



Dextra



SPEAKER

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General Manager
Engineered Bars
Dextra Group

Use of Composite & Steel Materials and Precast Technology in Marine Structures



Sofitel Philippine Plaza Manila, Philippines
Tuesday 19 to Thursday 21 March 2024



Dextra

Leader in design and manufacturing of engineered solutions

Over 40 years of experience on the world's most prestigious projects



Integrated engineering
& manufacturing
products & equipment



80+ fabricators &
distributors worldwide



International
& local contractors



Landmark projects:
high-rise, infrastructure
and energy projects



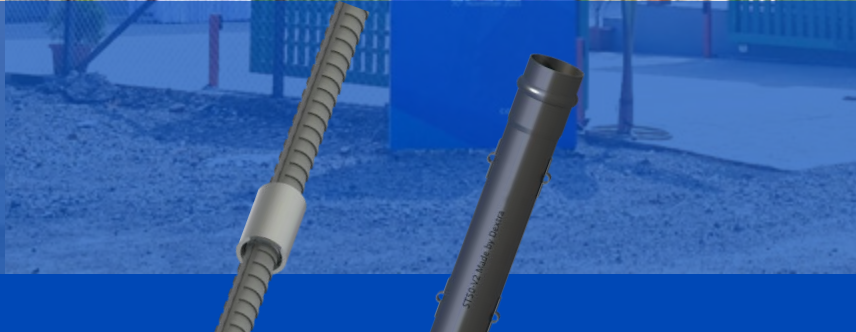
Compliance with
international standards,
approved by major
consultants

GLOBAL PRESENCE



89 Distributors - 16 Offices - 3 Factories

MANUFACTURING CAPABILITIES



INNOVATIONS FOR PORTS INFRASTRUCTURE AND PERFORMANCE



Speed of execution & increase
in productivity



Sustainability & Durability

INNOVATION

Applications
&
Materials

Production processes



Quality & Safety

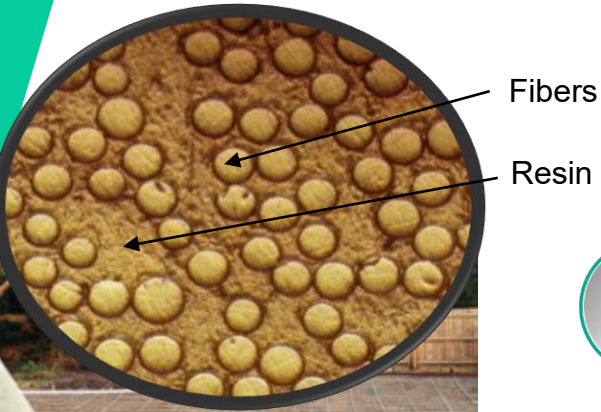


Modularity

DEXTRA FIBRE REINFORCED PRODUCTS



The Perfect Alternative To Steel



- Stronger & Lighter than steel**
- 2x the tensile strength of steel
 - 1/4 weight of a steel bar of same diameter



- Non-corrosive, non-conductive**
- Material doesn't corrode and offer high resistance to chlorides and alkali.
 - Particularly suitable for environments exposed to water, salt, & humidity.
 - Non-conductive. It's the perfect reinforcement solution for high voltage currents and magnetic fields.



- Simplified Installation**
- Delivered in straight bars up to 11.8m or in coils.
 - Labor required for installation reduced by 2x to 3x.



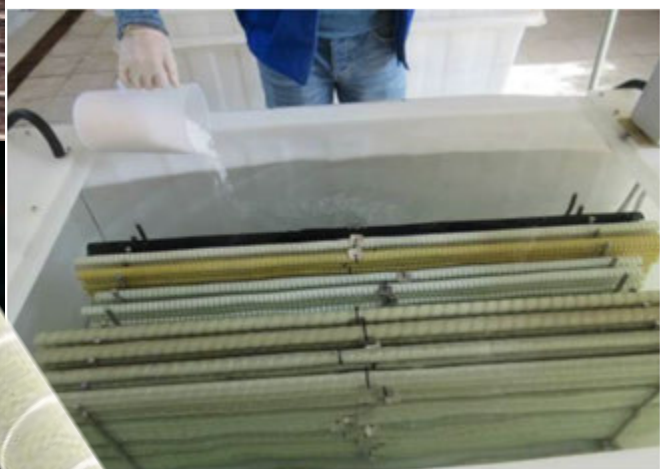
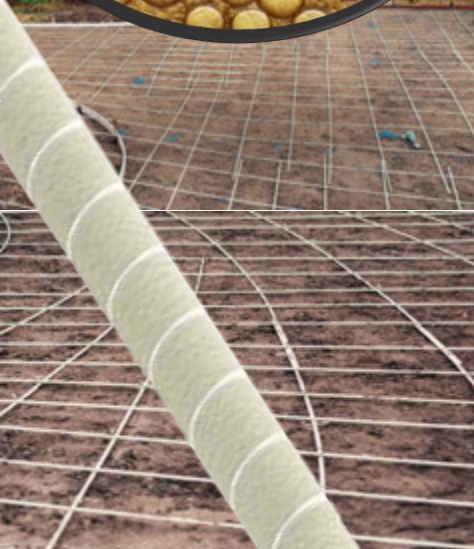
Material is safe & easy to handle, requiring much less labor for installation, generating both time & money saving.



Durable material, allowing to design for a longer lifetime of the structure. As no maintenance nor repair work is needed, ASTEC generates savings during the whole project life.



Sustainable material, with significantly less energy required and CO₂ emission, both at production stage and for its transportation & installation.



MARINE APPLICATIONS



Dry dock facia rehabilitation, Hawaii, USA



Elizabeth Quay, Australia



Jizan Flood Mitigation Channel, Saudi Arabia



Dock of Aramco, KSA

Construction of Quay & Jetty



Outer skin of wall in contact with sea-water

MARINE APPLICATIONS

Storage of Oil & Gas at Port Terminal



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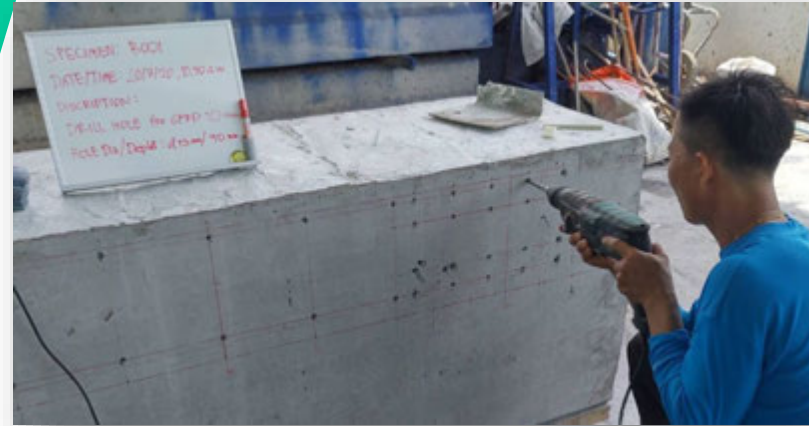


Dry-Dock Rehabilitation



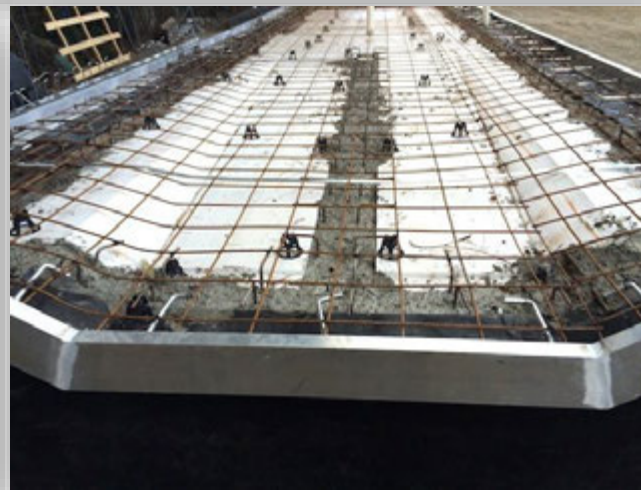
Grid of 19mm (#6) GFRP bars
doweled and epoxied in place

Jetty Repair / External Strengthening



Concrete with GFRP dowels
& post-tensioned steel bar

Platforms and Floating Structures



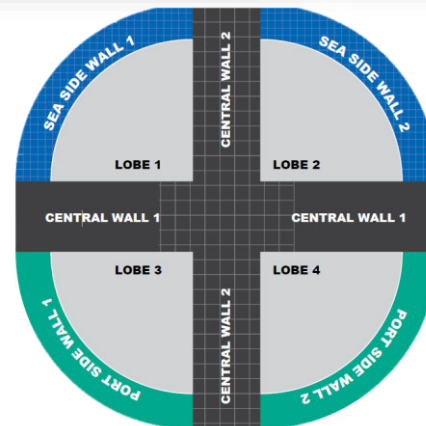
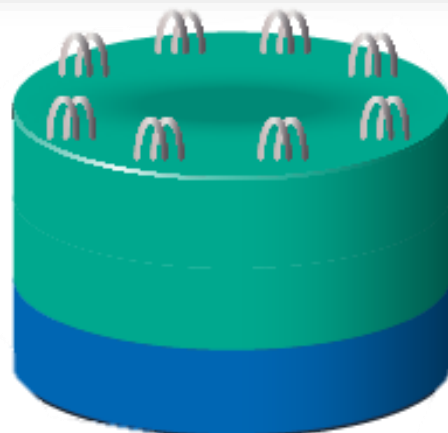
Precast and Composite
Materials at glance

Sea Walls



Precast and Composite
Materials at glance

Caissons Structures



Dextra couplers = splicing systems designed for the connection of concrete reinforcing bars



MARINE TIE BARS



Short installation time thanks to reduced assembly scope



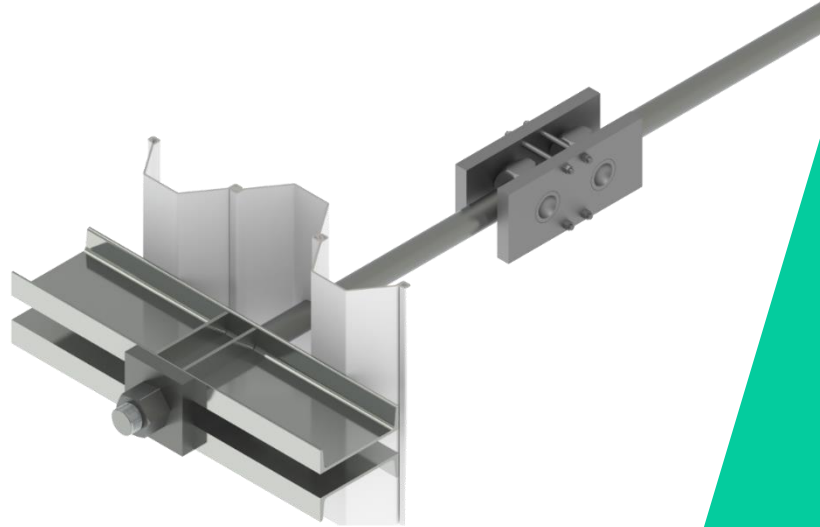
Overall efficiency in detailed design phase



Control over delivery sequence



Cost saving



Steel Piles



Diaphragm Wall



Tubular Piles



Increase steel grades, reduce diameters and go “lighter”

For a given working load of 4,400 kN







Cost saving

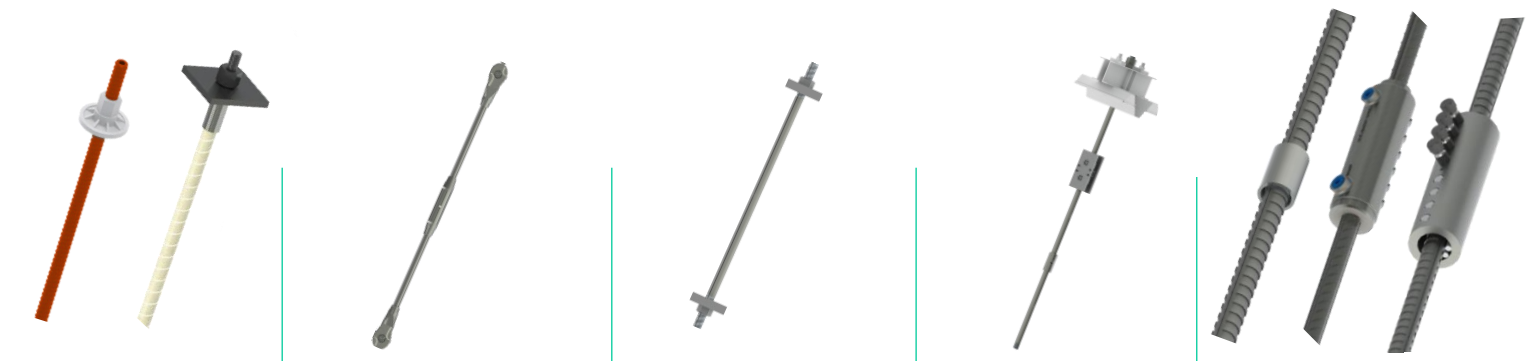
Grade	500	700
Diameter	110 mm	95 mm
Weight per 1m	75 Kg	56 Kg



Up to 25-30% savings
for the contractor with Grade 700

CAD & BIM DETAILING TOOLS

-  Get fast and precise 2D & 3D design
-  Easy to use
-  Up-to-date libraries
-  Dedicated support



Ground Engineering Tension Rods PT Bars Marine Tie Bars Rebar Couplers

		✓	✓	✓	✓
		✓	✓	✓	✓
		✓	✓	✓	✓
	✓				



ESG RESPONSIBILITY



REDUCE

REUSE

RECYCLE

ESG

ENVIRONMENTAL, SOCIAL & GOVERNANCE

Environmental Policy

**COMPLIANCE
WITH LAWS &
REGULATIONS**

**POLLUTION
PREVENTION**

**CONSUMPTION
& WASTE
REDUCTION**

**CONTINUOUS
IMPROVEMENT**

Identify and evaluate the requirements of laws and regulations, and implement them within the organization

Identify and control possible sources of pollution

Improve the comprehensive utilization rate of materials, minimize wastes, and save energy resources

Identify opportunities for improvement and build on them

01 IFC



02 ISO 14001



03 LCA





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THANK YOU

