

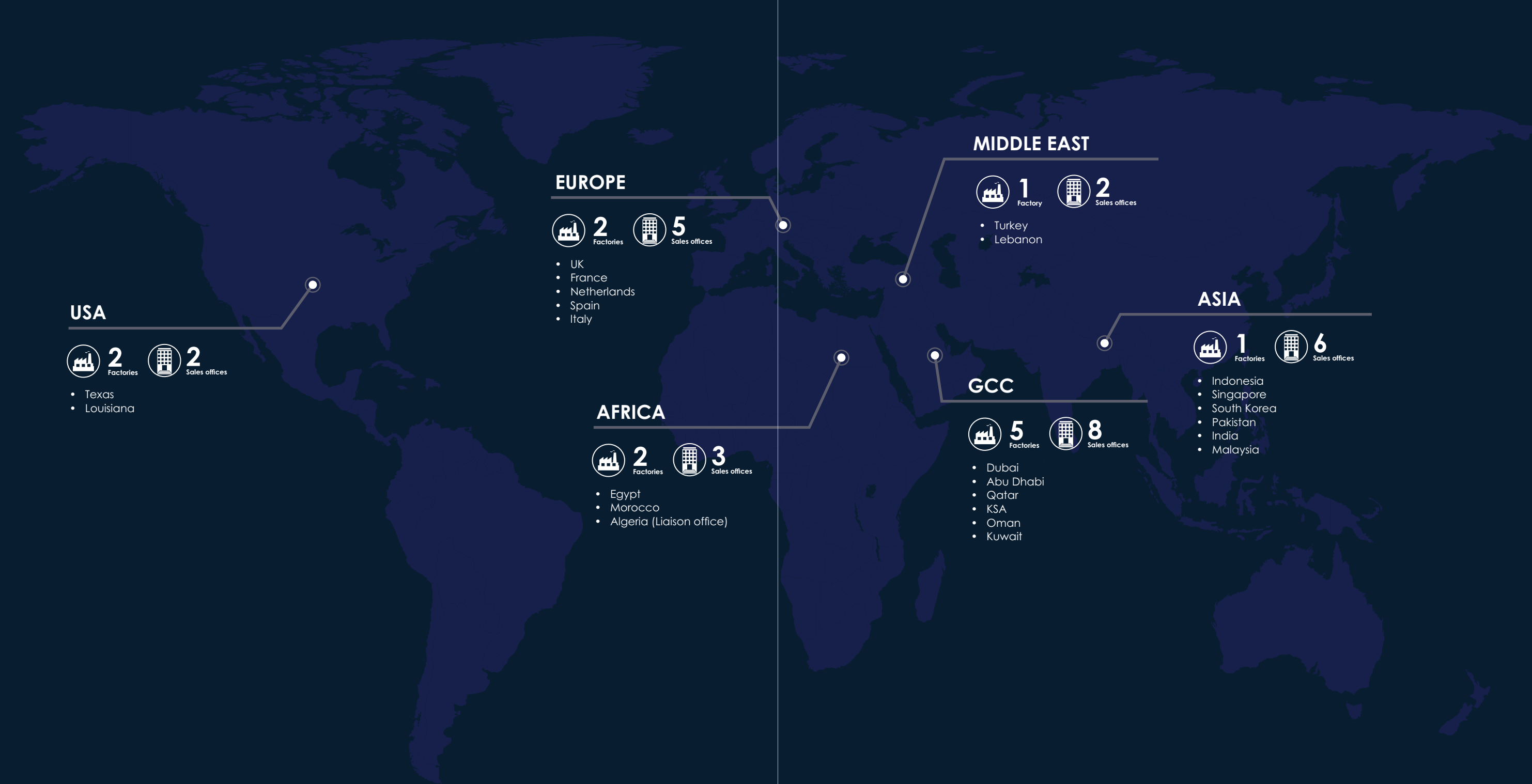
# Composite Piping Solutions





Connecting Life.  
Delivering the Future.

# Complete Composite Fiberglass Piping Solutions



3,000+ Employees

26 Sales Offices

400+ Customers

50+ Countries

13 Factories

53 Production Lines

681,000 sqm Build-up Area

7,500 km/year

200+ Running Contracts





Year 1971  
Dubai, United Arab Emirates

## HISTORY

Established in 1984 in Dubai, U.A.E., Future Pipe Industries has built a trusted reputation for delivering engineering excellence, and a commitment to creating value for our customers. Today our operations are worldwide with manufacturing facilities and sales offices throughout the Middle East, Africa, Europe, North America and Asia.

Future Pipe Industries is a leader in designing, manufacturing and installing bespoke composite pipe solutions for the Oil & Gas, Chemical & Industrial, Water & Infrastructure, Marine & Offshore industries.

Enhancing our extensive product portfolio, we offer comprehensive solutions including system design and engineering services, project management, technical support, field supervision and training.

We are driven by creating value for our end users through our corporate purpose, 'working together to deliver water and energy to the world in the most efficient and sustainable way.'

Our facilities are state of the art. Advanced manufacturing, testing and process control systems drive 53 production lines spread over 681,000 m<sup>2</sup>. We serve more than 400 customers and have installed over 190,000 kilometers of pipe worldwide.



*Delivering Water and Energy to the world, in the most efficient and sustainable way.*



#### OUR VISION

To elevate composites to a material of choice and position Future Pipe Industries as No.1 in the markets in which we compete.

#### OUR MISSION

We will deliver our Vision by;

- Becoming the preferred supplier to all of our key customers - we know what they want and we are easy to do business with
- Being at the forefront of technology & service innovation in composite pipe products
- Investing in building the people capabilities needed to win
- Playing our role as a responsible corporate citizen in all we do



## WHAT WE DO

Future Pipe Industries offers the largest portfolio of composite pipe system products, each designed and manufactured using the latest technology and production processes.

By perfecting the design and manufacturing process of thermosetting resins and glass fiber reinforcements, we provide a range of products with unique performance capabilities, enabling them to be used in a variety of applications across multiple industries.

Future Pipe Industries product range can withstand high-temperatures of up to 121 °C (250 °F), intense pressures of up to 3'500 PSI and have the capacity to transport highly corrosive fluids. Our pipes are available in diameters ranging from 25 mm (1") to 4000 mm (160").

Key benefit of our fiberglass pipes is that they offer a long design life solution to all sectors including Oil & Gas, Chemical & Industrial, Water & Infrastructure and Marine & Offshore pipe requirements against other more traditional pipe materials.





# Products

Our products are used across a wide range of applications; from oil refineries, petrochemical plants, district cooling systems, water transmission and distribution networks to CO<sub>2</sub> injection and recovery lines, marine piping and firefighting networks.



Products

# GRE

GLASS  
REINFORCED  
EPOXY



FLOWSTRONG® YELLOWBOX®



FLOWSTRONG® GREENBOX®



WELLSTRONG® REDBOX®



WELLSTRONG® BLUEBOX®



WAVISTRONG™



WAVISTRONG™ OIL AND GAS



WAVISTRONG™ INDUSTRIAL



WAVISTRONG™ FR



WAVISTRONG™ H<sub>2</sub>O



WAVISTRONG™ FIBERMAR™



WAVISTRONG™ FIBERMAR™ FR



WAVISTRONG™ FIBERTUBES



Products

# GRP AND GRV

GLASS  
REINFORCED  
POLYESTER AND  
VINYL ESTER



FIBERSTRONG™



FIBERSTRONG™ INDUSTRIAL



FIBERSTRONG™ H<sub>2</sub>O



FIBERSTRONG™ SLIPLINING



FIBERSTRONG™ JACKING



FIBERSTRONG™ TANKS



FIBERSTRONG™ STRUCTURAL  
MANHOLES AND LINERS



FIBERBOND®



FIBERBOND® FR and  
FIBERBOND® JF



Products

# TCP

THERMOPLASTIC  
COMPOSITE PIPE

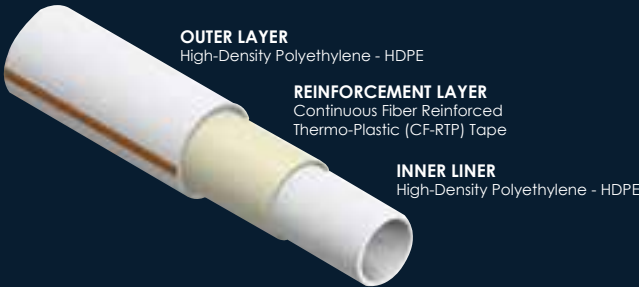


Flexstrong™ is a spoolable, non-corrosive, fully bonded Thermoplastic Composite Pipe (TCP), suitable for use across a range of applications in the Oil & Gas and Water industries.

Produced by Future Pipe Industries, it is the latest technology in the market and combines a thermoplastic High-Density Polyethylene (HDPE) liner, reinforced by a helically wrapped tape containing continuous fiber (uni-directional) in a HDPE matrix, and protected by a thermoplastic outer coating (or "jacket"). All three layers are melt-fused together ensuring a faultless bond. This results in a very robust, flexible light and corrosion resistant pipe. This spoolable product is fully bonded and resists permeation and liner collapse making it an effective solution for highly corrosive Oil & Gas applications.

Flexstrong™ is manufactured in continuous lengths up to 1000m/3280ft (depending on pipe diameter) The pipe is flexible and is spooled onto reels which are easy and efficient to transport. The reels allow quick and easy installation, reducing installation costs by up to a third in comparison to other piping materials.

It is available in a range of diameters, temperature rating and pressure capacities to suit individual application needs and to create value for projects and end users.



Our Thermoplastic Composite Pipe technology is currently in operation at our Houston plant in the US. We expanded our plant to accommodate the significant machinery required to produce this leading technology.





## Composite Fiberglass Technology Advantages

### Durable and Lightweight

Offers a high strength-to-weight ratio meaning lower transportation and installation costs compared to materials such as steel or concrete.



### Cost Effective and Efficient

Provides a better hydraulic performance than steel, ductile iron and concrete, significantly reducing operating costs. Composite pipes are cost effective.



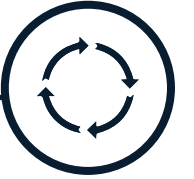
### Environmentally Friendly and Sustainable

Low energy is required for the production of composite pipes. Composite pipes have a smooth interior surface, needing less energy for the fluids to circulate.



### Longer Life Cycle

Increased durability extends the system life cycle significantly beyond what is offered by other alternative materials. Composites can last over 50 years making our pipes economical.



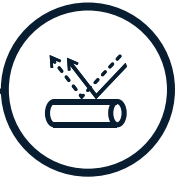
### Versatile and Accommodating

Accommodates a variety of assembly options and complex configurations due to its versatility, capacity to withstand high pressures, temperatures and loads as well as intense chemical resistance parameters.



### Anti-Corrosive and Resistant

Composites offer excellent resistance against corrosive environments including soils, saltwater, H<sub>2</sub>S and chemical applications. Composite pipes last longer.







# Sectors

We focus on four major Sectors: Oil & Gas, Chemical & Industrial, Water & Infrastructure, Marine & Offshore.





## OIL & GAS

World energy demand continues to rise and the Oil & Gas industry is increasing exploration and production, both onshore and offshore.

The non-corrosive characteristics of fiberglass piping systems position them as the materials of choice for efficient transportation across a wide range of applications in all pressures, temperatures, and mediums.

We offer an extensive portfolio of bespoke products and solutions which can meet extreme environmental requirements, including the ability to withstand pressures up to 240 bar (3500 psi) and temperatures up to 121°C (250°F).

### APPLICATIONS:

- Flow Gathering
- Water Injection
- Downhole Tubing and Casing
- Transmission Lines
- Battery and Header Piping

### PRODUCT RANGE:

- Flowstrong® YellowBox®
- Flowstrong® GreenBox®
- Wellstrong® RedBox®
- Wellstrong® BlueBox®
- Flexstrong™
- Wavistrong™ Oil & Gas





## CHEMICAL & INDUSTRIAL

Economic growth fuels the demand for major industrial developments.

FPI Composite Pipes are used across numerous industrial facilities such as Petrochemical Complexes, Refineries, Power and Desalinations Plants, Fuel Handling, and Storage Tanks.

Our products are used extensively by the Industrial sector, for a wide range of applications such as circulating water, process piping, chemical lines, cooling systems, utility piping, fire water, mining (slurries), and dredging.

### APPLICATIONS:

- Refineries and Plant Piping
- Petrochemicals
- Power and Desalination
- Fuel Handling
- Storage Tanks

### PRODUCT RANGE:

- Wavistrong™ Industrial
- Wavistrong™ FR
- Fiberstrong™ Industrial
- Fiberstrong™ Tanks
- Fiberbond®
- Fiberbond® FR
- Fiberbond® JF





## WATER & INFRASTRUCTURE

Future Pipe Industries provides a range of piping solutions for use in the Water Industry.

Growth, urbanization and infrastructure expansion means we need to manage water in an innovative, effective and sustainable way. FPI Composite Pipes are safe, efficient, reliable, and long-lasting, making them ideal for use across the Water Industry.

We work with public water utility authorities, municipalities, infrastructure developers as well as Contractors providing them with sustainable solutions.

### APPLICATIONS:

- Water Transmission
- Water Distribution
- Irrigation
- Storm Water Systems
- Sewer and Drainage

### PRODUCT RANGE:

- Wavistrong™ H<sub>2</sub>O
- Fiberstrong™ H<sub>2</sub>O
- Fiberstrong™ Sliplining
- Fiberstrong™ Jacking
- Fiberstrong™ Tanks
- Fiberstrong™ Structural Manholes and Liners





## MARINE & OFFSHORE

The Marine & Offshore industry has long provided our world with essential services in transportation and energy.

Exhibiting excellent corrosion resistant properties, FPI products are an ideal solution for marine vessels thereby reducing the overall cost of ownership and operation due to lower installation costs, lightweight nature, and ease of handling.

Our pipes meet Classification Societies' rules and IMO regulations, and are eco-friendly and pose no risk to the environment.

FPI Products are used extensively by the Marine & Offshore sector for a range of applications such as Top Side Piping, Firewater, Seawater, Ballast, Scrubber, Bilge, Sprinkler, Water Lines, and Chemical injection.

### APPLICATIONS:

- Ballast, Scrubber, and Bilge
- Fire Water and Sprinkler Lines
- Seawater Piping
- Offshore Chemical Injection
- Topside Piping

### PRODUCT RANGE:

- Wavistrong™ Fibermar™
- Wavistrong™ Fibermar™ FR
- Wavistrong™ Industrial
- Wavistrong™ FR
- Fiberbond®
- Fiberbond® FR
- Fiberbond® JF



The background of the entire image is a close-up, high-contrast photograph of a corrugated metal surface. A prominent diagonal seam runs from the top left towards the bottom center, dividing the image into two main sections. The lighting creates strong highlights and shadows on the ridges and valleys of the corrugations, emphasizing the texture and industrial nature of the material.

# Technology

Future Pipe Industries offers leading composite  
piping technologies successfully deployed for  
over 35 years.



## TECHNOLOGY

Future Pipe Industries offers leading composite piping technologies successfully deployed for over 35 years. Our dedicated Technology Division leads all innovation, testing, Research and Development activities and is constantly evolving based on Customer feedback and Market requirements.

We work closely with numerous International Standards Organizations such as the International Organisation for Standardization (ISO), European Standards (EN), British Standard Institute (BSI), Deutsches Institut für Normung (DIN), American Society for Testing and Material (ASTM), American Society of Mechanical Engineers (ASME), American Water Works Association (AWWA) and the American Petroleum Institute (API) to continuously enhance our composite pipes performance and ensure full compliance against industry best practices and standards.



### HELICAL FILAMENT WINDING PROCESS

Pipes are produced using the helical (reciprocal) filament winding process by which impregnated glass fiber reinforcement with resin are applied onto a precision steel mandrel in a prescribed pattern. Repeated application of wetted fibers results in a multi-layered structural wall construction of the required thickness.

The helical winding process enables us to manufacture pipes with diameters up to DN 1600 mm.



### CONTINUOUS FILAMENT WINDING PROCESS

Our continuous filament winding technology is the most proven in the composite pipe industry. Pipes are produced on a continuous filament winding machine. This machine consists of a mandrel composed of a helical wound continuous steel band, supported by beams forming a cylindrical shape. As the formed mandrel turns creating a multi-layered structural wall of the required thickness.

The continuous winding process enables us to manufacture pipes with diameters up to DN 4000 mm



### SPOOLABLE WINDING PROCESS

Our Thermoplastic Composite Pipe (TCP) technology produces fully bonded pipe manufactured in continuous lengths up to 1000m/3280ft (depending on pipe diameter). It is the latest technology in the market and combining three thermoplastic layers; a thermoplastic (HDPE) liner, reinforced by a helically wrapped tape containing continuous fiber (uni-directional) in a HDPE matrix, and protected by a thermoplastic outer coating (or "jacket"). All three layers are melt-fused together ensuring a faultless bond. The pipe is flexible and is spooled onto reels.



The background features a dark blue, textured surface with concentric circular patterns that resemble ripples or a tunnel view. A thin, vertical white line runs down the center of the image, dividing it into two equal halves.

# Solutions

We deliver innovative, integrated technical solutions.  
We engineer, design, manufacture, test, and deliver  
composite pipe systems and solutions to different  
sectors, applications, and projects.





## MANUFACTURING

We design and manufacture composite piping systems, selecting the best product for your needs, manufacturing pipes, fittings, and prefabricating spools.

All Future Pipe Industries products are manufactured in accordance with international standards using the latest technology utilizing Glass Reinforced Polyester (GRP), Glass Reinforced Vinyl ester (GRV) and Glass Reinforced Epoxy (GRE) depending on the needs of your project. Our range of composite pipe diameters ranges from 25 mm (1") up to 4,000 mm (160"), with a pressure range up to 3,500 psi.

### Advanced Testing Facility

Future Pipe Industries testing facilities, located in Dubai and the Netherland, are staffed with over 50 experienced Ph.D. Scientists, Engineers, and Technicians working on product, machinery, and process design and improvements.

Over 500 tests are conducted annually addressing product long-term testing including Hydrostatic Design Basis (HDB), Ring Bending, Strain Corrosion, Creep, UEWS (ultimate Elastic Wall Stress), Survival Testing, and Abrasion and Impact resistance. These tests are executed using highly specialized automated in-house testing equipment with 24/7 data logging system to ensure accuracy in according with international standards including ISO, ASTM, BS, API and many others. Our long-term testing equipment has over 80 pressure points for simultaneous sample testing with a capability of up to 700 bars and 150°C.

In addition, FPI collaborates on R&D projects in the Composites field with renowned Universities, Organizations, and Research Centers.

## ENGINEERING

Future Pipe Industries offers optimized pipe systems design and engineering, including stress and surge analysis as well as pipe support packages and detailed engineering.

We integrate our products and a wide range of services to offer an end to end solution for each project. We have a broad experience in all design aspects of our Composite Pipe systems. Early incorporation of our Value Engineering team during the design phase ensures maximum effectiveness.

We employ the latest system design software to analyse the design and operation conditions our pipes will be used in. This ranges from simple stress tests to complex large-scale fluid flow challenges.

- System Design and Drafting Services.
- Design analysis.
- Translating layout drawings to isometric drawings.
- Stress and flexibility analysis.
- Surge, water-hammer, and fluid flow analysis.
- Seismic analysis.
- Hydraulic calculations.
- Design of pipe supports, anchors, guides and thrust blocks.
- Dynamic and static analysis and vibration prediction control.
- FEM analysis for pressure vessels, nozzles and piping components.







## PROJECT MANAGEMENT

Future Pipe Industries participates and assists in your project execution from start-up to completion ensuring that your project is managed efficiently.

Our project management solutions include:

- Developing an overall project execution plan and workflow.
- Monitoring project progress and milestones using Industry best practices and software packages.
- Managing and controlling changes and variations.
- Attending site, client and End User meetings.
- Managing installation queries and site technical assistance.
- Preparing product design and component solutions.
- Developing specifications reviews and product selection.
- Validating the project design calculations.
- Preparing product qualification programs according to international standards.
- Controlling technical documentation and End User submittals.
- Providing computer aided design services including isometric and construction drawings.
- Managing On-site assistance requests.

## FIELD SERVICES

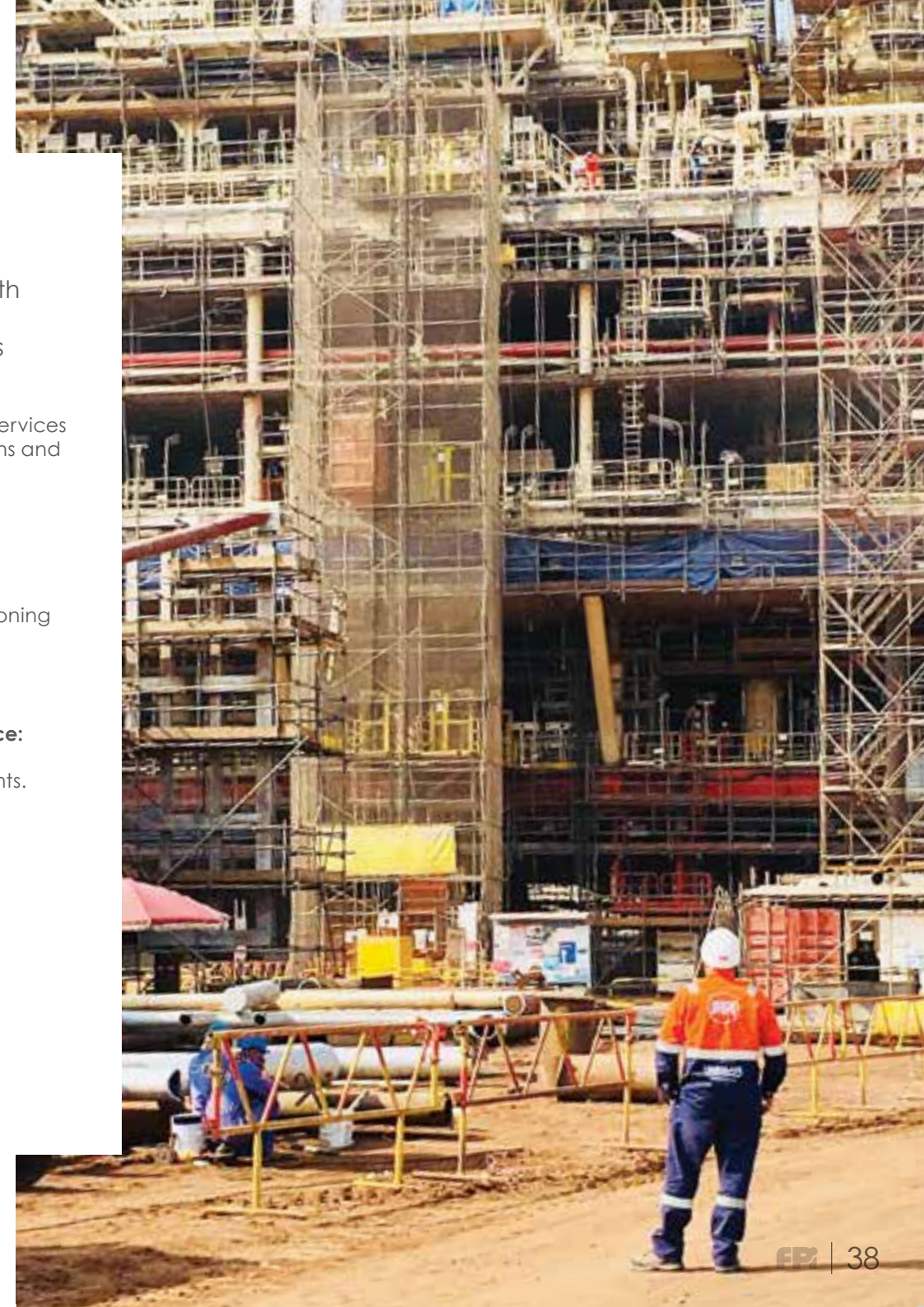
To ensure your installation is executed flawlessly we work with you to oversee every aspect of your project site activities. We offer a full range of professional field assistance services including training and bonder certification of your team.

Future Pipe Industries offers a full range of professional field assistance services designed to ensure execution in accordance with our recommendations and method statements. We offer the following services:

- Project execution methodology.
- Preparation of Method Statements.
- QAQC Services.
- HSE and Safety Procedures.
- Assistance in installation, jointing, pipe laying, testing, and commissioning activities.
- Bonder training, certification, and supervision.
- Troubleshooting and repair.

**FPI Field Services team can provide supervision and technical assistance:**

- Ensures the correct execution of pipe laying and field joints.
- Assures the quality, functioning, and conformity to Method Statements.



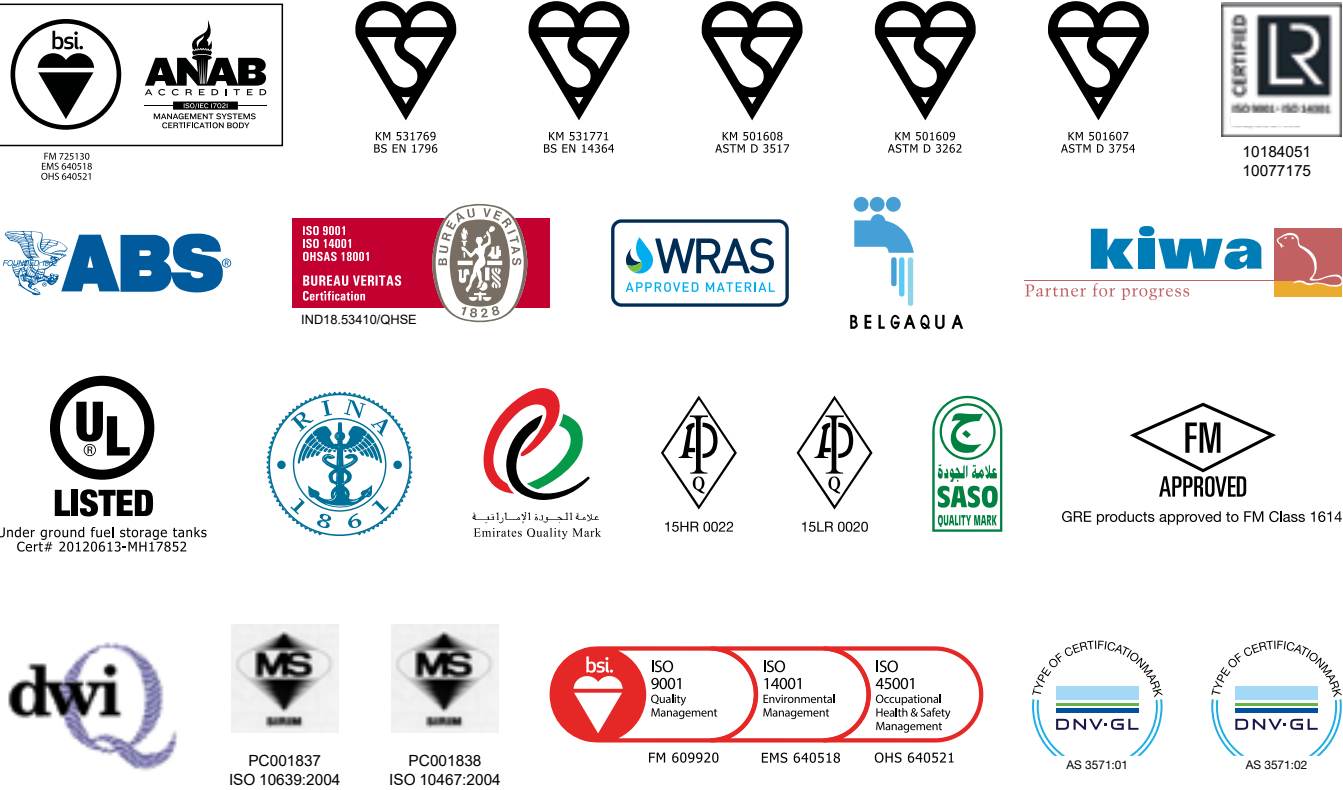


DOCUMENTATION AND TRAININGS



QUALITY EXCELLENCE

We are proud of our commitment to quality and excellence, shown here through our list of accreditations. Some are global and others more specific to the individual requirements by country, plant, or product.

















#### SALES OFFICES

Egypt  
France  
Germany  
India  
Indonesia  
Italy  
Korea  
KSA  
Kuwait  
Lebanon  
Malaysia  
Morocco  
Oman  
Pakistan  
Qatar  
Singapore  
Spain  
The Netherlands  
Turkey  
UAE  
United Kingdom  
USA

#### MANUFACTURING PLANTS

Egypt  
Indonesia  
KSA  
Lebanon  
Morocco  
Oman  
Qatar  
Spain  
The Netherlands  
UAE  
USA

#### AGENTS

Alaska  
Albania  
Austria  
Bosnia & Herzegovina  
China  
Denmark  
Finland  
Greece  
Iceland  
Kazakhstan  
Kosovo  
Kuwait  
Latvia  
Macedonia  
Montenegro  
Norway  
Romania  
Russia  
Serbia  
Sweden  
Switzerland  
Turkey  
Uzbekistan

#### MARINE AGENTS

Alaska  
Baltics (Estonia, Latvia, Lithuania)  
Finland  
Bermuda  
Bahamian Island Chain  
Bulgaria  
Croatia  
Cyprus  
Denmark  
Greece  
Italy  
Norway  
Russia  
Spain  
Sweden  
Turkey

#### LIAISON OFFICES

Algeria

Scan here for our  
worldwide  
list of contacts

