approved
- US Coast Guard Certified
- Achilles Certified
- ABS approved



APPLICATIONS



MOULDED GRATING



PHENOLIC GRATING



Conductive Phenolic Grating

- Excellent Fire Performance
- Corrosion Resistant
- Weight reduction of platform

Phenolic Grating Offshore Platform



PHENOLIC GRATING



ACCESS LADDERS



HANDRAIL



PLATFORMS



STAIRCASES



CABLE MANAGEMENT



COVERS



ENCLOSURES



Anti Slip Products

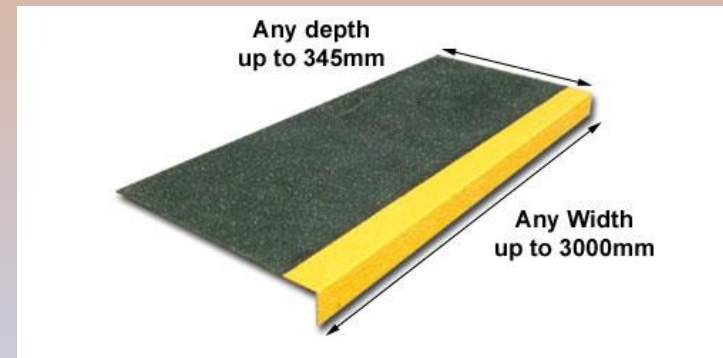


Gritted Sheet
Floor Covering

Ladder Rung Covers



Stair Tread Covers



Other GRP Products



GRP Fencing



GRP Self Closing Gates

GRP Corrugated Sheeting



SUBSEA COVERS



GRE PIPES

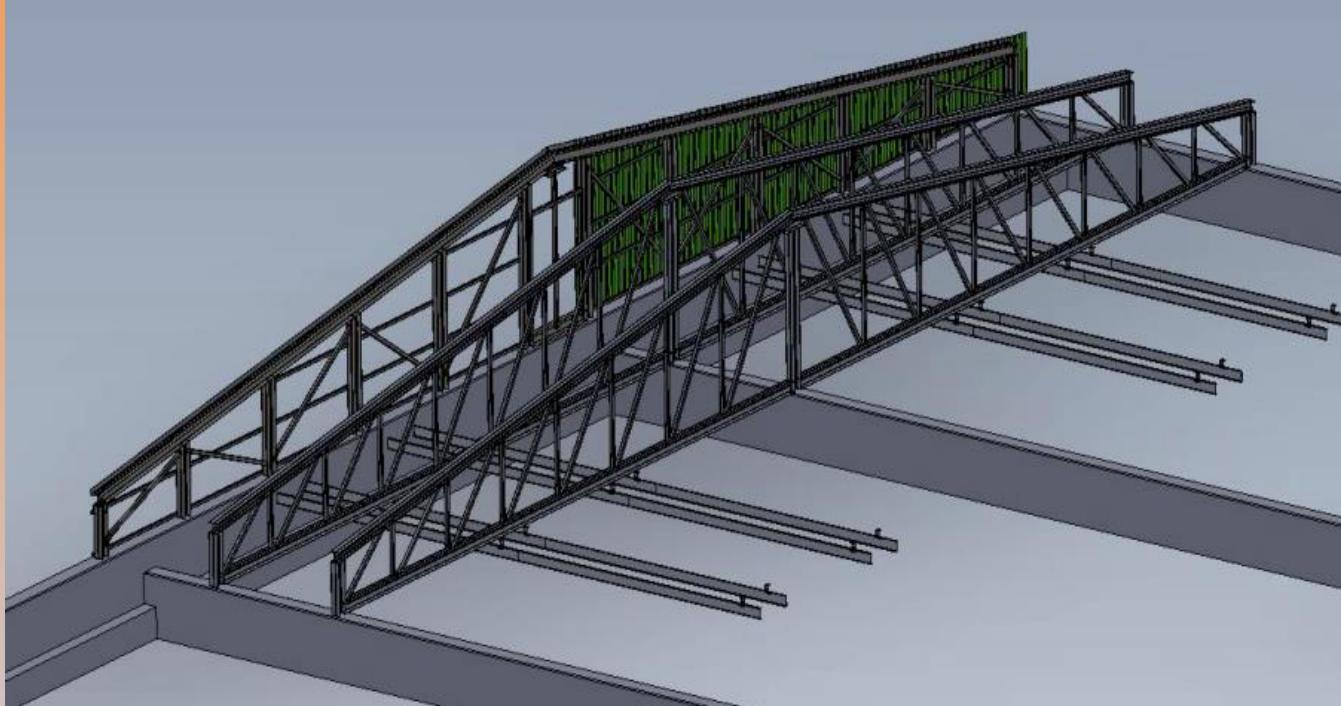


Example - Typical Project

- Description : GRP roof Structures for Sewage Treatment Plant – London
- Size of Roof : 52m long x 30m wide
- Number of roofs : 8 off
- GRP Used : All the trusses as well as the roof sheeting



Phase 1 - Design



Manufacturing - Pultrusion



Manufacturing - Fabrication



Prototype Assembly



Sub-Assemblies to Site



Installation



Installation Complete!



REFERENCES



Chinagrate USCG L2 Phenolic Grating Reference List

Owner or manager/ Rig name	Rig type	Supply Volume m2	Year Supplied	Shipyard Name	Location
ENSCO					
ENSCO 8502	Semisubmersible	800	2007	Keppel FELS	Singapore
ENSCO 8503	Semisubmersible	1,200	2008	Keppel FELS	Singapore
ENSCO 8504	Semisubmersible	1,400	2009	Keppel FELS	Singapore
Greatship					
Greatdrill Chitra	Jackup	800	2009	Keppel FELS	Singapore
Maersk Drilling					
Maersk High Efficiency No.4	Jackup	350	2008	Keppel FELS	Singapore
Maersk Semi Tbn3	Semisubmersible	3,200	2008	Keppel FELS	Singapore
Mermaid Drilling					
KM-1	Tender	800	2008	Kencana H.L. Engineering	Malaysia
Noble					
Noble Danny Adkins	Semisubmersible	4,500	2009	Jurong Shipyard Pte Ltd	Singapore
Petrobras					
PV Drilling II	Jackup	600	2009	Keppel FELS	Singapore
PV Drilling III	Jackup	800	2009	Keppel FELS	Singapore
Queroz Galvao					
Alpha Star	Semisubmersible	1,100	2008	Keppel FELS	Singapore
Gold Star	Semisubmersible	1,800	2009	Keppel FELS	Singapore
Seadrill					
West Vencedor	Tender	2,000	2009	Keppel FELS	Singapore
T-12	Tender	800	2008	Malaysia Marine & Heavy Engineering	Malaysia
Skeie Drilling					
SKDP1	Jackup	900	2008	Keppel FELS	Singapore
SKDP2	Jackup	1,100	2009	Keppel FELS	Singapore
SKDP3	Jackup	900	2009	Keppel FELS	Singapore
Transocean					
Development Driller III	Semisubmersible	1,600	2008	Keppel FELS	Singapore
12 Jackup & Semi	Jackup & Semi	24,000	2012	Keppel FELS	Singapore
China Markets					
National Oil Well	3 Semi	4,800	2011	National Oil Well	China
National Oil Well	12 Semi	24,000	2012	National Oil Well	China
Ruffles	2 Jackup	5,000	2011	Yantai Ruffles	China
Cosco	Various Semi / Jackup	4,000	2011	Dalian, Nantong Cosco	China
Cosco	Various Semi / Jackup	18,000	2012	Dalian, Nantong Cosco	China
Guangzhou Shipyard	2 Tenders	6,000	2011	Guangzhou Shipyard	China
Oil & Gas					
Woodside Angel Gas	Topside	3,000	2007	Malaysia Marine & Heavy Engineering	Malaysia
Maersk Oil Qatar	Topside	12,000	2007	Sime Darby Engineering	Malaysia
Shell Gumusut Kakap	Hull	4,000	2008	Malaysia Marine & Heavy Engineering	Malaysia
Maersk Oil Qatar	Topside	16,000	2009	National Petroleum Construction Co.	UAE
Shell Gumusut Kakap	Topside	20,000	2010	Malaysia Marine & Heavy Engineering	Malaysia
ExxonMobile	Various replacement	5,000	2011	ExxonMobile	Malaysia
ExxonMobile	Various Replacement	15,000	2012	ExxonMobile	Malaysia



PJNC Limited - Reference List

Project	Customer	End Customer	Country	Year	Products
Mogden STW	Black & Veatch	Thames Water	UK	2012	GRP Covers
Crankley Point	Nomenca	Severn Trent	UK	2013	GRP Covers
Alcester STW	Costain	Severn Trent	UK	2012	GRP Covers
Roughill Woods	Nomenca	Severn Trent	UK	2013	GRP Covers
Llanelli STW	Welsh Water	Welsh Water	UK	2012	GRP Covers
Quad 204	DynaMacc Eng	BP	SINGAPORE	2013	GRP Structures
Seafield STW	Veolia	Scottish Water	UK	2013	GRP Covers
UHDE	VitaCure	SASOL	SOUTH AFRICA	2013/14	GRP Ext Hoods
Gudrun	Stangeland	Aibel	NORWAY	2012	GRP Access Structure

