



INTEGRATED SUBSEA PRODUCTION SYSTEMS

Efficient Execution and Cost-Effective
Technologies Deliver Project Success

Streamlining Subsea Production Systems for Smaller Fields

AFGlobal and Deepsea Technologies, Inc. (DTI) are joining forces to meet the industry's need for the latest intervention technologies and services, but in customized packages for smaller, lower production fields.

Our alliance is uniquely different from most large intervention service companies that provide a standard set of expensive, one-size-fits-all intervention equipment and services—solutions that are often already installed on their own vessels. To maximize their revenues and rig rates, these service providers cater almost exclusively to large-scale, high-profile mega projects managed by supermajors or national oil companies. These services are provided in bundled packages with contract terms that favor low-cost, second-tier hardware while neglecting rising installation costs.

Together, AFGlobal and DTI will deliver full-service intervention solutions, customized to each client's needs. And, we bring application expertise and a willingness to work closely with clients to ensure that each intervention operation is optimized for minimal risk and cost.

AFGlobal and Deepsea Technologies—A Partnership Committed to Each Project's Success

The strategic alliance between AFGlobal and DTI is aimed at delivering fully synchronized and integrated subsea intervention solutions. AFGlobal and DTI 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.

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

- Subsea flowline and riser equipment
- Subsea umbilical equipment
- IWOCs equipment
- Subsea installation and hydrate remediation equipment
- ROV and general purpose tooling
- Subsea and topsides control equipment
- Engineering services for subsea systems and equipment.

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

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

- PLETs and PLEMs
- Rigid and flexible flowline jumpers
- Intervention systems for hydrate remediation
- Subsea pig launchers.

DTI'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 DTI'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 Connector 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

Additional Hardware

We provide ROV tooling hardware, including Hot Stabs and Receptacles, ROV Valve Operators, Torque tool buckets and Nut retraction tools. Each tool is custom-engineered with proprietary designs that allow for optimization of subsea operations. And, our personnel are experts in designing, deploying and operating this equipment in the field.

Installation Equipment

From offshore installation reels to flying lead baskets to over-boarding chutes and sheaves, we provide engineered equipment for offshore installation applications. We also have diverse, extensive expertise in the design, delivery, and operation of installation equipment for both diver and diverless subsea projects.





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.

- DTI's state-of-the-art design and engineering tools include Solidworks and AUTOCAD for design and drafting, Finite Element Analysis software for linear and non-linear analysis, and MATHCAD for traditional calculations.

Our aftermarket services include:

- Installation support that draws on more than 30 years of subsea installation experience from projects of varying complexity all over the world. DTI's installation equipment includes umbilical storage and installation reels as well as powered deployment frames. And, AFGlobal's 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 DTI'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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