





DEEPOCEAN GROUP

DeepOcean Group is an integrated provider of subsea, cable-lay, trenching and marine support vessels and services for the Oil and Gas, Offshore Renewables, Power and Distribution and Telecommunications markets

The Group

DeepOcean Group consists of three operating companies. CTC Marine Projects, specialising in trenching, cable-lay, subsea installation and construction; DeepOcean, specialising in subsea installation and construction support, survey, Inspection, Maintenance and Repair (IMR) services as well as subsea decommissioning and Trice Supply UK, specialising in offshore towing and supply services.



SERVICES
 Subsea Trenching
 Subsea Installation
 Subsea Construction Operations
 Cable-Lay
 Life of Field Seismic Systems

HEADQUARTERS
 Darlington - United Kingdom
www.ctcmarine.com



SERVICES
 Inspection, Maintenance and Repair (IMR)
 Survey and Construction Support
 Subsea Decommissioning
 Subsea Vessels
 Specialising Work ROV's

HEADQUARTERS
 Haugesund - Norway
www.deepeacean.no



SERVICES
 Platform and Rig Supply
 IMR Vessels
 Personnel Transport

HEADQUARTERS
 Aberdeen - United Kingdom
www.to.deepeaceangroup.com



GROUP STRENGTHS

DeepOcean Group offers a broad, global platform of subsea services

LEADING MARKET POSITION

- World's leading provider of subsea trenching and protection services
- Largest IMR player in the demanding North Sea
- Strong track record and capabilities within survey, construction, decommissioning and flexible product installation

GEOGRAPHIC DIVERSIFICATION

- Diversified from North Sea to include Mexico, Brazil and APAC with a permanent office
- Global operation capability, including the Mediterranean, West Africa and the Middle East
- Entrenched in local markets through track records, capabilities, innovation and operating history

LARGE & MODERN FLEET

- Operations performed from high specification multi-purpose vessels
- Largest and most sophisticated fleet of marine trenching vehicles globally, including pipeline and cable ploughs, jet trenching ROVs and mechanical trenchers
- High class survey and IMR equipment as well as a modern fleet of full work class ROVs

STRATEGIC OFFSHORE BASES

- Large-scale engineering maintenance and freight forwarding facilities in the UK and Norway with deep water berths and a dedicated heavy lift quay with associated storage space

STRONG CUSTOMER BASE

- Customers include Statoil, Petrobras, BP, Subsea 7, Alcatel/Lucent, CNOOC, ConocoPhillips, EON, McDermott, NSW and LS Cables
- Targeting Oil Companies, EPIC contractors, Grid and Product Suppliers to cover all of their subsea services requirements

LOW RISK SOLUTIONS

- Full control of delivery of mobilisation phase of projects
- Single source solution for all trenching equipment using wholly owned assets



CTC MARINE PROJECTS

CTC Marine Projects (CTC) is a leading subsea company specialising in subsea installation, cable lay and trenching services for the international offshore construction industry.

CTC operates one of the world's largest fleet of high technology marine trenching and burial equipment, which is supported by a fleet of DP2 multi-role construction vessels, flexible installation and shallow water spreads. This unique fleet enables CTC to execute subsea construction, installation and trenching worksopes in most water depths and seabed conditions, in any region of the world.

CTC offers a complete set of in-house services from R&D, Geotechnical Analysis and Detailed Engineering through to Project Management, Project Engineering and Offshore Execution. These services envelop the entire life cycle of an offshore development from installation, maintenance and life extension (Life of Field Seismic Systems) through to decommissioning.

Innovative techniques and the versatility of its equipment, coupled with the experience and know-how of its talented team ensures that CTC is amongst the strongest and safest installation and trenching specialists in the world. CTC's passion, energy and professionalism allows the delivery of "right first time" solutions suited to individual client needs.

Since establishment in the early 90's, CTC has built an extensive and successful track record which reflects the Company's enabling role in the Oil and Gas, Offshore Renewables, Telecommunications and Power and Distribution markets.

CTC is a member of DeepOcean Group Holdings AS, which was refinanced in 2011 with significant working and investment capital arrangements in place to support the Company's future growth.





SAFETY: THE NUMBER ONE PRIORITY

CTC is committed to promoting a strong Health, Safety, Environment, Quality and Security (HSEQS) culture, protecting the health, safety and welfare of its employees, personnel acting on its behalf and others affected by CTC business.

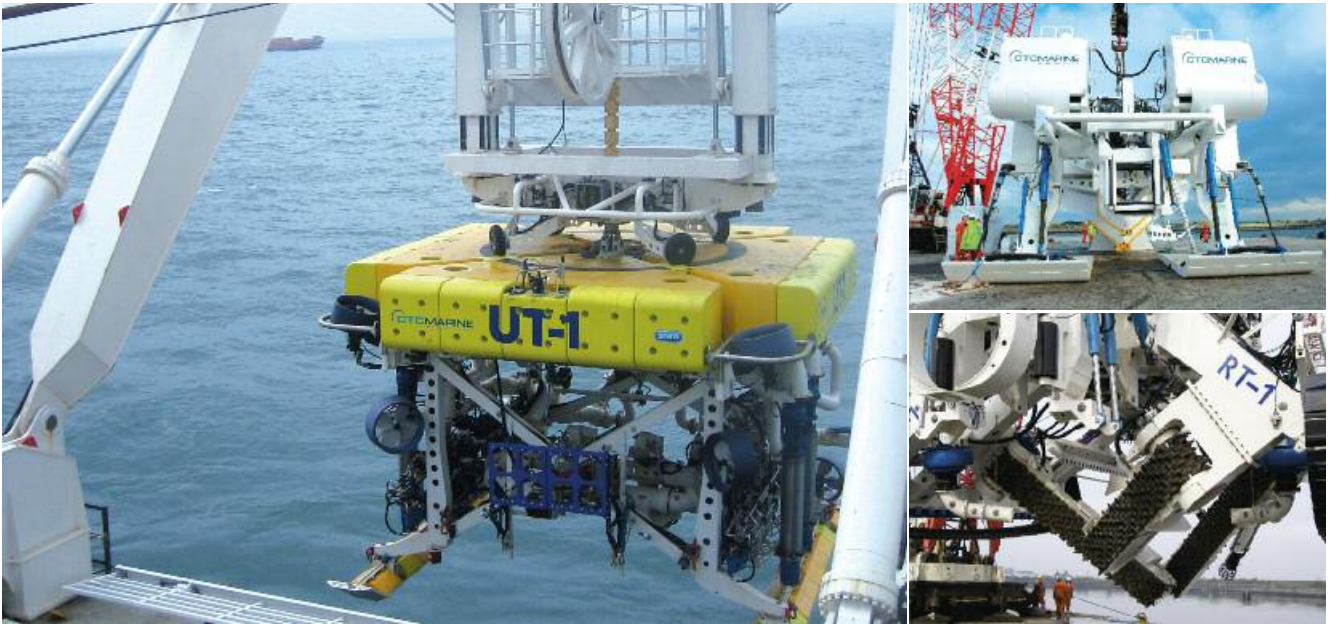
Guidelines, targets and incentives are set to ensure that the business continuously strives to improve the safety of its work. CTC also regards the need for individual responsibility as critical through all levels of the business and this is an essential part of its culture.

CTC is accredited to BS EN ISO 9001:2008 Quality Management System and OHSAS 18001:2007 Safety Management System both accredited by DNV and issued in 2005. CTC operates a robust Environmental Management System, in line with ISO 14001, which ensures an effective reporting system is used offshore. Operations are also carried out to meet any necessary safety rules and regulations as well as codes of practice and client specific requirements which are imposed. CTC is also FPAL and Achilles registered.

With the responsibility to protect the environment in every way it can, CTC focuses on minimising the impact to the environment resulting from routine offshore operational activities. CTC ensures that the most environmentally friendly methods are used offshore, and this is achieved by commitment to a strategy of continual environmental improvement and by using material and energy efficiently to provide its products and services.

DeepOcean is proud to be a member of the International Marine Contractors Association (IMCA).





SPECIALIST TECHNOLOGY

CTC is home to the world's largest fleet of high technology marine trenching and burial equipment, which is supported by a fleet of DP2 multi-role construction vessels, flexible installation and shallow water spreads.

These assets have an enviable reputation within the industry for reliability, which is brought about by the use of class leading preventative maintenance regimes, which are implemented and managed by one of the most experienced teams of asset support personnel in the world.

Jetting ROVs

CTC operates an advanced fleet of jet trenching ROVs. With the capability to operate globally in extreme weather and a variety of seabed conditions, the jettors are designed for rapid deployment providing an efficient and cost-effective solution for the burial, trenching and maintenance of rigid and flexible pipelines, umbilicals and power cables.

UT-1

- The world's most powerful jet trenching ROV
- Neutrally buoyant 2.1 Mega Watt jetting system
- Capable of providing rapid installation of flexible pipelines, flowlines and submarine cables using its bell mouth and cable capture tool
- Upgraded swords can provide ultra deep trenching

Ploughs

CTC operates a wide variety of pipeline, cable and umbilical ploughs from the pipeline plough APP, to the industry standard MD3 cable plough through to the more sophisticated and specialist equipment such as the Power Cable Plough 1 (PCP1) and 2 (PCP2).

Advanced Pipeline Plough (APP)

- Adjustable skids for enhanced burial performance
- Extensive track record for the post-lay burial of large diameter pipelines and flowlines to specification in multiple soils using multi-pass ploughing

- Flexible Heave Compensated launch and recovery system allows operation in extreme environmental conditions

Trenchers

CTC owns and operates mechanical trenchers ranging from RT-1, the most powerful underwater tracked vehicle in the world, to the smaller, lighter vehicles, T1 and T2 through to the Shallow Water Trencher SWT-1. The trenchers have a proven track record for the burial of pipelines, flowlines, umbilicals and submarine cables including Life of Field Seismic (LoFS) technologies and power cables.

RT-1 Rock Trencher

- 2.35 Mega Watts of effective trenching power
- Designed specifically for the burial of pipelines / trunklines in hard soil regions
- Advanced designed pipe lifting technology allows the safe and efficient lifting of heavy flooded pipelines





DIVERSE VESSEL FLEET

CTC can provide specialist designed but cost-effective DP2 vessel and barge solutions, which offer a variety of comprehensive installation and burial spreads

CTC operates a range of multi-role DP2 support vessels for installation, cable-laying and trenching, and has working relationships with suppliers of barges and alternative support vessels. It's long-term charter vessels are designed to operate in high sea states, with good station keeping and manoeuvring capabilities, whilst the barge can allow shallow water operations.

CTC operates Volantis, a world leading DP2 vessel capable of working in high sea states, the Maersk Recorder a high bollard pull vessel with two main cable and ancillary tanks and has access to an array of other construction vessels as part of DeepOcean Group. Working in partnership with barge suppliers, CTC can also provide a complete installation solution for shallow water cable installation and burial of large export and power cables.

Vessels

CTC can provide specialist designed but cost-effective DP2 vessel and barge solutions, which offer a variety of comprehensive installation and burial spreads. The vessels are designed to operate in high sea states, with good station keeping and manoeuvring capabilities, whilst the barge can allow shallow water operations. CTC also has access to an array of other construction vessels as part of DeepOcean Group.

Volantis

- Multi-role subsea construction, installation and trenching DP2 class vessel
- Equipped with a 2,000te rated capacity carousel (can be upgraded)
- Spread includes a 150te Active Heave Compensated crane and two permanently mobilised Workclass ROVs

Maersk Recorder

- High bollard pull, dynamically position, multi-role subsea construction, installation and trenching vessel
- Incorporate a 30te Active Heave Compensated crane and a 60te A-Frame system
- Equipped with two main cable and ancillary tanks, with specialised coiling systems for installation of circa 7,000te of cable

ASV Pioneer

- Fully classes and flagged shallow water cable installation barge
- Offered with a 2,000te cable carousel (upgradeable to 4,000te), trenching spread and onboard accommodation
- Large open deck space capable of a multitude of uses to support oil and gas and/ or renewable energy industries
- Barge is a suitable platform for a range of trenching equipment including the Power Cable Plough 2 (PCP2), other ploughs, jet trenching ROVs and mechanical trenchers

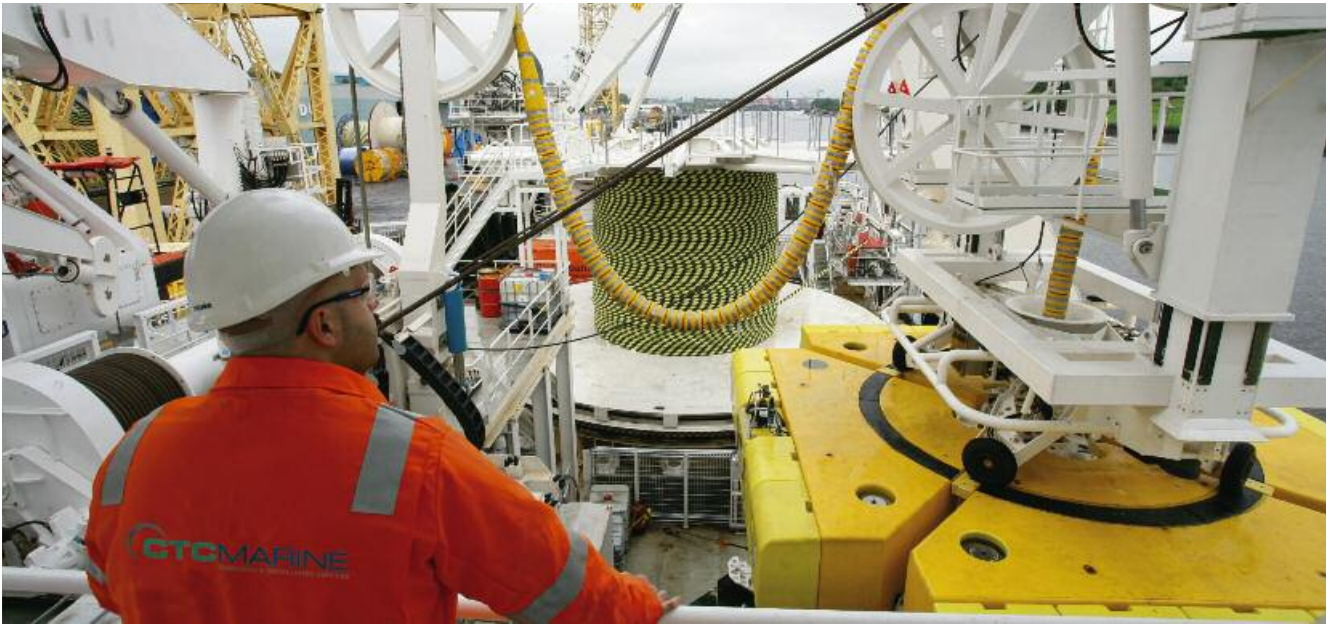
Lay Spreads

CTC operates a range of flexible installation and cable-lay spreads including under deck storage tanks, deck reels, cable baskets, cable engines and tensioners.

It also has an upgradeable 2,000te capacity flexible installation carousel which has a maximum lay speed of 1,200 metres per hour for the deployment of flexible pipelines, umbilicals and power cables. Its modular design, which includes a deck mounting system, enables rapid mobilisation and demobilisation on the vessel of opportunity without the need for welding the carousel structure to the deck.







EXPERIENCED PEOPLE

As a key component of its growth strategy, CTC has a strong commitment to training and development, allowing employees to recognise their full potential, whilst providing a successful contribution to the future of the company

The team works hard to ensure it delivers strong results which encourage customer loyalty and repeat business. At CTC, it is the passion, energy and professionalism of its people that makes it stand out from the crowd.

The depth and diversity of skill sets, capabilities and backgrounds within the organisation and the interaction between people and different cultures energises the CTC team to generate creative solutions with lasting value for its customers. CTC strives to attract and retain the best individuals with a flexible attitude, who understand CTC's customers' needs, and value the relationships with colleagues and co-workers.

New skills are being developed through Apprenticeship and Trainee programmes, and the Graduate Development Programme, as well as enhancing existing skills through specialist in-house training and seminars. A major investment has been made to develop the trenching industry's first reality Simulator, which allows the safe and effective in-house training in the use of our ploughing and jet trenching equipment.

CTC wants to be recognised as the employer people really want to work for...





PROJECT DRIVEN SOLUTIONS

CTC's engineering-intensive approach has established new standards of reliability and cost-effectiveness for its clients.

Project Management

A proactive integrated working relationship with the client is key to successful delivery. Having successfully project-managed a wide variety of complex offshore contracts, CTC is well placed to safely manage a range of cable installation and burial workscope to the satisfaction of operators and main contractors.

CTC's long term vessel charters, ownership of all trenching assets and dedicated offshore base, allows controlled management and on time delivery of complex installation and trenching spreads. During operations, CTC proactively works with the client and other contractors on the project to ensure logistic requirements and interfaces are clear to all parties. This reduces the potential for conflicts and project delays.

Engineering Services

CTC can provide extensive engineering and design support for the planning and execution of offshore and subsea operations, including detailed planning and schedules, documentation and drawings and project installation procedures. These range from new vessel and equipment fabrication and commissioning to vessel and equipment upgrades through to trenching and burial worksopes.

Engineers use a wealth of advanced software in-house, which allows extensive analysis of offshore operations, including:

- Finite Element Analysis of pipes, flexibles and umbilicals to determine bend and stress parameters
- Dynamic Analysis of vehicle launch and recovery systems to maximize the equipment operating window in the most extreme Sea States.





IN-HOUSE GEOTECHNICAL EXPERTISE

CTC is unique in managing geotechnical risk. Its in-house team matches geotechnical science with operational experience to select the right burial tools based on the data provided.

The Geotechnical team works as an internal consultancy service, providing a full range of geoscience-related support to CTC and key clients, focused on geotechnical and trenching engineering, but also including metocean advice and risk analysis.

Maintaining an extensive operational database, which combined with the use of predictive models where applicable, ensures the selection of the correct asset and that realistic performance estimates are made to comply with client burial goals, and ultimately project success.

Services include:

- Review of geophysical and geotechnical route survey data
- Detailed trenching assessments
- Hazard identification and risk mitigation
- Asset selection and burial performance estimation
- Commissioning of research and development, scale model testing
- Post project performance analysis



Tees Offshore Base

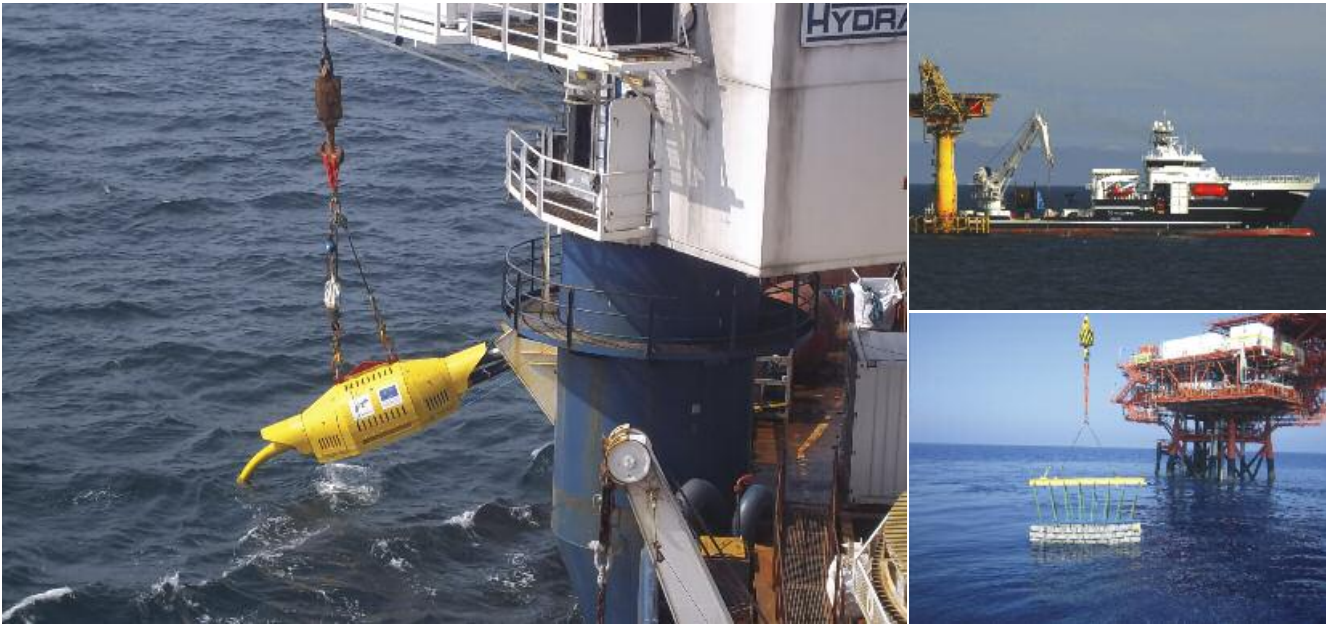
Teesside Offshore Base is CTC's large-scale UK Marine Base. It has an experienced workforce and successful track record in conducting major operations, including vessel and equipment mobilisations and demobilisations based on the 'Just in Time' principle, pipe spooling and other heavy construction projects.

The facility has full service sector support in the local area including engineering, freight forwarding, lifting, testing and service infrastructure, whilst it is also located next to CTC's long-term leased area, the 'Heavy Lift Quay' (HLQ) with its 200te capacity crane.

Services include:

- Ideal location for North Sea access
- Heavy Lift Quay
- 200te capacity crane
- 8 metre Lowest Astronomical Tide (LAT) deep water berth
- 24/7 operations
- Within easy access of all major arterial road networks

Geotechnical Decision Making Table						
COHESIONLESS SOIL - SAND						
Density	Very Loose	Loose	Medium Dense	Dense	Very Dense	Cemented
ASSET SELECTION	JETTERS			CUTTERS		
Strength	Very Soft	Soft	Firm	Stiff	Hard	Rock
COHESIVE SOIL - CLAY						



TRACK RECORD AND ALLIANCES

CTC is passionate about building a successful track record, which is brought about through the experience of its employees, the reliability of its technology and the commitment of its supply chain and strategic alliances

Track Record

In the last 20 years, CTC has successfully completed over 120 trenching and cable installation projects ranging in scope, value and complexity.

CTC's Track Record comprises:

- Approximately 15,000km of fibre optic cable and seismic array cable installed
- 750km of control umbilical, power cable and flexible pipeline, trenched or installed
- 850km of steel pipeline trenched

Procurement

The CTC procurement team manages the acquisition of all external goods, services and engineering equipment with the purpose of delivering best value for the company and its clients. The diverse nature of its requirements means that CTC has in-depth purchasing experience and knowledge across the full range of supply categories from subsea equipment and engineering services to transport and logistics through to IT and telecommunications.

CTC is able to provide the efficient delivery of all aspects of the procurement process to its client's projects by working through well established and proven systems and procedures appropriately developed to suit particular project needs. Since CTC's reputation relies heavily on the support of its suppliers it is essential that these systems are in place.

Alliances and Partnerships

CTC is keen to develop strategic alliances and partnerships with core suppliers and support networks in order to build a reliable supply chain, which will support CTC as it carries out repeat business but also as it expands into new markets and regions of the world.

CTC has established strategic partner alliances and frame agreements that work with its Engineering Department to strengthen its engineering capability and enable CTC to meet the demand of engineering services at peak times. These include:

- PDL Group – Finite Element Design and Modelling
- REFLEX – Naval Architecture and Structural Design
- RED MARINE – Conceptual Design, Equipment Design, Installation Feasibility Studies

CTC is also working with vessel and barge suppliers to strengthen its installation offering.

As well as this, CTC is a member of a number of Oil and Gas, Energy and Regional Business Development Organisations, which include:

- Sellihca
- FPAL
- Achilles
- IMCA
- Renewable UK
- Energy Industries Council (EIC)
- NOF Energy
- Subsea UK





DEEPOCEAN

A recognised market leader in the provision of high quality subsea services, including Inspection, Maintenance & Repair (IMR), survey and construction support

DeepOcean Services

Sister group, DeepOcean, owns and operates a specialised fleet of subsea vessels and work ROVs to provide IMR, survey and construction support and subsea decommissioning services. Complex IMR operations are made efficient through DeepOcean's ongoing innovation and dedicated people, resulting in its position as the largest IMR player in the demanding North Sea.

DeepOcean is committed to developing leading-edge technical solutions that are safe and efficient, so that subsea operations can work effectively with high accuracy in demanding and challenging conditions. This commitment has been brought to an even higher level with the introduction of two IMR vessels Edda Fauna and Edda Flora. These two vessels are now engaged on a year-round basis under a new long term IMR agreement with StatoilHydro on the Norwegian Continental Shelf, servicing the most sophisticated subsea installations in the world.

Its unique base of highly skilled personnel ensure that customer expectations are met. DeepOcean has an extensive track record in all aspects of seabed mapping, pipeline inspection and construction support vessels, modern equipment and on-off line data processing tools make DeepOcean an attractive partner for these operations.

DeepOcean is leading the way forward in the development of safe, effective diverless methods to dismantle offshore subsea structures. As Oil and Gas fields deplete, structural decommissioning becomes a reality. By adapting the company's existing expertise within engineering and operational planning together with an in-depth knowledge of remote subsea operations and development of specialised tooling, DeepOcean has demonstrated to its customers that it has the capabilities to solve and execute complicated projects within this novel market segment. Today, DeepOcean has an established track record in steelwork removal and recovery.





CTCMARINE
TRENCHING & INSTALLATION SERVICES

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