

A decorative icon for the Transport Middle East event, consisting of a circular pattern of interlocking geometric shapes in blue and gold.

TRANSPORT MIDDLE EAST



SPEAKER

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General Manager
Engineered Bars
Dextra Group

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

InterContinental Abu Dhabi, United Arab Emirates
Tuesday 23 to Thursday 25 January 2024



We are the global leader
in mechanical couplers

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

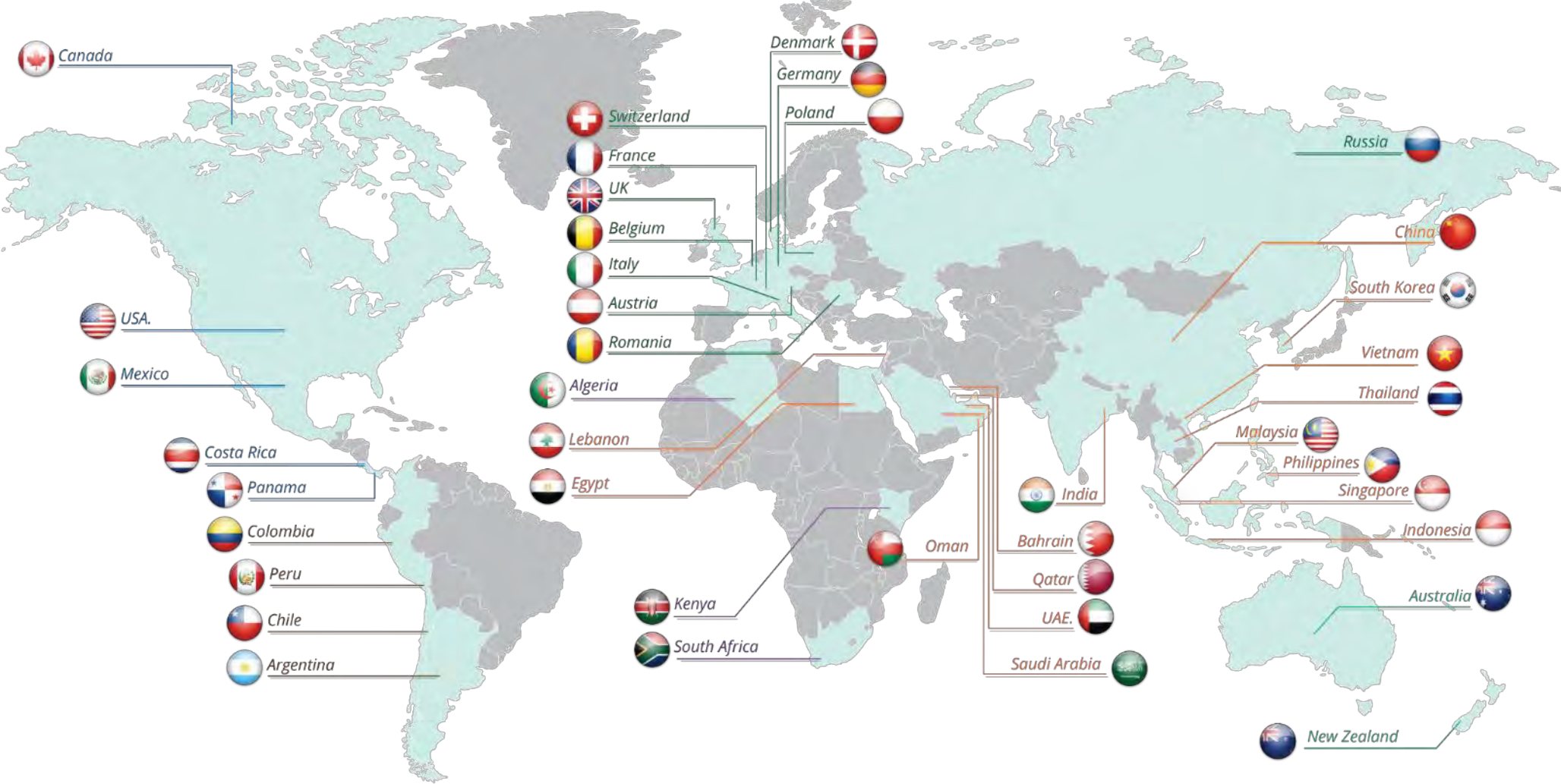


Landmark projects:
high-rise, infrastructure
and energy projects



Compliance with
international standards,
approved by major
consultants

Global Presence



89 Distributors - 16 Offices - 3 Factories

Manufacturing Capabilities



Bangkok, Thailand

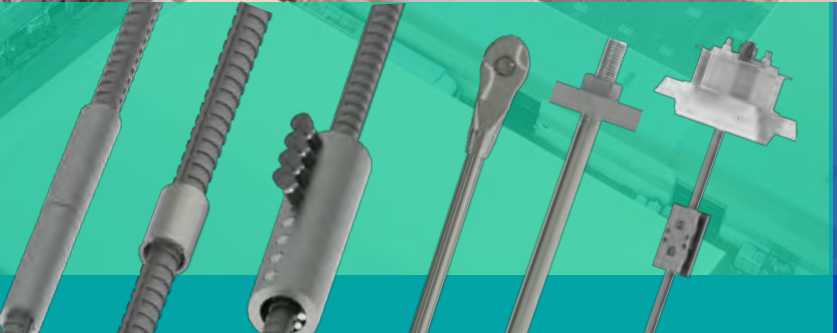


Mumbai, India

*New factory inauguration
in December 2023!*



Guangzhou, China





Speed of execution & increase
in productivity



Sustainability & Durability

INNOVATION

Applications
&
Materials

Production processes



Quality & Safety



Modularity

DEXTRA Fiber Reinforced Products



Fibers

Resin



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



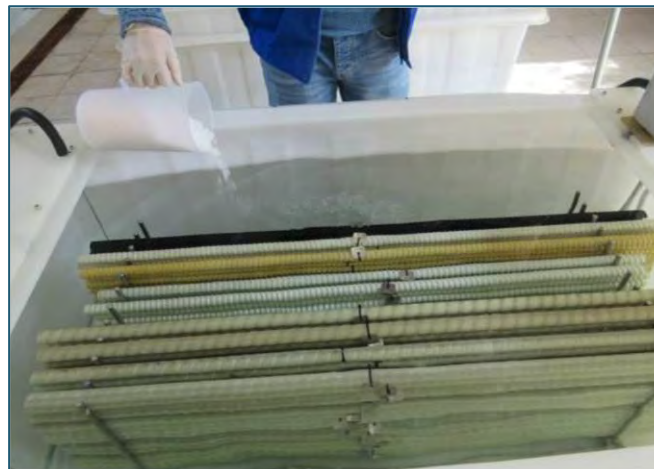
Non-corrosive, non-conductive

- 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 & CO₂ emission, both at production stage and for its transportation & installation.

Marine Applications



Dry dock facia rehabilitation, Hawaii, USA



Dock of Aramco, KSA



Elizabeth Quay, Australia



Jizan Flood Mitigation Channel, Saudi Arabia

Marine Applications

Construction of Quay & Jetty



Dextra



Outer skin of wall in contact with sea-water

Marine Applications

Storage of Oil & Gas at Port Terminal



Dextra



2018 05 23



Marine Applications

Dry-Dock Rehabilitation



Dextra



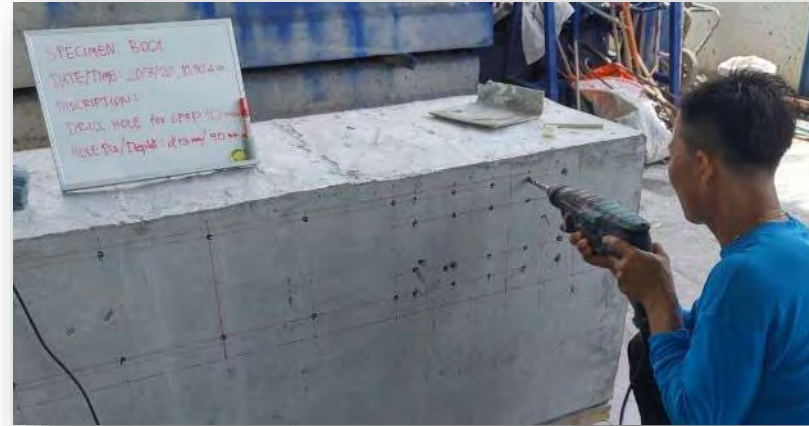
**Grid of 19mm (#6) GFRP bars
doweled and epoxied in place**

Marine Applications

Jetty Repair / External Strengthening



Dextra



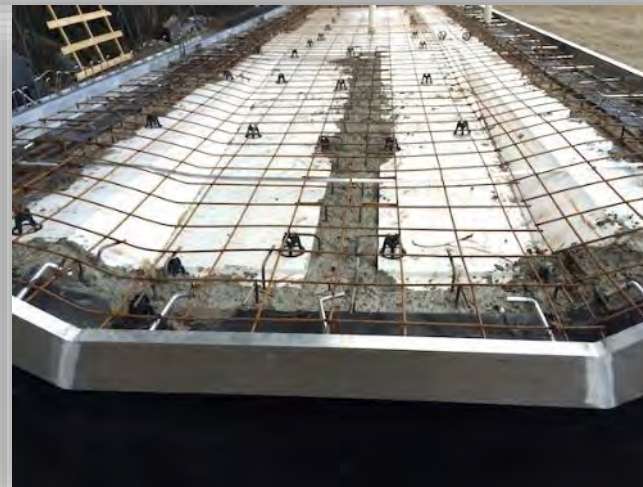
**Concrete with GFRP dowels
& post-tensioned steel bar**

Marine Applications

Platforms and Floating Structures



Dextra



**Precast and Composite
Materials at glance**

Marine Applications

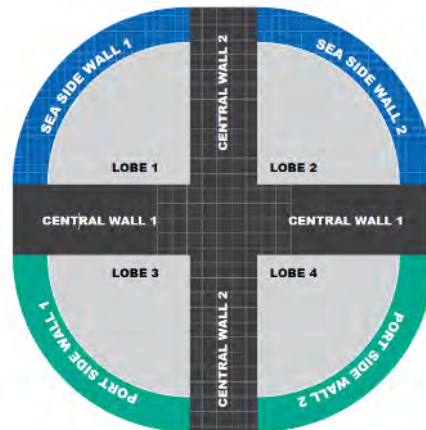
Sea Walls



**Precast and
Composite Materials
at glance**

Marine Applications

Caissons Structures



Dextra Couplers = splicing Systems designed for the connection of concrete reinforcing bars



DEXTRA Marine Tie Bars



Short installation time thanks to reduced assembly scope



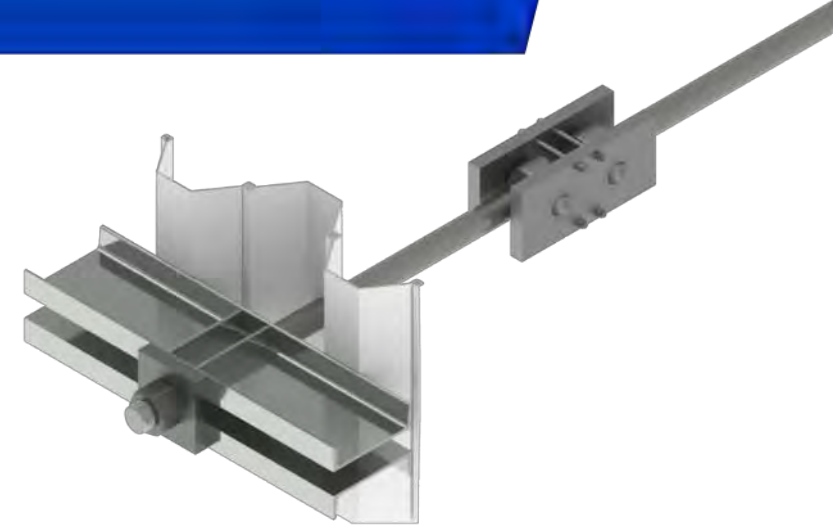
Overall efficiency in detailed design phase



Control over delivery sequence



Cost saving



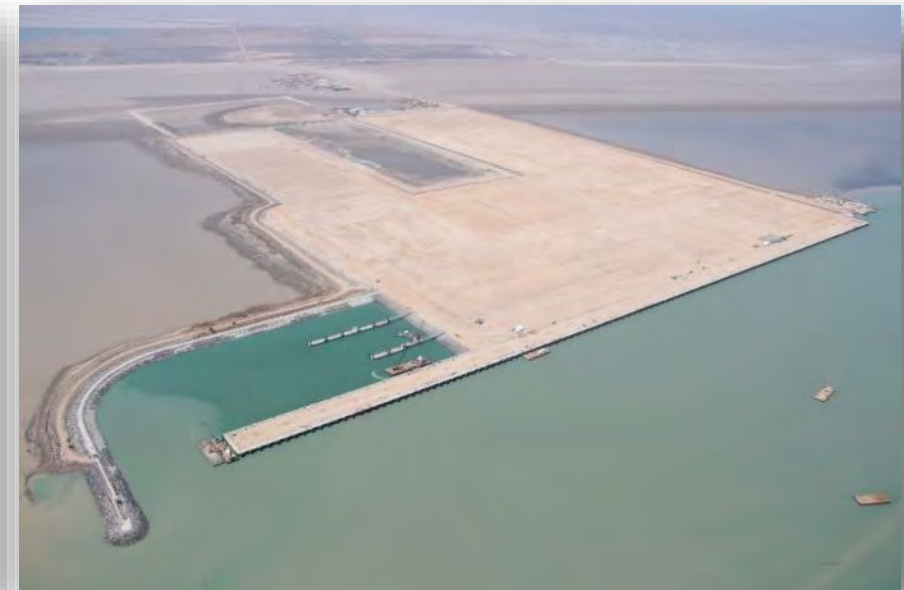
Steel Piles



Diaphragm Wall



Tubular Piles



Increase steel grades, reduce diameters and go
"lighter"

For a given working load of 4,400 kN



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

ESG Responsibility



A hand holding a glowing globe with the text **ESG** and **ENVIRONMENTAL, SOCIAL & GOVERNANCE** overlaid. The globe is surrounded by various icons in circular frames: a factory, a hand holding a leaf, a wind turbine, a globe, a recycling symbol, two coins, a group of people, a classical building, and two people with an equals sign. The background is a blurred green forest.

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

Producing "smarter"



01 IFC



02 ISO 14001



03 LCA





Dextra



THANK YOU

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www.dextragroup.com



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www.linkedin.com/company/dextra-group



www.youtube.com/dextragroup