



**PROJECT TRACK RECORD**

SPT Offshore has vast experience in suction pile design, supply, recovery and offshore installations.

Since the founding of SPT in 1997 we successfully installed more than 1000 suction piles, in various soils, ranging from dense sands to stiff clays, as well as silts and layered soils.

Having more than 25 years of experience in suction piles, we are the leading EPCI contractor for suction pile anchors and foundations. We manage and undertake EPCI projects worldwide, from installing single suction anchors up to complete self installing platforms.





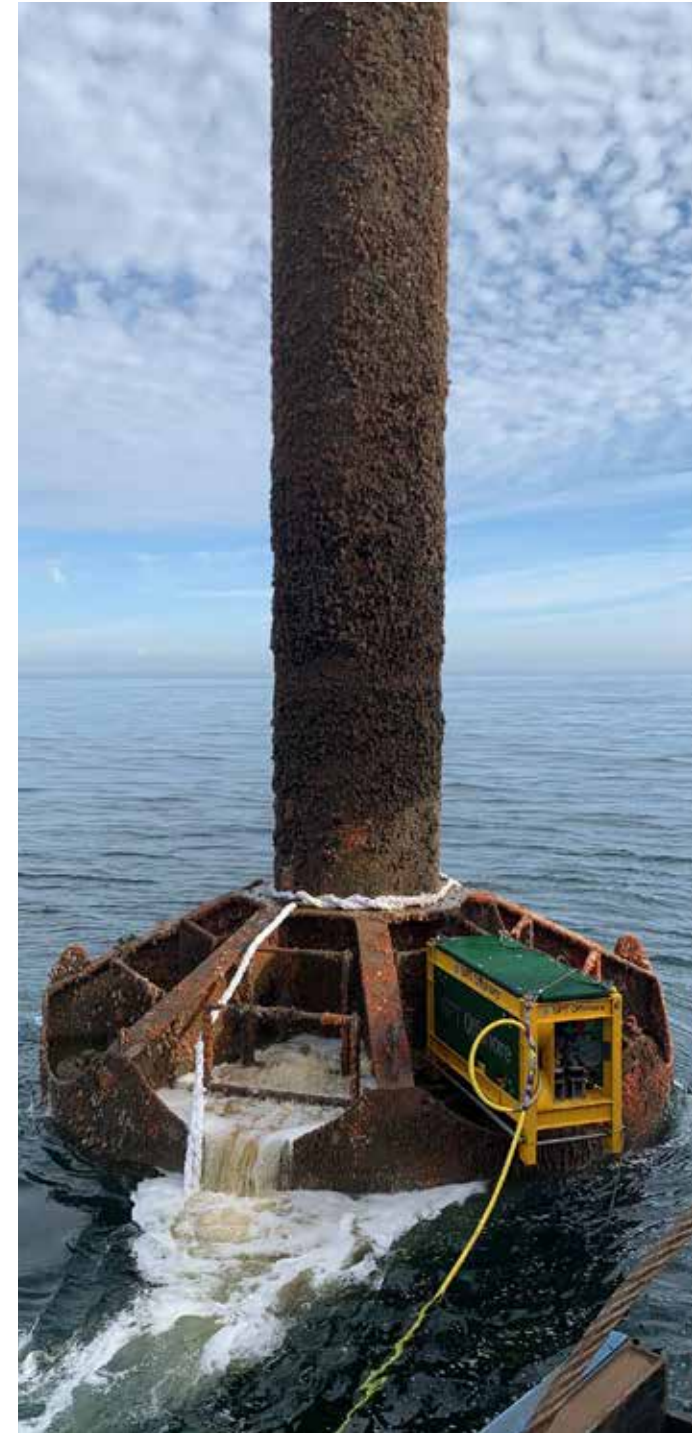
## Huntington Suction Piles Removal

Client	Boskalis
Year completed	2022
Location	Huntington field - North Sea
Waterdepth	90 m
Soil conditions	stiff clay
Project properties	#5x suction piles
Scope of work	Suction removal services, using bespoke interface frame to allow extra flow capacities (1000m3)
SPT Achievements	Six weeks project preparation time



## Wintershall MPP Decom Q4-B & P6-D

Client	Scaldis
Year completed	2022
Location	North Sea
Scope of work	Suction removal services
Project properties	#4x suction piles
Soil conditions	clay on sand
Water depth	21 - 30 m





## CTG Changle Waihai OWF Area A

Client	Fujian Yongfu Power Engineering Co
Year completed	2021
Location	Taiwan strait – Offshore China
Waterdepth	31-45 m
Soil conditions	Clay
Project properties	• #15 jackets of each 8 - 10 MW WTG
Scope of work	Concept design suction pile jacket, detailed design of suction piles, suction installation analysis and suction installation services
SPT Achievements	Jacket suction installations varied between 2-4 hrs and verticality of all jackets well below 0.1 degrees



## Fujiang Energy Changle Waihai OWF Area C

Client	Fujian Yongfu Power Engineering Co
Year completed	2021
Location	Taiwan strait – Offshore China
Waterdepth	31-45 m
Soil conditions	Clay
Project properties	• #57 jackets of each 8 - 10 MW WTG
Scope of work	Concept design suction pile jacket, detailed design of suction piles, suction installation analysis and suction installation services
SPT Achievements	Jacket suction installations varied between 2-4 hrs and verticality of all jackets well below 0.1 degrees



## CTG YangXi Shaba OWF

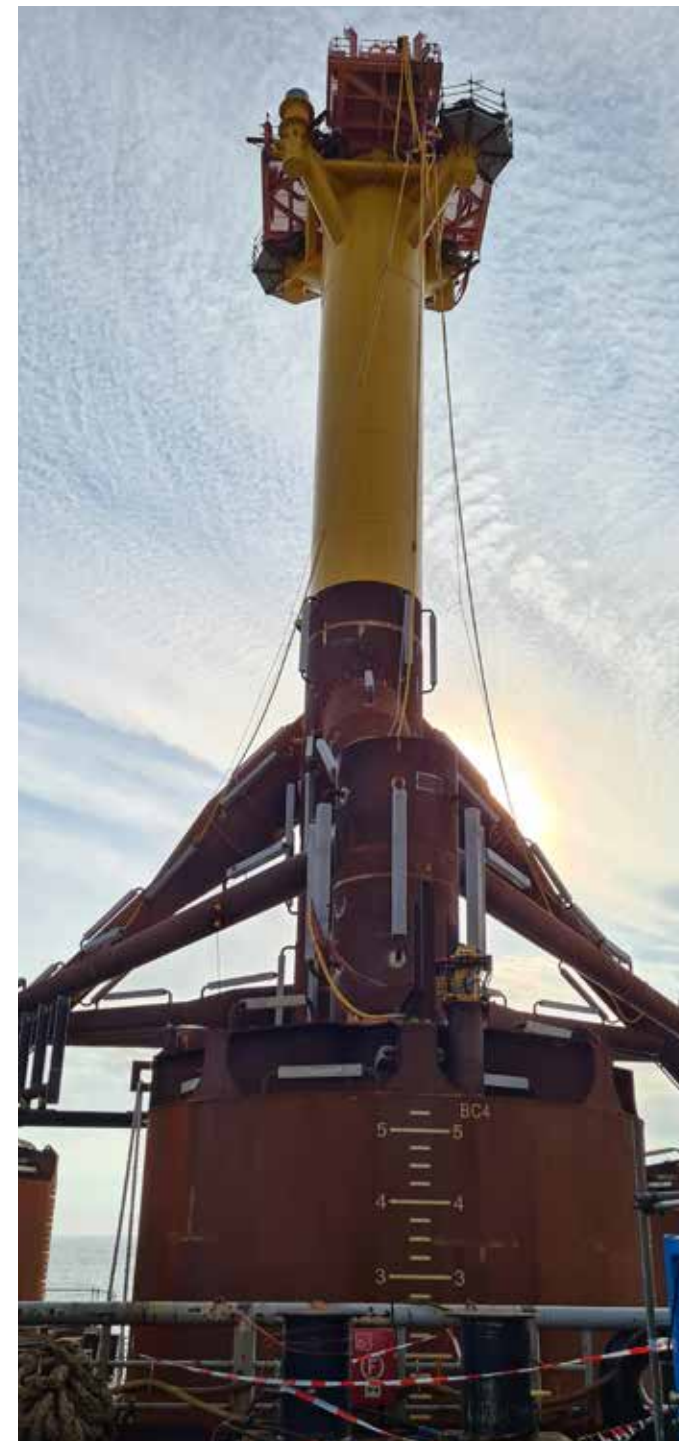
Client	Guangzhou Salvage
Year completed	2020
Location	South China Sea
Scope of work	<ul style="list-style-type: none"><li>• Installation Engineering</li><li>• Review and verification of suction pile detailed design</li><li>• Supply of SAPS-007 suction equipment</li><li>• Offshore preparation and suction installation services of 3 Suction Pile Jackets</li></ul>
Project properties	<ul style="list-style-type: none"><li>• #3x suction piles of ech 8 MW WTG</li></ul>
Soil conditions	very soft clays overlaying dense to very dense sand
Water depth	28 m
SPT achievements	<ul style="list-style-type: none"><li>• suction Installation of SPJ 3.0 to 4.5 hours</li><li>• verticality within 0.03 deg</li></ul>





## IOG Blythe and Southwark

Client	HSM/Seaway
Year completed	2021
Location	North Sea UK
Waterdepth	30 m
Soil conditions	Southwark: sand Blythe: sand on clay
Scope of work	<ul style="list-style-type: none"><li>• Design and supply of #7 suction piles foundations for two platforms</li><li>• Suction installation services</li></ul>
Project properties	<ul style="list-style-type: none"><li>• Blythe: #3 suction piles, Southwark: #4 suction piles</li></ul>
SPT Achievements	Innovative scour protection system designed and supplied of first commercial system within 1 year after order.



## COOEC Startup Pile Lingshui

Client	Allseas
Year completed	2020
Location	South China Sea, Lingshui offshore field
Waterdepth	1560 m
Soil conditions	Clay
Project properties	#1 x suction pile
Scope of work	Installation verification, supply of suction start-up pile and suction equipment and provision of suction services
SPT Achievements	Pile was successfully installed and retrieved multiple times with the SPT deepwater suction pump SAPS-003 operated by a working class ROV



## Petrofac East Cendor

Client	Muhibbah Engineering Bhd
Year completed	2020
Location	Offshore Malaysia, Block East Cendor
Scope of work	<ul style="list-style-type: none"> <li>• Basic and detailed design suction pile foundation</li> <li>• T&amp;I engineering</li> <li>• Transportation of jacket and boat-landing</li> <li>• Offshore installation of jacket and boat-landing</li> </ul>
Project properties	• #2 x suction piles
Soil conditions	Firm to stiff clay
Water depth	64 m
SPT achievements	<ul style="list-style-type: none"> <li>• Jacket verticality within 0.1 degrees</li> <li>• Offshore pump installation (mitigation to COVID-restrictions)</li> <li>• Successful installation of jacket and boat-landing</li> </ul>





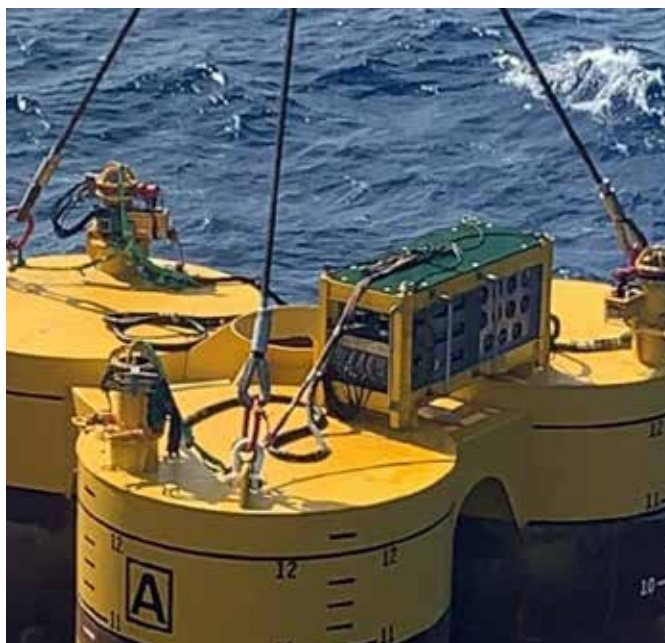
## Vestigo Ophir Relocation/Jitang

Client	Redtech Offshore
Year completed	2019
Location	Jitang field, Malaysia
Scope of work	<ul style="list-style-type: none"><li>• Design and engineering for removal, transport and installation</li><li>• Removal of WHP at Ophir location</li><li>• Transit from Ophir to Jitang location</li><li>• Installation of wellhead platform (WHP) at Jitang location</li></ul>
Project properties	<ul style="list-style-type: none"><li>• #3 suction piles</li></ul>
Soil conditions	Very soft to stiff clay
Water depth	74 m
SPT achievements	<ul style="list-style-type: none"><li>• One-piece relocation of WHP completed in only 3 days</li><li>• Platform installed within tolerances (0.03 degrees vertical)</li><li>• Delivery within 4 months</li></ul>



## Suction Pile Cluster

Client	Chinese contractor
Year completed	2019
Location	China
Scope of work	Design, supply and installation of suction pile cluster pile, design and supply of project specific pump equipment, offshore suction services
Project properties	#2 x cluster pile foundations
Soil conditions	Soft clay
Water depth	1200 m
SPT achievements	<ul style="list-style-type: none"> <li>• Design and delivery of 2 cluster suction piles in 4 months</li> <li>• Successful suction installation operation</li> </ul>



## Ørsted Changhua Offshore Pile Test

Client	Per Aarsleff
Year completed	2019
Location	Offshore Taiwan
Scope of work	Design and engineering, supply of project specific pump equipment, offshore suction services
Project properties	Installation and removal of Pile Guide Frame with suction piles (2 locations)
Soil conditions	Sandy soils laminated with silt/clay
Water depth	40 m
SPT achievements	<ul style="list-style-type: none"> <li>• Delivery of surface controlled pump system</li> <li>• Average of only 5 hours per installation or removal</li> <li>• Verticality control using via suction pumps</li> </ul>





## CNOOC Mooring Piles Liu Hua

Client	COOEC (China Offshore Oil Engineering Co.)
Year completed	2019 (LOT1), 2019 (LOT2), 2020 (LOT3)
Location	Liu Hua field, 250 km southeast of Hong Kong in the South China Sea, China
Scope of work	<ul style="list-style-type: none"><li>• Project Management and Installation Engineering</li><li>• Review and verification of Mooring Piles</li><li>• Detailed Design</li><li>• Offshore preparation</li><li>• Suction installation services</li></ul>
Project properties	# 9x suction piles
Soil conditions	Firm olive grey silty CLAY overlaying with approx. 2m soft to very soft grey silty clay
Water depth	420 m
SPT achievements	Successfully installed all Mooring Piles within 7 days. For the individual mooring piles it took only 2.5 hours to reach the required penetration depth of 16 m



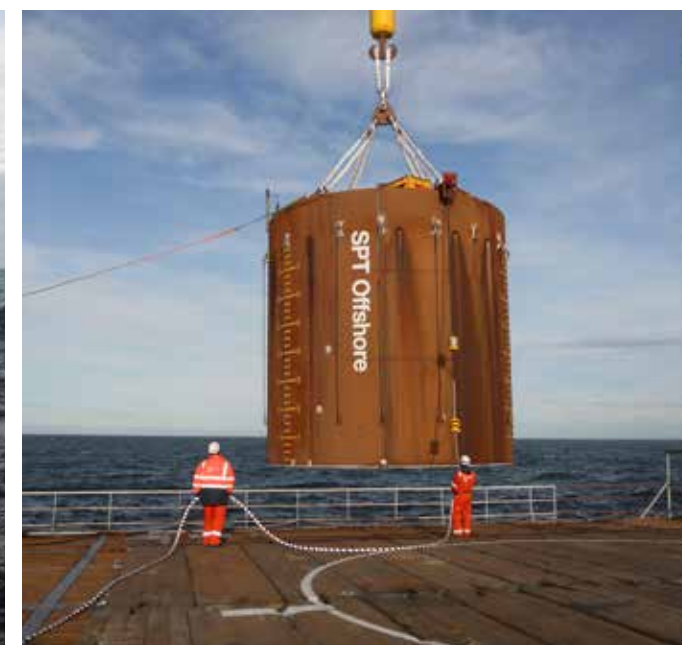
## PEMEX Demar PLEM 2

Client	GDT Offshore
Year completed	2016
Location	Ayatsil field, Mexico
Scope of work	<ul style="list-style-type: none"> <li>• Project management</li> <li>• Installation engineering</li> <li>• Suction installation services</li> </ul>
Project properties	#4 x suction piles
Soil conditions	Sand layer overlaying a clay layer
Water depth	115 m
SPT achievements	<ul style="list-style-type: none"> <li>• After hitting a coral layer below seabed level, a new location was identified</li> <li>• PLEM relocated and the PLEM was installed in 1 hr to final penetration on the new location</li> </ul>



## SSE Seagreen Suction Pile Test Campaign

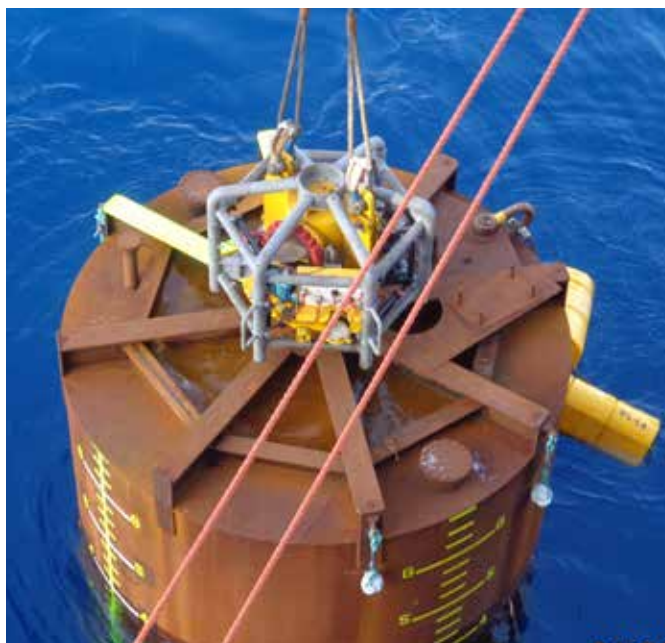
Client	Seagreen Wind Energy Ltd
Year completed	2019
Location	Seagreen, UK (Scottish East coast)
Scope of work	<ul style="list-style-type: none"> <li>• Project Management</li> <li>• Geotechnical and Installation Engineering</li> <li>• T&amp;I scope for installation trials</li> <li>• Issue of Geotechnical factual and interpretative Trial Campaign As-Built reports</li> </ul>
Project properties	#1 suction pile
Soil conditions	Silty fine sand and extremely high strength clay
Water depth	40-60 m
SPT achievements	Successfully installed a test bucket at #29 test locations including #3 cycling tests and #2 landing on Seabed Tests within 21 days





## Noble Leviathan

Client	Allseas
Year completed	2019
Location	Offshore mediterrian
Scope of work	<ul style="list-style-type: none"> <li>• Project management and preparation of installation engineering document for 2 start-up piles.</li> <li>• Provison of start-up pile and suction installation services</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #2</li> <li>• Start -up forces maximum 45 mT</li> </ul>
Soil conditions	Soft clays
Water depth	1650 m
SPT achievements	Two sucion piles installed in January 2018 from the Allseas vessel Audacia with the SAPS-003 and removed a year later in January 2019 with the same spread again



## Moheskhalı Floating LNG

Client	Jumbo Offshore
Year completed	2019
Location	Bangladesh
Scope of work	<ul style="list-style-type: none"> <li>• Design</li> <li>• Suction installation services</li> <li>• Detailed design and supply adapter frames for suction installations</li> </ul>
Project properties	#9 x suction pile
Soil conditions	Layered soil
Water depth	436 m
SPT achievements	<ul style="list-style-type: none"> <li>• Suction installation of only 1.5 hour per pile</li> <li>• Structures successfully installed without the need for ROV interventions</li> </ul>



## Summit FSRT

Client	Geocean
Year completed	2018
Location	Offshore Bangladesh
Scope of work	Review installation documents and suction installation services.
Project properties	<ul style="list-style-type: none"> <li>• #8 Mooring piles</li> <li>• #1 PLEM</li> <li>• #1 PAD</li> </ul>
Soil conditions	Overconsolidated clayey soils with an overlaying sand layer
Water depth	33 m
SPT achievements	All suction piles installed to target penetration within 3.5 hrs with the SAPS-007 suction spread



## Dogger Bank Met Mast Removal

Client	Ardent Global
Year completed	2017
Location	UK Sector North Sea Dogger Bank
Scope of work	<ul style="list-style-type: none"> <li>• Engineering and subsea services for removal of two mono bucket met masts.</li> <li>• Detailed design and supply of mono bucket Interface frame</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #2x mono buckets</li> </ul>
Soil conditions	Sand (East) and clay (West)
Water depth	25 m
SPT achievements	<ul style="list-style-type: none"> <li>• Design and supply custom interface frame</li> <li>• High capacity pumps proven to be compatible for alternative suction pile interfaces</li> <li>• Pressure-controlled operations with 0.1 bar accuracy by the SPT pumps.</li> <li>• After 4 years of service life, each bucket swiftly pressed out of seabed in only 3.5 hours</li> </ul>





## Vattenfall Aberdeen OWF (European Offshore Wind Deployment Centre)

Client	Boskalis
Year completed	2018
Location	UK North Sea
Scope of work	<ul style="list-style-type: none"> <li>• Detailed design of #4 different suction pile jacket foundations</li> <li>• Basic design of #2 different suction pile jackets</li> <li>• Installation of #11 suction pile jacket foundations</li> </ul>
Project properties	#9 SPJ of eacht 8.4 MW and #2 SPJ of eacht 8.8 MW WTG.
Soil conditions	Loose to very dense sand overlaying soft to very stiff clay overlaying bedrock
Water depth	19 m to 32 m
SPT achievements	<ul style="list-style-type: none"> <li>• Installation of suction pile jacket (SPJ) foundation in 55 minutes to 3 hours</li> <li>• Average on-site installation time of 15 hours</li> <li>• Verticality &lt; 0.01 deg</li> </ul>





## Ophir Wellhead Platform

Client	Muhibbah Engineering Bhd
Year completed	2017
Location	Block PM-315, Malaysia
Scope of work	<ul style="list-style-type: none"><li>• Basic and detailed design suction pile foundation</li><li>• Basic design of jacket</li><li>• T&amp;I engineering</li><li>• Transportation of jacket and topsides</li><li>• Offshore installation of jacket and topsides</li></ul>
Project properties	• #3 x suction piles
Soil conditions	Very soft to stiff clay
Water depth	73 m
SPT achievements	<ul style="list-style-type: none"><li>• Complete offshore installation campaign within only 3 days</li><li>• Jacket installation within 24 hours</li><li>• Jacket vertically within 0.2 degrees</li><li>• Succesfull project execution within schedule and budget</li></ul>





## Equinor Dudgeon Substation

Client	SLP Sembmarine
Year completed	2016
Location	UK North Sea
Scope of work	<ul style="list-style-type: none"> <li>Detailed design suction pile foundation</li> <li>Supply of suction pile foundation</li> <li>Installation of suction pile foundation</li> </ul>
Project properties	#4x suction piles
Soil conditions	Dense sand to stiff clay
Water depth	23 m
SPT achievements	<ul style="list-style-type: none"> <li>Installation of suction pile foundation in 2.5 hours</li> <li>Verticality of 0.01 deg</li> </ul>



## PEMEX Ayatsil PLEM

Client	Swiber
Year completed	2016
Location	Gulf of Mexico
Scope of work	Installation of the suction pile foundation
Project properties	#4x suction piles
Soil conditions	Medium dense sand and soft clay
Water depth	110 m
SPT achievements	Suction pile foundation installation in only 45 minutes



## PEMEX Demar PLEM 2

Client	GDT Offshore
Year completed	2016
Location	Ayatsil field, Mexico
Scope of work	<ul style="list-style-type: none"> <li>• Project management</li> <li>• Installation engineering</li> <li>• Suction installation services</li> </ul>
Project properties	#4 x suction piles
Soil conditions	Sand layer overlaying a clay layer
Water depth	115 m
SPT achievements	<ul style="list-style-type: none"> <li>• After hitting a coral layer below seabed level, a new location was identified</li> <li>• PLEM relocated and the PLEM was installed in 1 hr to final penetration on the new location</li> </ul>



## Vattenfall Aberdeen OWF Suction Bucket Test

Client	Boskalis
Year completed	2016
Location	Uk North Sea
Scope of work	<ul style="list-style-type: none"> <li>• Suction installation and retrieval tests on several locations</li> <li>• Design and fabrication a Full Scale Suction Bucket similar to the intendend WTG foundations</li> <li>• Analyze results</li> </ul>
Project properties	#2 x suction pile
Soil conditions	Sand and clay
Water depth	21 - 35 m
SPT achievements	<ul style="list-style-type: none"> <li>• Modification of DNV correlation factors for in-situ soil conditions</li> <li>• Confirm applicability of mitigating measures</li> </ul>





## PEMEX Bridge Support Structure

Client	Nuvoil
Year completed	2016
Location	Sonda de Campeche, Gulf of Mexico
Scope of work	Installation suction pile foundation
Project properties	• #3 x suction piles
Soil conditions	Soft clay and medium dense sand
Water depth	43 m
SPT achievements	• Installation of suction pile foundation in 2 hours • Verticality of 0.01 deg



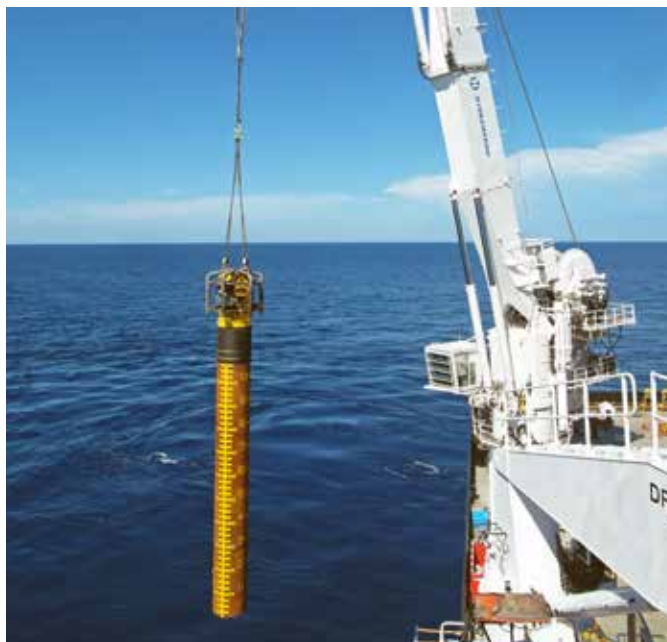
## Allseas Pioneering Spirit Test Frame

Client	Allseas
Year completed	2016
Location	K13, Dutch North Sea
Scope of work	• Detailed design suction pile foundation • Supply suction pile foundation • Installation suction pile foundation
Project properties	• #4 x suction piles
Soil conditions	Dense to very dense sand
Water depth	27 m



## Shell Malikai

Client	Technip
Year completed	2015
Location	Sabah, Malaysia
Scope of work	<ul style="list-style-type: none"> <li>Detailed design and supply of suction pile interface and hatches</li> <li>Installation of 14 no. turning bollard suction piles</li> <li>Installation of 2 no. pipeline restraint suction piles</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>#14x turning bollard suction piles</li> <li>#2 x pipeline restraint suction piles</li> </ul>
Soil conditions	Soft clay
Water depth	500 m
SPT achievements	Average complete suction pile installation of only five hours per pile



## BP Foinhaven

Client	Subsea7
Year completed	2015
Location	UK North Sea
Scope of work	<ul style="list-style-type: none"> <li>Installation and removal services.</li> <li>Rental of suction pile</li> </ul>
Project properties	#1 x suction pile
Soil conditions	Very soft to firm clay
Water depth	500 m





## Support Suction Piles for PGN Repair

Client	DCN
Year completed	2015
Location	Indonesia, offshore Jakarta
Scope of work	<ul style="list-style-type: none"> <li>• Management and installation engineering.</li> <li>• Detailed design of four suction pile foundations</li> <li>• Suction installation services</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #5 x suction piles</li> <li>  (#1 x test pile and #4 foundation piles)</li> </ul>
Soil conditions	Soft clay
Water depth	25 m
SPT achievements	<ul style="list-style-type: none"> <li>• Installation of test pile for verification of soil characteristics</li> <li>• Installation and removal of piles in less than 15 min. each</li> <li>• Certificate of Great Achievement by PGN Indonesia</li> </ul>



## Wintershall L6-B Minimum Facility

Client	Scaldis Salvage and Marine Contractors
Year completed	2014
Location	North Sea Dutch sector block L6
Scope of work	<ul style="list-style-type: none"> <li>• Concept design of platform transport &amp; installation</li> <li>• Design and engineering of the suction piles</li> <li>• Installation of suction piles</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #3 x suction piles</li> </ul>
Soil conditions	Layered sandy & silty soils with clay bands
Water depth	35 m
SPT achievements	<ul style="list-style-type: none"> <li>• Mobilization, installation and demobilization in only three days</li> <li>• Verticality within 0.01 deg</li> <li>• First of its kind one piece transportation and installation</li> </ul>



## Ørsted Borkum Riffgrund Wind Turbine

Client	Ørsted
Year completed	2014
Location	German North Sea
Scope of work	<ul style="list-style-type: none"> <li>• Installation Engineering</li> <li>• Offshore installation of suction bucket jacket</li> </ul>
Project properties	• #3 x suction piles for a SPJ of 3.6 MW WTG
Soil conditions	Dense sands
Water depth	25 m
SPT achievements	<ul style="list-style-type: none"> <li>• First wind turbine jacket founded on suction piles installed worldwide</li> <li>• Approval of German BSH</li> <li>• Successful installation through pre-installed anti-scour filter layer</li> </ul>



## PEMEX Line 3 & 11 Ayatsil field

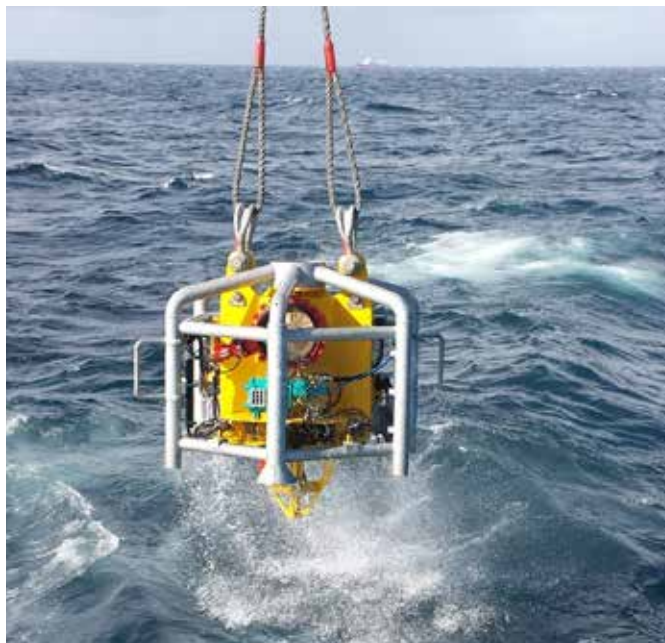
Client	Swiber
Year completed	2014
Location	Gulf of Mexico
Scope of work	<ul style="list-style-type: none"> <li>• Installation and removal engineering.</li> <li>• Rental of start-up suction pile</li> <li>• Installation and removal services</li> </ul>
Project properties	#1 x suction pile
Soil conditions	Very soft to soft clays
Water depth	120 m





## Equinor Asgard Field Development

Client	Allseas
Year completed	2013
Location	Norwegian North Sea
Scope of work	<ul style="list-style-type: none"> <li>• Installation and removal engineering</li> <li>• Suction pile design verification</li> <li>• Installation and removal services</li> </ul>
Project properties	#1 x suction pile
Soil conditions	Silty clay
Water depth	300 m



## Gaz de France Q13-A Platform

Client	Seaway Heavy Lifting
Year completed	2013
Location	North Sea, Dutch Sector
Scope of work	<ul style="list-style-type: none"> <li>• Detailed design suction pile foundation</li> <li>• Installation of suction pile foundation</li> </ul>
Project properties	#4 x suction piles
Soil conditions	Dense to very dense sand
Water depth	20 m
SPT achievements	<ul style="list-style-type: none"> <li>• Installation within 2.5 hours</li> <li>• Vertically within 0.65 deg</li> <li>• Installed over an existing well</li> </ul>



## Global Tech 1 Transformer Substation

Client	Keppel Verolme
Year completed	2013
Location	North Sea German Bight
Scope of work	<ul style="list-style-type: none"> <li>• Preparation and review of platform T&amp;I procedures</li> <li>• Geotechnical design suction piles</li> <li>• Installation engineering for installation of suction piles</li> <li>• Provision of construction crew on vessel</li> <li>• Installation of suction piles</li> </ul>
Project properties	• #4 x suction piles
Soil conditions	Dense sands
Water depth	40 m
SPT achievements	First suction pile foundation in the German sector approved by BSH



## Wintershall Multi Purpose Platforms (3x)

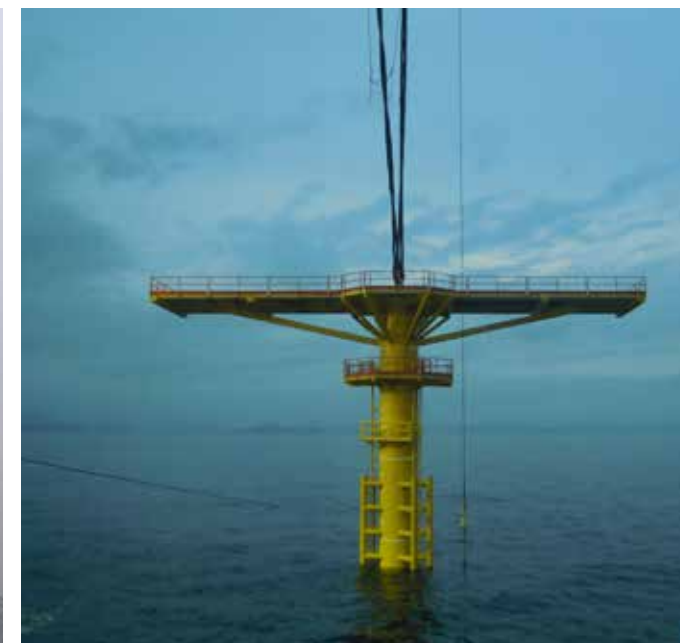
Client	Wintershall
Year completed	2013, 2001, 2000, 1997
Location	North Sea Dutch sector P2 and P6
Scope of work	<ul style="list-style-type: none"> <li>• Installation of the suction pile foundations for 3 MPPs</li> <li>• Relocation of 3 MPPs in 2000, 2001, 2013</li> </ul>
Project properties	• #4x suction piles
Soil conditions	Sandy and occasional clayey soils
Water depth	25m-30 m
SPT achievements	<ul style="list-style-type: none"> <li>• All three platforms relocated without port call</li> <li>• Relocation (de-installation and re-installation) of each platform in only 3 days</li> </ul>





## CLP Hong Kong Met Mast

Client	COOEC
Year completed	2012
Location	Hong Kong, South China Sea
Scope of work	<ul style="list-style-type: none"> <li>Detailed design suction pile foundation</li> <li>Installation of SIP1 suction pile foundation</li> </ul>
Project properties	#3 x suction piles
Soil conditions	Soft clay and medium dense sand
Water depth	30 m
SPT achievements	<ul style="list-style-type: none"> <li>Verticality of the structure within 0.12 deg</li> <li>Installation of suction pile foundation in one hour</li> </ul>



## EON Huntington FPSO

Client	Sevan Marine
Year completed	2012
Location	UK Central North Sea
Scope of work	<ul style="list-style-type: none"> <li>Installation engineering for loadout, handling and installation of suction pile mooring</li> <li>Provision of construction crew on vessel</li> <li>Installation of suction pile</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>#12 x suction pile</li> <li>250 m chain section</li> </ul>
Soil conditions	Stiff clays
Water depth	90 m
SPT achievements	6 weeks project preparation time



## Noble Hadera Oil Offloading Buoy

Client	Micoperi
Year completed	2012
Location	Mediterranean
Scope of work	<ul style="list-style-type: none"> <li>• Installation engineering for installation of suction piles</li> <li>• Installation of suction piles</li> </ul>
Project properties	#8 x suction piles
Soil conditions	Soft to medium stiff clays
Water depth	80 m



## Noble Tamar Development

Client	Allseas Marine Contractors
Year completed	2011
Location	Mediterranean
Scope of work	<ul style="list-style-type: none"> <li>• Suction pile installation engineering</li> <li>• Rental of suction piles</li> <li>• Installation and removal of suction piles</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #2 x rental suction piles</li> <li>• Suction pile weight 25 t each</li> </ul>
Soil conditions	Soft clays
Water depth	1,700 m
SPT achievements	<ul style="list-style-type: none"> <li>• One of the deepest suction piles installed by SPT Offshore</li> <li>• Quick installation in critical vessel time</li> </ul>





## Athena FPSO

Client	Bibby Offshore
Year completed	2011
Location	UK Central North Sea
Scope of work	<ul style="list-style-type: none"> <li>• Suction pile installation engineering</li> <li>• Suction pile installation services</li> </ul>
Project properties	• #9 x suction pile
Soil conditions	Sandy and clayey soils
Water depth	140 m



## Ithaca Energy Jacky

Client	HSM Offshore
Year completed	2009
Location	UK North Sea, Beatrice area
Scope of work	<ul style="list-style-type: none"> <li>• Detailed design suction pile foundation</li> <li>• Supply of suction piles</li> <li>• Installation of SIP1 tripod suction pile foundation</li> </ul>
Project properties	• #3 x suction piles
Soil conditions	Sand with cobbles
Water depth	45 m
SPT achievements	<ul style="list-style-type: none"> <li>• EPCI schedule of 9 months</li> <li>• Jacket docked over an existing well</li> </ul>



## Shell Riser Access Tower

Client	ALE Heavylift
Year completed	2011
Location	K15 Dutch North Sea
Scope of work	<ul style="list-style-type: none"><li>• Suction pile installation engineering</li><li>• Suction pile installations services</li><li>• ROV services</li><li>• Positioning services</li></ul>
Project properties	<ul style="list-style-type: none"><li>• #4 x suction piles</li></ul>
Soil conditions	Sands
Water depth	30 m





## Centrica F3-FA

Client	Heerema Fabrication Group
Year completed	2010
Location	Dutch sector North Sea F3-FA field
Scope of work	<ul style="list-style-type: none"><li>• Transport from Flushing to F3FA site &amp; offshore installation SIP2 self installing platform</li><li>• Detailed design suction piles</li><li>• Supply of suction piles</li><li>• Detailed design grillage and seafastening</li><li>• Supply of seafastening beams</li><li>• Supply of deck cantilever beams</li><li>• Marine design and model testing at test basin MARIN</li></ul>
Project properties	• #4 x suction piles
Soil conditions	Dense to very dense sands
Water depth	41 m
SPT achievements	<ul style="list-style-type: none"><li>• Re-usable concept for short life of field of 7 years</li><li>• 18 months EPCI contract schedule</li><li>• Offshore installation in only 52 hours</li><li>• Concept insensitive to weather downtime and weight growth</li></ul>



## GFI FPSO mooring

Client	EMAS
Year completed	2007-2008
Location	Gulf of Thailand
Scope of work	<ul style="list-style-type: none"> <li>• Design of suction pile cluster</li> <li>• Installation of suction pile cluster</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #1 x suction pile cluster with</li> <li>  #3 x suction piles</li> </ul>
Soil conditions	Soft to stiff clays
Water depth	30 m



## ENI Rosetta

Client	Saipem
Year completed	2008
Location	Mediterranean, Egypt
Scope of work	<ul style="list-style-type: none"> <li>• Rental of suction pile installation spread for installation of foundation of manifold protection structure</li> </ul>
Project properties	<ul style="list-style-type: none"> <li>• #4 x triangular suction compartments</li> </ul>
Soil conditions	Soft clays
Water depth	100 m





## Chevron Frade Field Subsea Development

Client	Subsea7
Year completed	2007-2008
Location	Brazil
Scope of work	<ul style="list-style-type: none"> <li>• Detailed design of suction piles for the mooring of subsea risers</li> <li>• Supply of suction piles in Brazil</li> <li>• Installation of suction piles using ultra deepwater suction pump SAPS-003</li> </ul>
Project properties	#22 suction piles
Soil conditions	Soft clays
Water depth	1,100 m



## Berbice Bridge Pontoon Mooring

Client	Bosch Rexroth
Year completed	2007
Location	Berbice River, Guyana
Scope of work	<ul style="list-style-type: none"> <li>• Detailed design of Suction Embedded Anchors (SEA)</li> <li>• Supply and supply of suction embedded anchors</li> <li>• Installation of suction embedded anchors</li> </ul>
Project properties	#80 UHC suction embedded anchors with 100 mT capacity
Soil conditions	Soft to very stiff clays
Water depth	3 – 12 m



## Talisman Malaysia Bunga Raya

Client	Talisman
Year completed	2006
Location	Malaysia
Scope of work	<ul style="list-style-type: none"> <li>• Design of monopods and suction pile foundations</li> <li>• Marine design, transport and installation engineering</li> <li>• Installation of 2 SIMs</li> </ul>
Soil conditions	Clayey soils
Water depth	55 m
SPT achievements	<ul style="list-style-type: none"> <li>• Cost efficient and low impact platform extension founded on 2 suction pile based monopods</li> <li>• EPCI schedule in 4 months met</li> </ul>



## PetroCanada de Ruyter Development

Client	Boskalis
Year completed	2006
Location	North Sea, Dutch sector
Scope of work	<ul style="list-style-type: none"> <li>• Installation of GBS suction skirt foundation</li> <li>• Installation of cluster suction pile foundation</li> </ul>
Project properties	• #4 x suction piles
Soil conditions	Silty sands
Water depth	25 m





## Amerada Hess Ceiba Subsea Development

Client	Subsea7
Year completed	2003-2006
Location	Equatorial Guinea, West Africa
Scope of work	<ul style="list-style-type: none"> <li>Detailed design of suction pile cluster foundation</li> <li>Supply and installation of suction pile cluster foundations</li> </ul>
Project properties	#25 x suction piles cluster of #3 x suction piles
Soil conditions	Soft clays
Water depth	700 – 900 m
SPT achievements	Verticality of all suction pile foundations within 0.5 deg



## Talisman Bunga Raya Subsea Jacket

Client	Talisman
Year completed	2003
Location	Offshore Malaysia
Scope of work	<ul style="list-style-type: none"> <li>Design of suction pile foundation</li> <li>Marine design verification</li> <li>Installation procedures</li> <li>Installation of free floating jacket suction pile foundation</li> </ul>
Project properties	#4 x suction pile
Soil conditions	Firm clays
Water depth	53 m
SPT achievements	Application of SPT Offshore's patented technology 'buoyancy in suction piles', making a platform wet tow feasible



## ConocoPhillips Calder

Client	Genesis Oil & Gas Consultants
Year completed	2002
Location	East Irish Sea, UK
Scope of work	<ul style="list-style-type: none"> <li>• Design of suction pile foundation</li> <li>• Supply of 4 suction piles</li> <li>• Marine design and preparation of transport and installation procedures</li> <li>• Transportation and installation of complete SIP2 platform</li> </ul>
Project properties	• #4x suction piles
Soil conditions	Loose to very dense sands
Water depth	30 m + 9 m tide
SPT achievements	<ul style="list-style-type: none"> <li>• EPCI schedule of 9 months met</li> <li>• Installation of suction piles in gravel layered soil</li> </ul>



## ConocoPhillips Millom West

Client	Genesis Oil & Gas Consultants
Year completed	2000
Location	East Irish Sea, UK
Scope of work	<ul style="list-style-type: none"> <li>• Suction pile foundation design</li> <li>• Marine design and T&amp;I procedures</li> <li>• Suction pile installation services</li> </ul>
Project properties	• #4 x suction piles
Soil conditions	Loose to very dense sands
Water depth	29 m





## Chevron North Nemba Flare Jacket

Client	Subsea7
Year completed	1999
Location	Angola
Scope of work	<ul style="list-style-type: none"><li>• Design of suction pile foundation</li><li>• Supply of suction piles</li><li>• Suction pile installation services</li></ul>
Project properties	<ul style="list-style-type: none"><li>• #3 x suction pile</li></ul>
Soil conditions	Soft clays
Water depth	120 m
SPT achievements	<ul style="list-style-type: none"><li>• Jacket installation in 24 hours, including wet upending, set down and suction pile installation</li><li>• Verticality of the structure within 0.25 deg</li></ul>



# Projects

Year	Client	Project	Location	Water Depth	Year	Client	Project	Location	Water Depth
2022	Allseas	Chevron anchor project	Gulf of Mexico	1400m	2016	Boskalis	AOWF suction bucket tests	Aberdeen	21m-35m
2022	Allseas	Deepwater Whale Project	Gulf of Mexico	2551m	2015	Technip	Shell Malikai	Malaysia	900m
2022	Boskalis	Huntington suction pile removal	North Sea	90m	2015	DCN	PGN Pipeline Repair	Indonesia	25m
2022	COOEC	Hong Kong Met Mast Removal	South China Sea	30m	2015	Allseas	Shell BC-10	Brazil	1700m
2022	Scaldis	Wintershall MPP Decom	North Sea	21-30m	2014	DONG Energy	Borkum Riffgrund SBJ	German North Sea	24m
2022	YongFu	Fujian Pingtan Waihai OWF	China Sea	40-42m	2014	Protexa	PEMEX Line 2 and 8	Mexican GoM	120m
2021	IOG	Blythe & Southwark WHP	UK North Sea	23-29m	2014	Swiber	PEMEX Line 3 and 11	Mexican GoM	120m
2020	CNOOC	Lufeng 12-3 FPSO Anchors	South China Sea	215-250m	2014	Protexa	Abkatun-A Pipeline	Mexican GoM	125m
2020	COOEC	Lingshui 17-2 Gas Field	South China Sea	1560m	2014	Cal Dive International	PEMEX Line 4, 7 and 9	Mexican GoM	50m-120m
2020	Fujian Energy	Changle Waihai OWF Area C	Taiwan strait	31-45m	2014	Scaldis NV	Wintershall L6-B Platform	Dutch North Sea	35m
2020	CTG	Changle Waihai OWF Area A	Taiwan strait	31-45m	2014	Mammoet	Salvage barge mooring	Persian Gulf	30m
2019	CTG	YangXi Shaba (phase I) China	South China Sea	26 - 30m	2013	Wintershall	P6S MPP relocation to Q1D	Dutch North Sea	26m
2019	CNOOC	Liuhua 11-1 FPSO mooring	South Chinese Sea	420m	2013	Seaway Heavy Lift	Gaz de France Q13-A	Dutch North Sea	20m
2019	Noble Energy	Tamar SW Pipelay starter pile	Mediterranean Sea	1700m	2013	Keppel Velrome	Global Tech Substation	German North Sea	40m
2019	Demar	Demar PLEM 2	Mexico GoM	115m	2013	Allseas	Asgard start-up suction pile	Norwegian North Sea	300m
2019	PEMEX	Swiber PLEM-2	Mexico GoM	115m	2012	Sevan Marine	EON Huntington FPSO	UK North Sea	90m
2019	Energiean	Karish & Tanin Field FPSO	Mediterranean Sea	1700m	2012	Micoperi	Noble Hadera Oil Offloading	Mediterranean	80m
2019	Petrofac	Development East Cendor	Malaysia	64m	2012	COOEC	CLP met mast	Hong Kong	30m
2019	Muhhibah Offshore	Ophir relocation	From Ophir to Jitang field	74m	2011	Allseas	Noble Tamar start-up	Mediterranean	1600m
2019	Not disclosed	Suction Pile cluster	South Chinese sea	1200m	2011	ALE Heavylift	Shell Riser Access Tower	Dutch North Sea	30m
2019	Per Aarsleff	Changua offshore pile test	Offshore Taiwan	40m	2011	Bibby Offshore	Athena FPSO mooring	UK North Sea	140m
2019	COOEC	Mooring piles Liu Hua	Liu Hua field	420m	2011	McDermott	BP barge mooring for pipelay	Caspian Sea	175m
2019	Seagreen Wind Energy	Seagreen test	UK sea	40-60m	2011	Carbon Trust	Offshore Wind Accelerator SIWT	North Sea	60m
2019	Allseas	Noble Leviathan	Offshore mediterranean	1650m	2011	Bluewater	FPSO and buoy mooring	Angola	1100m
2018	Geocean	Summit FSRT	Offshore Bangladesh	33m	2010	Heerema Fabrication	Centrica F3FA (SIP2)	Dutch North Sea	40m
2018	Boskalis Offshore	Aberdeen Offshore Windfarm	UK North Sea	19-32m	2010	Global Industries	PEMEX L59 and L58 startup pile	Mexican GoM	60-80m
2018	PEMEX	Sapura L16	Mexico GoM	71m	2009	Perenco	Emeraude	Congo	60m
2017	Jumbo Offshore	Moheskhalı Floating LNG	Bangladesh	36m	2009	HSM	Ithaca Jacky	UK North Sea	45m
2017	Ardent Global	Dogger Bank Met Mast	UK North Sea	25m	2008	Smit Talisman	Yme platform	Norwegian North Sea	80m
2017	Muhibbah Engineering	Ophir Wellhead Platform	Malaysia	73m	2008	Saipem	ENI Rosetta	Egypt	100m
2016	Sembmarine SLP	Statoil Dudgeon Substation	UK North Sea	23m	2008	EMAS GFI	Bualang Field Development	Gulf of Thailand	30m
2016	Allseas	Pioneering Spirit Test Frame	Dutch North Sea	30m	2008	Subsea7	Chevron Frade Field Subsea	Brazil	1100m
2016	Nuvoil	PEMEX Bridge Support	Mexican GoM	43m	2007	Bosch Rexroth	Berbice River Bridge Mooring	Guyana	12m
2016	Swiber	PEMEX PLEMs	Mexican GoM	110m	2007	Allseas	Maersk Blane Development	UK North Sea	80m
2016	Subsea7	BP Foinaven	UK North Sea	450m	2007	Oceanografia	PEMEX Sihil and AKAL start-up	Mexican GoM	40-80m



# Projects

Year	Client	Project	Location	Water Depth
2006	Boskalis (Smit)	PetroCanada de Ruyter	Dutch North Sea	25m
2006	Talisman	Bunga Raya platform extension	Malaysia	55m
2006	Global Industries	PEMEX KU-D startup pile	Mexican GoM	40m
2006	Subsea7	ConocoPhillips Ekofisk	Norwegian North Sea	80m
2006	Subsea7	Amarada Hess Ceiba	Guinea	800m
2005	Doris Engineering	Total Moho Bilondo FPSO mooring	Congo	600m
2005	Saipem	Nexen Buzzard	North Sea	140m
2005	Subsea7	BP West Infill Flowline	UK North Sea	300–600m
2004	Subsea7	Exelerate Project Energy Bridge	GoM	80m
2003	Talisman	Bunga Raya subsea jacket	Malaysia	55m
2003	Allseas	Maersk Halldan Tyra Pipeline	Danish North Sea	50m
2002	Prosafe	Agip ABO FPSO Mooring	Nigeria	600m
2002	Genesis	Calder	UK North Sea	30m
2002	Technip	Centrica Bains	UK North Sea	20m
2002	Wintershall	P2-NE-Q4B MPP SIP2 Relocation	Dutch North Sea	30m
2001	Smit Mammoet JV	Kursk Salvage	Barents Sea	120m
2001	Wintershall	P2-SE to P6-D SIP2 Relocation	Dutch North Sea	30m
2000	Genesis Burlington	Millom West	UK North Sea	30m
1999	Subsea7	Chevron North Nemba Jacket	Angola	120m
1998	Subsea7	Chevron Alba Manifold	UK North Sea	140m

