







## Franklin Offshore

### A world-class company with a global reach

Franklin Offshore is headquartered in Singapore, serving the marine oil & gas and offshore construction industry. Our companies are strategically located in Singapore, Australia, Indonesia, South Korea, Azerbaijan, Qatar, United States of America and the Netherlands. We have an experienced and dedicated workforce and a corporate culture that is solidly based on the principles of professionalism, innovation and service.



Waterfront Operations Base, Singapore

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### Our products and services

The Franklin Offshore group of companies is a leading provider of steel wire rope, rigging and mooring equipment. Expertise includes manufacturing of cable laid slings, Flemish Lock slings, inspection & load testing services. The company provides high quality integrated solutions in temporary and permanent mooring projects including a comprehensive range of 'OIC' services.

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### Franklin— The Brand for Quality

Franklin Offshore manufactures excellent products and provides a full spectrum of value-added services. We give such products and services developed by our company, the Franklin brand name.



Count on Franklin for everything from swivels to complete mooring systems

# TMENT

## Our Beliefs

Franklin Offshore is a business driven by the passion and know-how of our people. Thus, we treat them with the care and respect they deserve. Our people are our most important assets.

### Safety takes Priority

Safety takes priority and nowhere is safety more important than in the manufacture, supply, handling, inspection and installation of mooring equipment.

### HSE MS Health Safety Environment Management System

In all our operations, it's our commitment to pursue the highest possible standards to maximize our Health, Safety and Environmental performance. It's our commitment:

- Making Safety, Health and Environmental considerations a top priority.
- Conducting our business in a manner consistent with the Safety and Health considerations of our employees and customers while protecting the Environment.
- Developing and implementing training and procedures to reduce incidents and accidents and continually improve our HSE Health, Safety Environment Management Systems.



Take: 8 Safety and Health Awareness Campaign

Franklin Offshore also has earned the prestigious Bizsafe Star award from the

Workplace Safety and Health Council in Singapore. 'Bizsafe Star' accreditation permits us to provide products and services to Singapore's shipbuilding and construction industries.



Our commitment  
is demonstrated by our investment.  
Dedicated QA/QC/HSE MS Management approvals



## Franklin Mooring Services

A global leading integrated solutions provider for temporary and permanent moorings. Regardless of water depth, mooring requirements and component requirements, Franklin Mooring Services provide a unique opportunity for customized and cost-effective solutions.

### Our services:

- Initial feasibility studies
- Engineering FEED studies
- Mooring analysis
- Design and engineering
- Equipment rental and sale
- Fabrication
- Installation, engineering, crew and supervision
- Conventional and preset mooring
- Temporary and permanent mooring
- Maintenance, repair and replacement
- Recovery
- Rig move
- Riser analysis



We're equipped to be a turnkey solution provider

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### Planning / Personnel

Franklin Offshore employs experienced project engineers, naval architects, project managers and marine superintendents. We believe in teamwork and in detailed planning for successful project execution that meet or exceed our clients expectations.



Global teams of experienced professionals

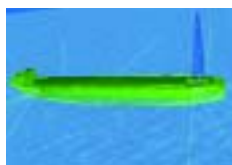




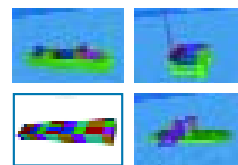
## Engineering Resources

Supported by the latest software programs, Franklin Mooring Services offer a wide range of engineering and design solutions, which include:

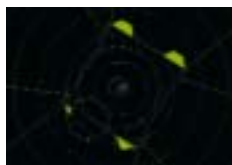
- Quasi-static and dynamic analysis for integrated mooring and riser
- Hydrodynamic characteristic modeling
- Ballasting analysis
- Ballast plan
- Stress analysis
- Station keeping analysis
- Cost and feasibility analysis
- Risk assessment analysis
- Structural engineering
- Installation engineering
- Dynamic lowering analysis
- Drafting services
- Mooring operations



OrcaFlex



Moses



Romeo 1



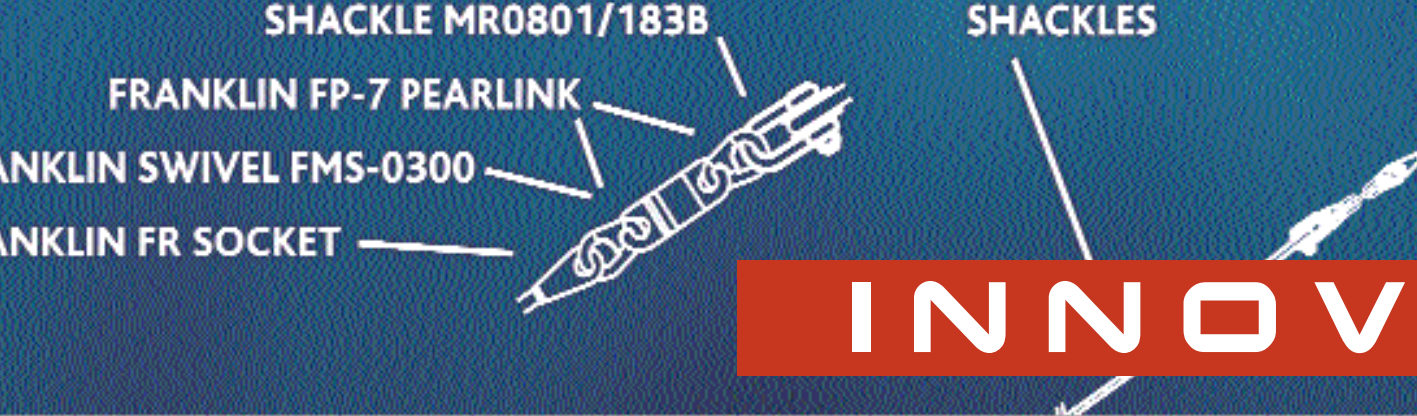
Romeo 2

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## Inventory

Complete preset mooring systems, single components, wire rope, polyester rope, spooling machines and other equipment are kept at our locations, thus ensuring fast response and short delivery time.





## Franklin Mooring Services (Temporary Mooring)

With our global reach, we are able to provide and install our Franklin Mooring Systems in the world's leading offshore exploration and production regions— including shallow and ultra deepwaters across Asia, China, and the West Africa regions.

Our experience in deepwater mooring has helped us develop a mooring system that is robust and that satisfies both industry and regulatory criteria.

### Mooring Equipment

Our inventory includes all types of mooring equipment available for rental or direct purchase. Steel wire ropes, anchor chain, buoys, synthetic tethers, anchors, and a complete range of jewelry to connect the different components together. The equipment is certified and controlled within our QA/QC management systems.

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### Franklin Spooling Machines

Our tough and robust spooling units are multi purpose in regards to the reel sizes and have the capacity to provide back tension.



#### Spooling Machine Back Tension Ability

Our spooling units are designed to provide tension in regards to carrying out rope spooling safely and without damage.

# ACTIONS

## PERMANENT

We have the knowledge and experience in providing a single unit of mooring equipment or a complete designed and proven ultra deep water pre lay mooring system. We provide the expertise, the equipment, the people — all within a cost effective management system.



We have set anchors in excess of 8,000 feet water depth.



POLYESTER ROPE  
C/W SHACKLE



## Franklin Mooring Services (Permanent Mooring)

We provide comprehensive integrated permanent mooring solutions. We support our projects from shallow to deep water with a complete multi disciplined project management department that has a vast range of experience and knowledge in getting the job done.

Our expertise includes:

- Project management and planning
- Selection and optimization of mooring system
- Engineering
- Supply of vessel mooring system components
- Supply of mooring installation equipment
- Fabrication
- Installation
- Service inspection and maintenance



Pile installation



Mid Water Arch (MWA)  
installation

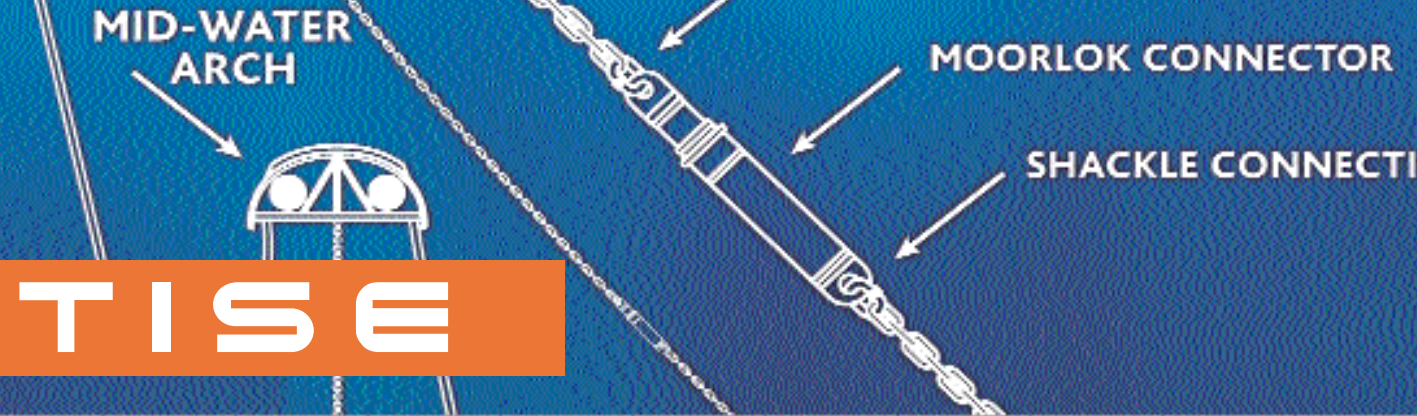


Riser installation



M3energy Ratu Songkhla FSO Installation Project

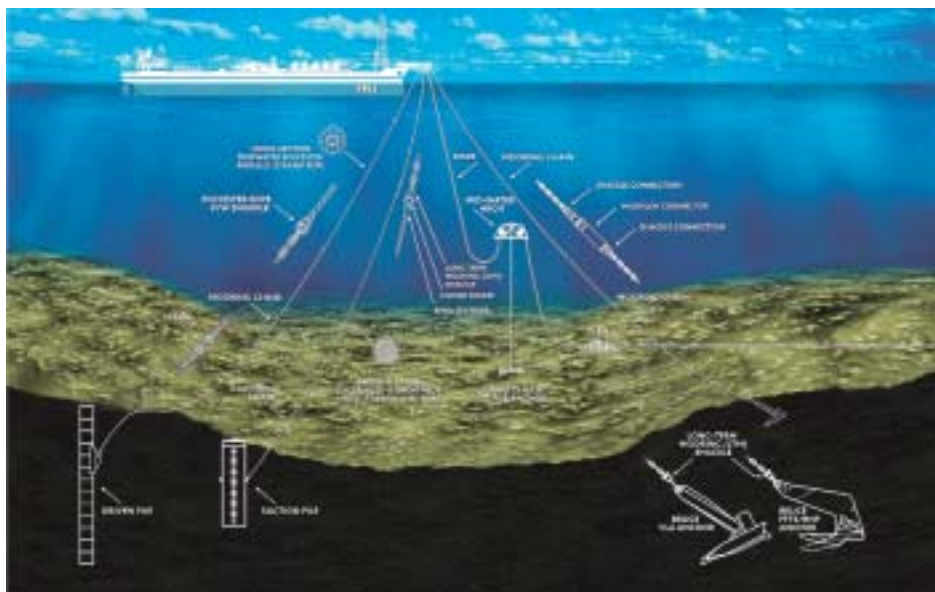




## A complete solution

We have the knowledge and experience in providing a single unit of mooring equipment or a complete Permanent Mooring System in which we can provide a turnkey solution in installing the entire system.

### Franklin Permanent Mooring Systems



## Simplicity in Mobilization

We own and operate handling equipment for a single-source solution for mooring equipment mobilization.

- Experienced project planners
- Waterfront/Quayside facilities
- Cranes
- Crane barges, transportation barges
- Spooling machines and spooling crew
- Welders, fitters, support personnel



# EXPERI

## In-field removal and replacement solutions

The EPCI scope of work for these types of projects may include:

- Project Management and Planning including safety and hazard analysis
- Engineering, including design of the replacement mooring lines and produce all procedures conforming to classification/ warranty surveyor requirement
- Procurement, supply and transportation of replacement mooring equipment and non permanent material
- Constructability engineering including load and anchor leg strength modeling and analysis
- Installation phase of removal of existing mooring system and replace with new system



Our crane barge, Isamigo 3, handles the on-location chain replacement



The Franklin marine crew sets up the chain stopper system

We created the plan and carried out all the work— ahead of schedule, and without incident.





# ENCE

## Riser system installation, pre-commissioning and engineering

Franklin Offshore has developed a successful track record in the engineering analysis, installation, and commissioning of flexible risers.

FSO Ratu Songkhla is designed for 20 years of service life without the need to drydock. The mooring system is a 6-legged mooring chain, external turret mooring system configuration that is mounted on the vessel bow. The condensate import system is one length of 8-inch unbonded flexible riser connecting the PLEM to the turret. Water depth is 61-metres.

Global alliances and our in-house capabilities enable us to provide a full spectrum of permanent mooring equipment. We can either fabricate the equipment used in the permanent mooring system or source it externally.





# RELIAB

## Professional equipment, superior results

### Franklin Pile Guidance Frame



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### Franklin Spooling Unit

Under-roller drive spooler for handling umbilicals, small flexible, risers  
Reel capacity: 250 Tonnes.



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### Franklin Winches

Tough jobs need tough, reliable winches.  
We design, manufacture, and test our robust range of Franklin winches. These are deployed for project execution or can be rented.  
Waterfall winches range from 25-tonnes up to 400-tonne single-drum winches.



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### Franklin 400-tonne Linear Chain Tensioner





# ILITY

## Engineering and fabrication

Our people have the skill, know-how, experience and capability to design and fabricate unique Franklin brand of mooring installation equipment.

We have extensive experience in manufacturing buoys, winches, swivels, spooling units and pile frames.



Franklin 100-tonne Waterfall Winch

CFE Engineers Asia Pte Ltd  
(A Franklin Offshore Group Company)

### Suction Piles: Manufacture and load out

5X suction piles  
4.5 MT x 16-meter length  
Unit weight 100-tonnes

Suction piles manufactured  
at our waterfront facility





## Franklin Inspection and Certification Services

### Onshore/Offshore

A mooring system can range from a simple single rope holding a small boat to a complete deep water mooring system complete with anchors, ground chain, swivels, tri-plates, anchor lines and buoys.

We have the experience and detailed work methods to carry out the full inspection of all types of mooring systems on location prior to deployment of the systems.

We are able to further provide a Computer Aided Drawing in our inspection report which clearly identifies the position of each component used within the system.





# HENSIVE

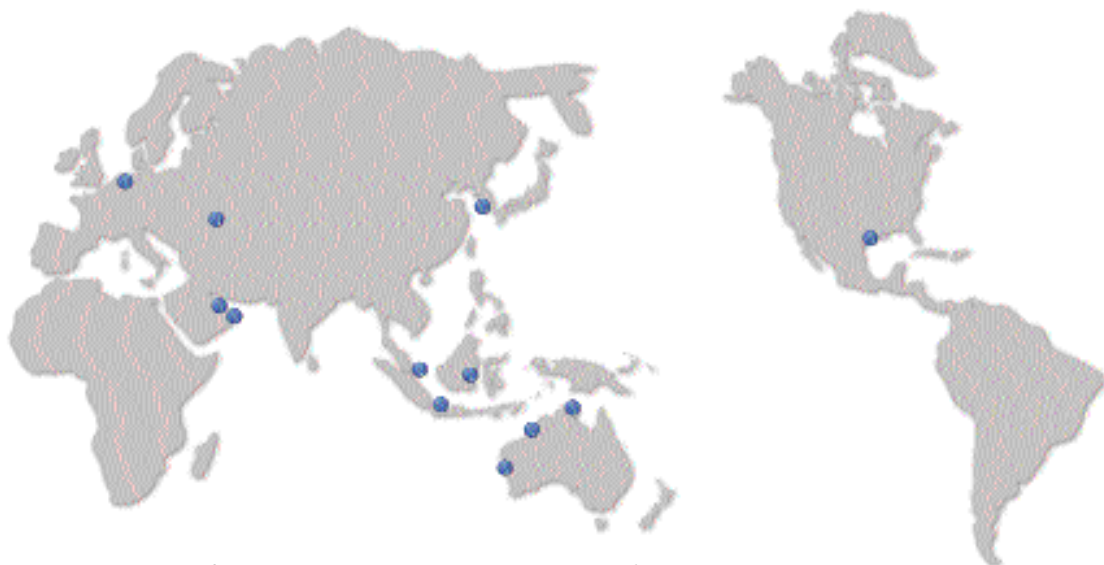
## Specific Work Methods

Our intensive work methods include:

- FO/WM/M/001 - Standard Anchor
- FO/WM/M/002 - HHP Anchor
- FO/WM/M-003 - Normal Load Anchor
- FO/WM/M/004 - Mooring Anchor Line
- FO/WM/M/005 - Baldt, Kenter & Pear Link
- FO/WM/M/006 - Open Link
- FO/WM/M/007 - Totally Enclosed Swivel
- FO/WM/M/008 - Open Swivel
- FO/WM/M/009 - Anchor Sockets
- FO/WM/M/010 - Mooring Winch
- FO/WM/M/011 - Anchor Shackle
- FO/WM/M/012 - Buoy Pigtail
- FO/WM/M/013 - Synthetic Fibre Ropes
- FO/WM/M/014 - Mooring Buoys
- FO/WM/M/015 - Mooring Buoy Pigtails
- FO/WM/M/016 - J-chaser / Grapnel
- FO/WM/M/017 - Mooring Chain
- FO/WM/M/018 - Delta Plate
- FO/WM/M/019 - Chain Buoy Pigtail
- FO/WM/M/020 - Wire Rope Clamp



# GLOBAL REACH



## Corporate Headquarters

### Franklin Offshore Holdings Pte. Ltd.

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