



INTEGRATED SUBSEA SYSTEMS

Efficient Execution and Cost-Effective
Technologies Deliver Project Success

Streamlining Installation of Subsea Production Systems

With a unique blend of contracting, manufacturing, engineering and installation experience working on many umbilical installations in the Gulf of Mexico, we specialize in flexible and rigid riser, flowlines, jumpers, umbilicals, and steel tube and thermoplastic hose flying leads.

Experienced integration of design and fabrication enables our teams to facilitate optimal efficiency through proven modular products. These proprietary products provide effective offshore solutions when combined, and often result in significant cost savings, reduced field workloads and minimization of the significant safety risks.

Our highly qualified offshore engineers are also competent to perform interface engineering through the writing of installation procedures and supervise offshore execution. From conception, our teams provide comprehensive engineering for every segment of production providing a customer-specific approach to application and risk management.

AFGlobal and Deep Down, Inc.—A Partnership Committed to Each Project's Success

The strategic alliance between AFGlobal and Deep Down is aimed at delivering fully synchronized and integrated subsea production solutions. AFGlobal and Deep Down are committed to each client's success by providing:

- Cost-effective technologies
- Highly experienced engineers and service professionals
- Project management excellence.

As a fully integrated package, these services solve the challenges of big EPC company costs and lead-time delays.

Our strategic alliance leverages each company's core competencies.

AFGlobal brings expertise in:

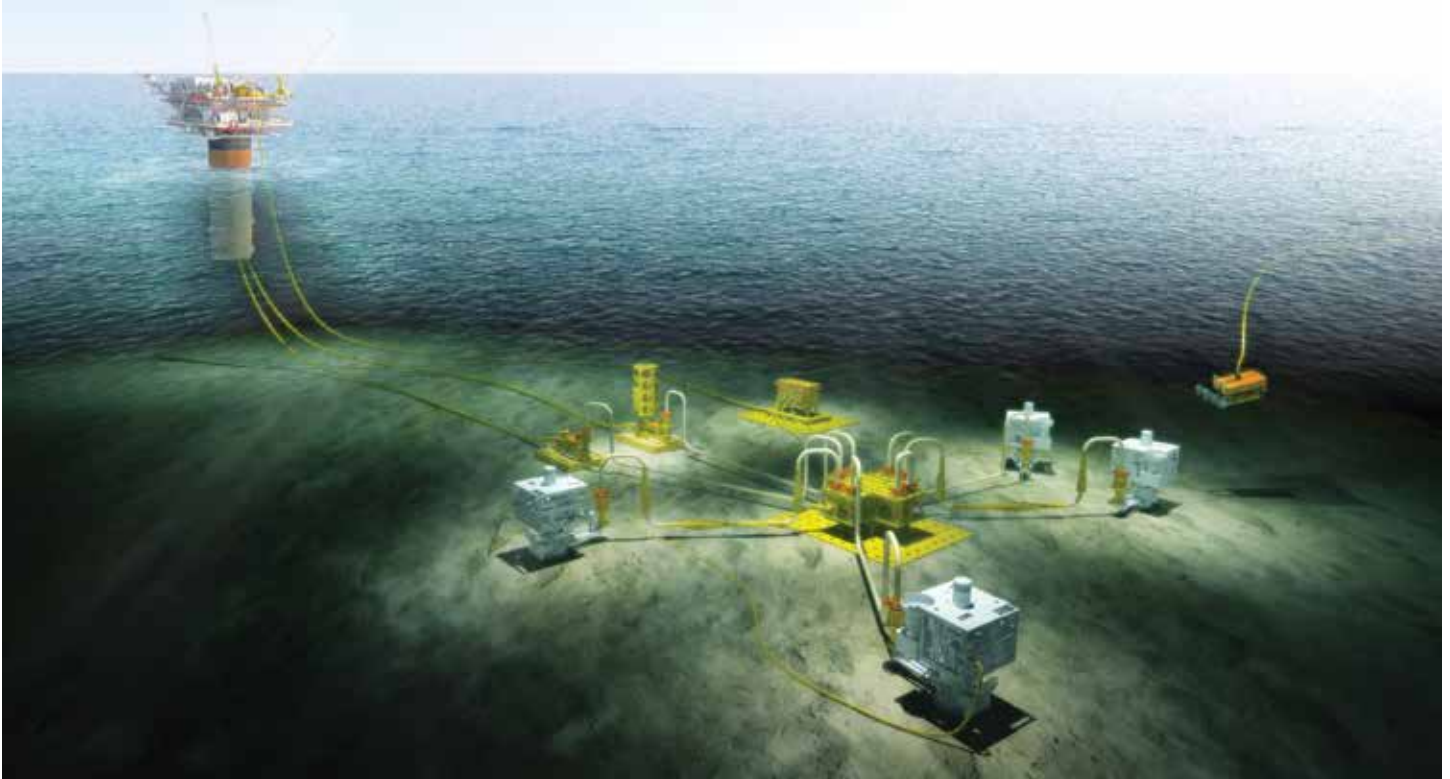
- Forging, machining, subsea connection systems
- ROV tooling and tooling skids
- Integrated project management and supply chain infrastructure
- Subsea insulation and buoyancy
- Development and testing of subsea valves.

Deep Down's offerings include engineering and project management for the supply of:

- Subsea connection systems
- Umbilical hardware and terminations
- Flying lead fabrication and installation
- Installation and commissioning
- Manufacturing and fabrication
- Deployment reels and spooling operations
- System Integration Testing (SIT)

Taken together, our products and services provide operators with a comprehensive solution that:

- Drives down costs
- Reduces project bureaucracy by minimizing the number of contractor interfaces
- Reduces the risk of miscommunication or unsafe practices
- Shortens turnaround times
- Ensures price certainty on products and services.



Our Scope of Offerings

Our alliance brings together technologies and services that solve the most challenging problems of subsea production installation—in ways that drive down costs, deliver reliability, and provide long-term production.

Subsea Flowline Equipment

AFGlobal brings a wide range of engineered subsea flowline equipment, including:

- PLETs and PLEMs
- Rigid and flexible flowline jumpers
- Compact manifolds and foundations
- Horizontal and vertical diverless connection systems

Deep Down's capabilities extend beyond equipment supply to include design, analysis, procurement, fabrication, assembly, and testing—for our own product specs or for those specified by each customer.

AFGlobal designs and delivers a range of diverless connectors, from flowline-type and vertical-type to riser-type and large-bore. Each connector is engineered for long operating life, high-strength capacity, and flexibility in installations and connections.

For example, the DMAc flowline connector is a compact, lightweight drag-to-place system for horizontal connection

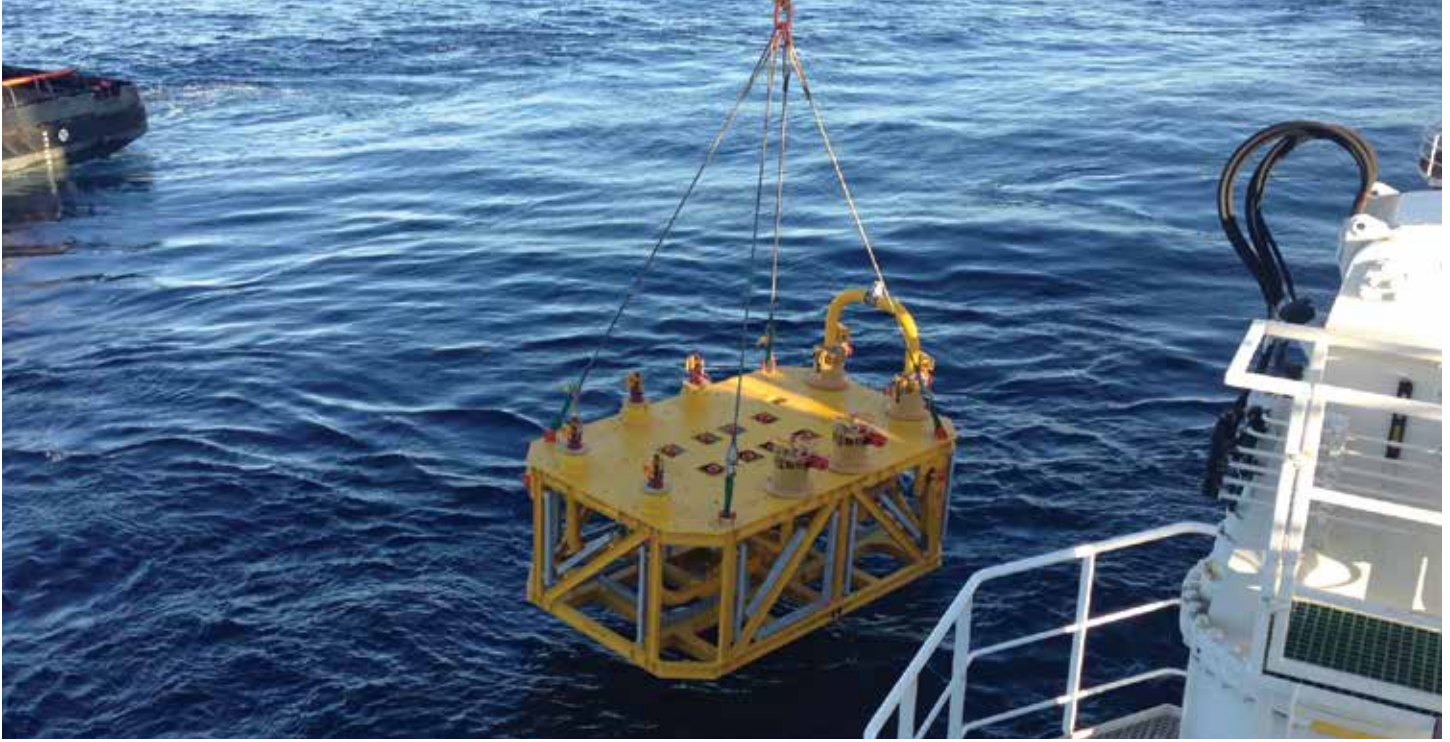
of flexible pipe, jumpers and umbilicals in extreme operating environments. The system was originally designed for use in West of Shetland fields, where weather conditions change quickly and interrupt field activities with little notice. The connector has seen nearly 20 years of successful usage in this environment, with time-efficient processes that can be halted to suite sudden changes in ocean currents or wave heights.

AFGlobal's flowline termination assembly is further proof of our commitment to cost-effective design, manufacturing, testing and delivery. These assemblies have successfully provided full-spec compliance at minimal costs in West of Shetlands fields.

Subsea Umbilical and Riser Equipment

We bring extensive expertise to the design and manufacturing of subsea umbilical and distribution equipment through Deep Down's umbilical termination assemblies, cobra heads, hydraulic and electric flying leads, flying lead deployment systems, and umbilical and riser clamps.

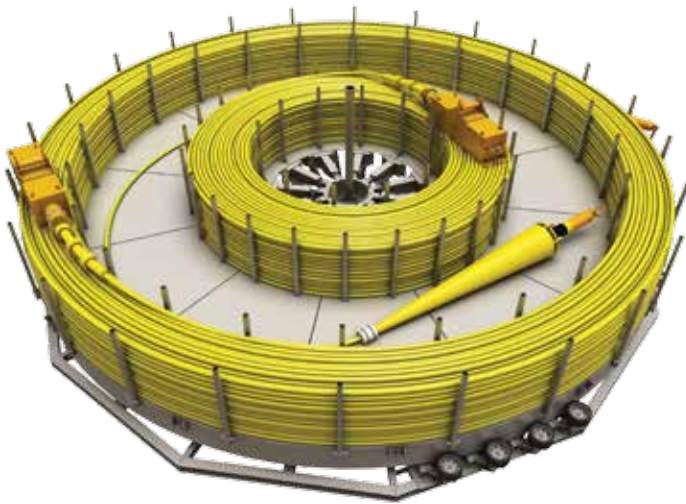
We also provide concept-to-delivery capabilities for all equipment, from design and analysis to procurement, assembly and testing. Our Bend Stiffener Latcher incorporates proprietary technology and features that provides customers with a cost-effective solution to installing flexible risers and umbilical without subsea intervention and minimizing pull-in operations from host facilities.



Additional Equipment and Installation Support

We understand the risks and difficulty of installing flying leads and umbilicals through reel methods that require constant tension on the flying lead increasing personnel and equipment risks. Our highly experienced installation teams and engineers have suitably designed interchangeable deployment frames providing storage, transportation, innovative installation methods, and ultimate protection for valuable umbilicals and flying leads. These frames top the market with installation simplicity, while providing safe, efficient installation equipment and reduced installation time, ultimately saving revenue.





Engineering and Aftermarket Services

As part of our commitment to being your life-of-field partner, we provide engineering and aftermarket field services designed to optimize equipment development and operation.

Our engineering services include:

- Field architecture solutions that maximize configuration freedom and increase flexibility for new drilling and installation campaigns. We minimize operational disruptions, with services that include localized decommissioning for system implementations, and reconfigurations due to extensions, repair, interventions or replacement change outs. In one subsea installation, AFGlobal connected the tree and manifold with a pre-cut jumper that helped the client avoid scheduling delays and saved \$1 million in re-drilling costs.
- Subsea structure design capabilities that include manifolds, FTAs and SSIVs. Our design services also include bespoke solutions for pipeline repair systems and umbilical distribution.
- AFGlobal's subsea structural engineering capabilities were vital to the delivery of production and water injection manifolds for Schiehallion Central. The design included a piping module assembly that floats within a protective structure to minimize shifting due to temperature changes, and which allows the manifold to be recovered in an emergency, with minimal impact on the flowlines.

Our aftermarket services include:

- On the forefront of innovative technology, our extraordinary testing teams provide extreme flexibility while maximizing efficiency through flushing the highest number of lines at the greatest possible flow rate. Using a variety of revolutionary pumping systems and proven equipment, our teams fully exploit efficiency safely and effectively while optimizing expenditures resulting in greater revenues.
- Installation support that draws on more than 30 years of subsea installation experience from projects of varying complexity all over the world. Deep Down and AFGlobal engineers and technicians plan and direct all technical onshore and offshore activities required for a successful installation—with a focus on efficiency and cost effectiveness.
- Repair and inspection services that deliver responsive, efficient and reliable inspection and maintenance services to each client. From inspection and repair of tie-ins and connections to equipment intervention support and riser inspection, we conduct each operation with the highest focus on safety and efficiency.

The integrated offering of AFGlobal and Deep Down's subsea production equipment and services includes the highest commitment to safety, quality, efficiency and reliability. This gives each client the peace of mind that comes from working with an integrated subsea production provider.

Partner with Subsea Production Specialists

Call us to ensure that your next subsea field development is delivered and installed by industry experts committed to your long-term success.

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