



**SPEAKER**

**Julien Raybaud-Gines**

General Manager  
Bar Systems  
Dextra Group

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

The Landmark Bangkok, Thailand  
October 31 – November 2, 2023

# Company Introduction



Established 40 years ago in 1983, Dextra is a leading manufacturer and distributor of **engineered construction products** for the building and civil industries.

For over 15 years, Dextra has been selling a **comprehensive range of steel bar systems** suitable for a variety of concrete, ground engineering and structural steelwork applications.

The combination of our in-house expertise and design capability with modern manufacturing facilities has allowed us to supply to major construction projects such as **Laem Chabang**.

We are moving forward to become a **global leader in engineered solutions** for the construction industry, providing high added value in terms of **quality, safety, and service**.





[Dextra Corporate Video](#)

## 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



80+ Distributors - 12 Offices - 3 Factories

# Manufacturing Capabilities



Bangkok, Thailand



Mumbai, India



Guangzhou, China





Speed of execution & increase  
in productivity



Quality & Safety

## INNOVATION

Applications  
&  
Materials

Production processes

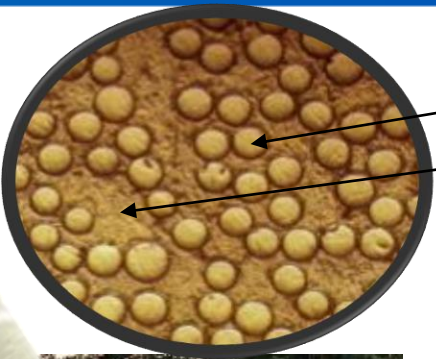


Sustainability & Durability



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



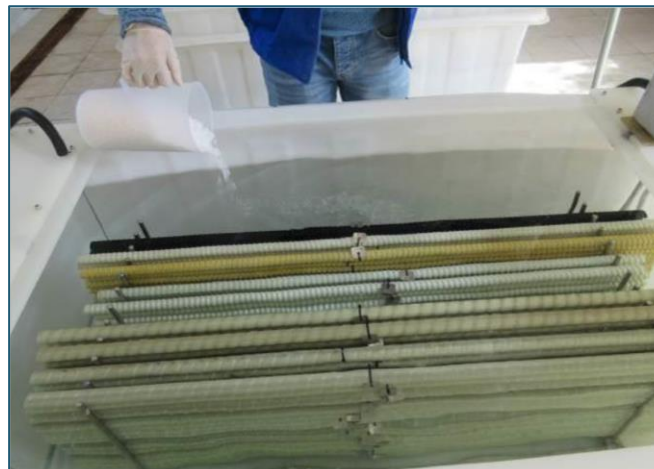
### Non-corrosive, non-conductive

- 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 & CO<sub>2</sub> 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



2018 05 23



# Marine Applications

## Dry-Dock Rehabilitation



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

# Marine Applications

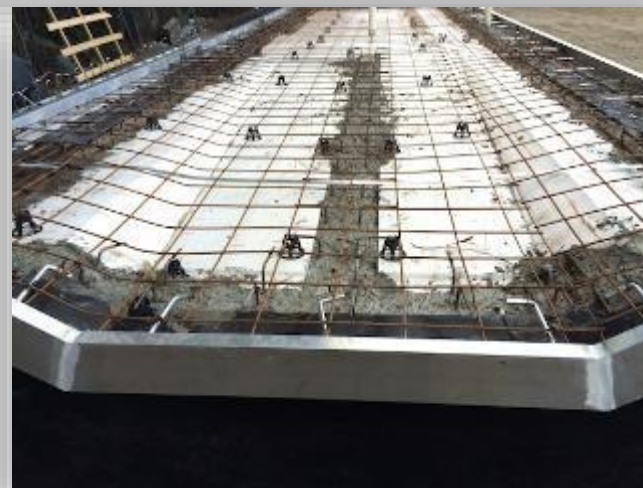
## Jetty Repair / External Strengthening



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

# Marine Applications

## Platforms and Floating Structures



**Precast and Composite  
Materials at glance**

# Marine Applications

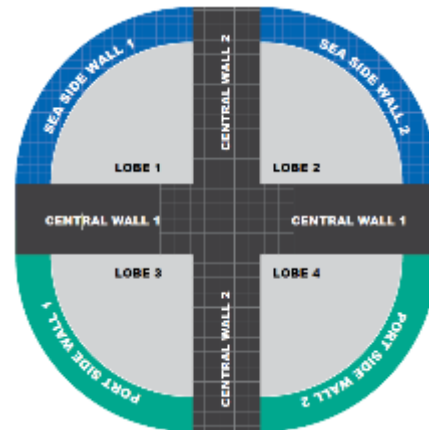
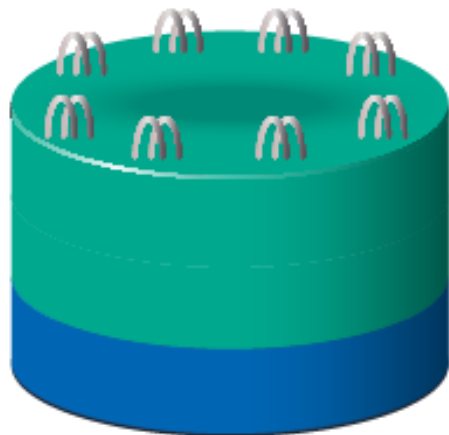
## Sea Walls



**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*



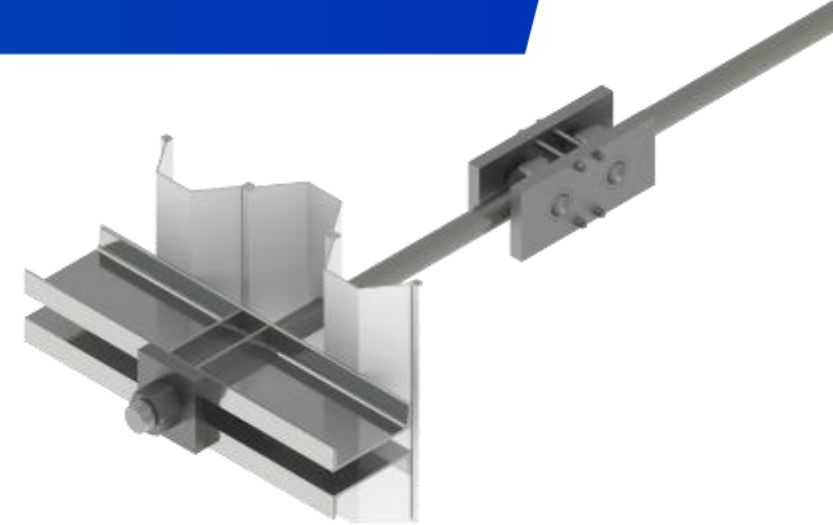
*Overall efficiency in detailed design phase*



*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



## 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





Laem Chabang Seaport, Thailand

# THANK YOU

Name: Julien Raybaud-Gines  
E-Mail: [jrgines@dextragroup.com](mailto:jrgines@dextragroup.com)

-  [www.dextragroup.com](http://www.dextragroup.com)
-  [www.facebook.com/dextragroup](http://www.facebook.com/dextragroup)
-  [www.linkedin.com/company/dextra-group](http://www.linkedin.com/company/dextra-group)
-  [www.youtube.com/dextragroup](http://www.youtube.com/dextragroup)