

**FIXED OFFSHORE  
PRODUCTION  
FACILITIES**



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# SAIPEM TODAY

SAIPEM TODAY IS A WORLD LEADER IN THE GLOBAL SUPPLY OF ENGINEERING, PROCUREMENT, PROJECT MANAGEMENT, CONSTRUCTION AND DRILLING SERVICES WITH DISTINCTIVE CAPABILITIES IN THE DESIGN AND EXECUTION OF LARGE-SCALE OFFSHORE AND ONSHORE PROJECTS.

Saipem has a strong bias towards oil and gas frontiers, namely activities in harsh and remote areas, in deep waters as well as in extremely cold and hot environments, applying significant technological competences in many diverse fields such as gas monetization and heavy oil exploitation.

Saipem operates in the Engineering & Construction and Drilling businesses.





# SAIPEM ENGINEERING & CONSTRUCTION

FOLLOWING AN AGGRESSIVE GROWTH STRATEGY, WHICH INCLUDED IN THE LAST DECADE THE ACQUISITION OF MANY CONSTRUCTION, TECHNOLOGY AND ENGINEERING COMPANIES, MOST PROMINENTLY OF SNAMPROGETTI, BOUYGUES OFFSHORE, SOFRESID AND MOSS MARITIME, SAIPEM HAS BECOME ONE OF THE WORLD LARGEST AND MOST COMPLETE ENGINEERING AND CONSTRUCTION COMPANIES IN THE GLOBAL OIL AND GAS MARKETS, ONSHORE AND OFFSHORE.



Ever since its initial steps in the fifties as the construction division of Snam, the pipeline company of the Eni Group in Italy, Saipem has pursued a systematic growth strategy, based on the development of internal assets, expertise and skilled resources, as well as on the acquisition of other players with their own asset bases, such as Micoperi in late eighties, and many others.

In the last decade, Saipem has continued its growth by acquiring Bouygues Offshore and Sofresid in France, Moss Maritime in Norway, IDPE in India and Snamprogetti in Italy, and by carrying out a multibillion investment program into the expansion of its offshore construction and drilling fleets. Since the year 2000, Saipem's market capitalization has grown more than sixfold and its revenues tenfold.(\*)

The organizational integration of this considerable asset base, namely the network of engineering centres, fabrication and support yards in several continents as well as the offshore construction fleet, has been completed gradually over the years - most recently with the creation of a unified Business Unit Engineering & Construction, an entity with over 30,000 employees (excluding corporate and BU Drilling staff) from over 100 nationalities, with over 60 permanent establishments

and numerous project execution centres around the globe, and with yearly revenues exceeding 10 billion/y; all held together by outstanding project management skills.

Through the involvement of our global EP(I)C hubs in Milan, Rome and Fano (Italy), Paris (France) and Chennai (India), which operate in connection with a growing number of medium size and smaller regional engineering and project execution centres employing altogether over 7,000 engineers, Saipem balances high project execution quality with a competitive cost and - most importantly - with a major emphasis on local know-how and content.

This well-integrated multicenter approach provides a consistent design and robust execution philosophy on all our projects worldwide. Top priority is provided throughout to all HSE and Quality aspects.

Saipem therefore offers a complete range of project definition and execution services, offshore and onshore, particularly for the complex "mega-projects" required by the market today: from feasibility and conceptual studies to complex integrated solutions combining design, engineering, procurement, field construction, fabrication and offshore

installation; also revamps, upgradings, maintenance, decommissionings, reclamations and decontaminations.

Saipem today operates in virtually every world market, often in remote locations with harsh environmental conditions and challenging logistics, leveraging on its proven experience across the most significant product lines in the oil and gas production onshore, offshore, in deepwater; gas and oil transportation via offshore and onshore pipeline systems; midstream, refining, chemicals, power generation from fossil as well as from renewable sources; environmental industries, maritime works and infrastructure.

This new series, therefore, outlines Saipem's integrated references in engineering and construction markets offshore and onshore, according to individual business and technology lines.

(\* ) Until Dec. 31, 2010



# FIXED OFFSHORE PRODUCTION FACILITIES

SINCE ITS EARLY STEPS IN OFFSHORE MARKETS IN THE FIFTIES, SAIPEM HAS BECOME A LEADER IN DESIGNING AND INSTALLING THE HEAVIEST AND MOST MODERN OFFSHORE FACILITIES, WITH A TRACK RECORD TO DATE OF MORE THAN 90 MAJOR EPIC PROJECTS AND OVER 2.5 MILLION TONNES OF INSTALLED STRUCTURES.

Saipem's consolidated experience in designing and installing offshore oil and gas production facilities dates back to the Company's earliest steps: in 1961 Saipem fabricated and installed Europe's first offshore production platform off the shores of Sicily, followed by other such installations in the sixties and in the seventies in the Adriatic Sea for Agip, the initial lead customer.

In the following decade the market for fixed offshore oil and gas facilities grew substantially. To match those growing needs, Saipem effectively developed its skills and the required vessels and tools, to rapidly become a recognized international contractor, for both International and National Oil Companies.



Float out of the first European offshore platform, Licata, Italy, 1960





Indeed, since those early steps in the domestic and Mediterranean markets, Saipem has become a global market leader, having designed, built and installed hundreds of platforms, while excelling at both the heavy lift and the float-over techniques. Over its sixty years life, Saipem has thus evolved to become a complete offshore services provider, with distinctive capabilities in the design and execution of even the largest projects. This consolidated industrial model has led Saipem to successfully complete more than 60 EPIC platform projects over the last two decades, including drilling and production platforms with modular or integrated decks, wellhead and accommodation platforms, often as part of larger integrated offshore systems.

Following the above mentioned initial steps in the sixties and seventies, the main stepping stones during Saipem's expansion in expertise and proprietary assets were:

↳ The South Bassain BPB complex project in India (1986 - 1991), the Zuluf project (1981 - 1984) and the Safaniya GOSP-4 project (1990 - 1995) in Saudi Arabia, in partnership with Snamprogetti, along with Agip's complex Bouri field development, offshore Libya, completed in 1988, confirmed the trend of Saipem's involvement in supplying the full range of services, from engineering to procurement, construction, offshore installation and commissioning.

↳ With the acquisition of Micoperi in 1990, the state-of-the-art semisubmersible heavy lift vessel *Micoperi 7000* (rechristened *Saipem 7000*) joined Saipem's fleet to lead the future world heavy lift market. Still today, *Saipem 7000* is one of the world largest and most powerful heavy lift vessels.

↳ Indeed, in 1996 *Saipem 7000* set the world heavy lift record at that time of lifting 10,400 t in DP (Dynamic Positioning) mode, for the installation of the integrated deck of BP's Andrew platform in the North Sea. This project was also significant as it was the first of several projects executed under an alliance scheme with the Client, based on an innovative risk/reward contract mechanism.

↳ The same technologies and assets typically used for fixed facilities were also employed in the ExxonMobil's Diana-Hoover field development (1997 - 2000), a moored 'spar' floating production platform standing in 1,480 m of water in the Gulf of Mexico. The Diana-Hoover project was the first example of supplying a package of integrated marine services on a major deepwater development, and marked the transformation of the *Saipem 7000* to include J-lay. The specific challenges of the project included the installation in DP mode of the world's largest deep draught caisson structure, of numerous topside modules ranging up to 8,790 t in weight, and of multiple flowlines and steel catenary risers, all performed by *Saipem 7000*.





Today, Saipem's unique fleet of more than 40 construction vessels, with a balanced mix of high reliability and high technology units, stands out as a key element for the conservation and the strengthening of its leadership in this sector. The development of an in-house know-how to design, manage and optimally operate these assets, from the earliest steps in R&D and new vessels design to the maintenance and continuing upgrading of the ones in operation, has been a key factor of success in ensuring Saipem's achievements.

Furthermore, ten fabrication yards, distributed in various locations worldwide, maximize the services provided close to the project sites. They also contribute to Saipem's full control of the overall EPIC process, both for onshore and offshore projects, while providing maximum local content. These yards are normally able to support the offshore projects by fabricating specific or all parts of the fixed production systems, with an aggregate in-house fabrication capacity of over 200,000 t per year.

While developing its own fleet and a business model based on the local content maximization, the Company reinforced its engineering and project management capabilities in order to satisfy the market needs increasingly oriented towards large integrated EPIC and EPC projects. In the offshore sector, this was achieved through a number of acquisitions, such as that of Bouygues Offshore in 2002, as well as through a determined investment in training and skills development.



In most recent years, Saipem has designed and successfully executed several complex integrated projects, which combine the EPIC skills in many related fields. For example, the large-scale integrated projects of Bahr Essalam Full Field Development in Libya and the Kashagan Experimental Program in the Caspian Sea. New records for the offshore industry were established, such as the 12,150 t Sabratha deck combined lift performed by the *Saipem 7000* in Libya, and the float-over of the 28,300 t deck of Piltun-Astokhskoye-B platform, Sakhalin II project, in Russia.

A milestone is the 2011 award by Saudi Aramco of the multi-billion Al Wasit project off the Saudi Arabian shores. This complex endeavor includes the design and construction of 12 wellheads, 2 tie-in and 1 injection platforms, a 260 km export trunkline offshore, a 120 km onshore pipeline, many service pipelines and cables, as well as the shore approaches.

Today, Saipem has thus strengthened its position as one of the world leaders in this market segment.





# SAIPEM ASSETS: PROJECT MANAGEMENT AND ENGINEERING

A PILLAR OF THE COMPANY'S INDUSTRIAL MODEL, IT ENABLES SAIPEM TO TAKE FULL RESPONSIBILITY FOR THE EFFECTIVE AND RELIABLE EXECUTION OF LARGE AND COMPLEX EPIC PROJECTS.



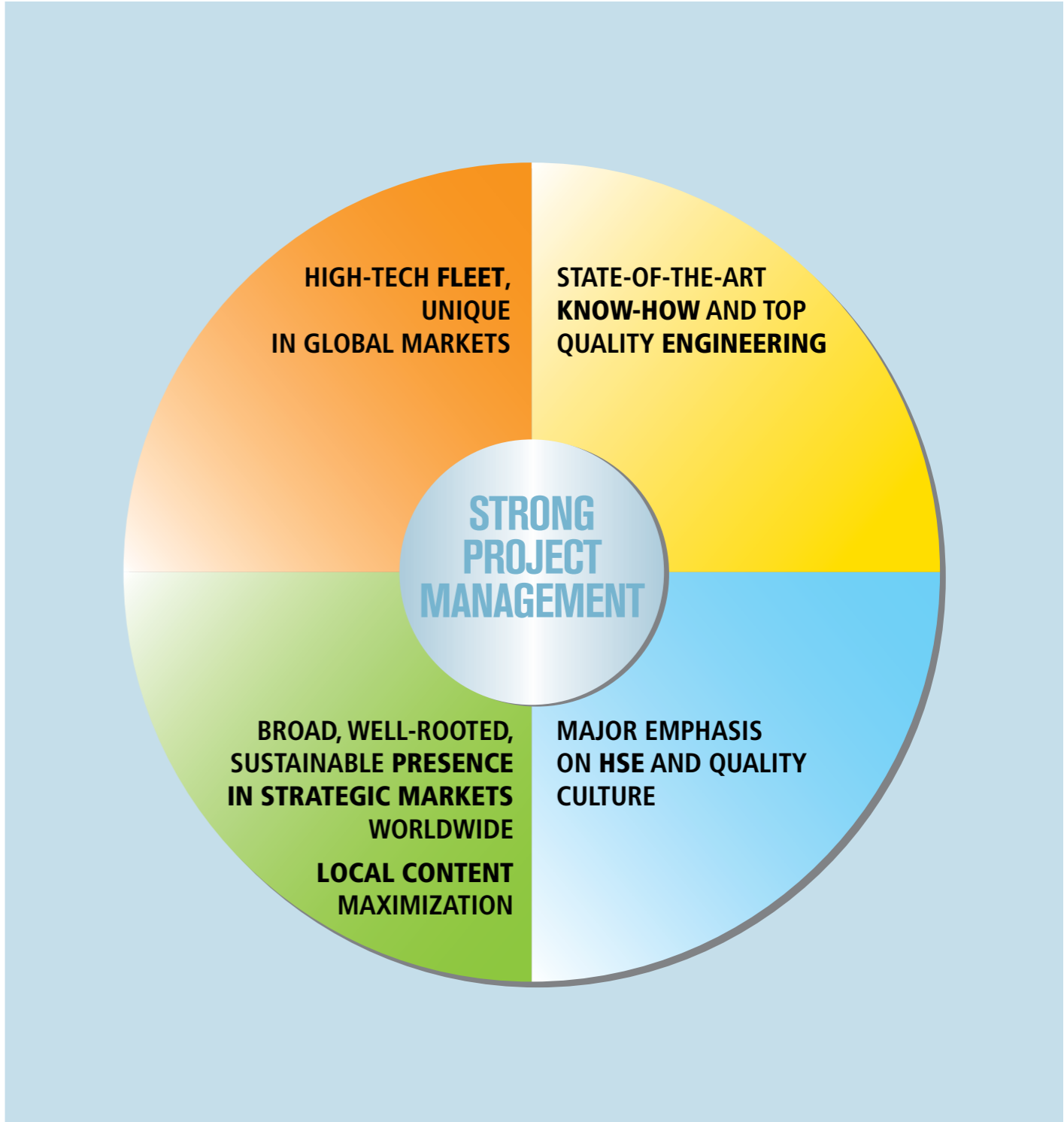
In the offshore markets Saipem's role has evolved from a T&I operator in the early days to the present profile also as a fully integrated EPIC general contractor.

This growth in the breadth of services provided to every client was achieved

initially through numerous acquisitions carried out in the last decade, most notably Bouygues Offshore, Sofresid, Moss Maritime, Snamprogetti, Idpe.

Subsequently, this original infusion of powerful project management and

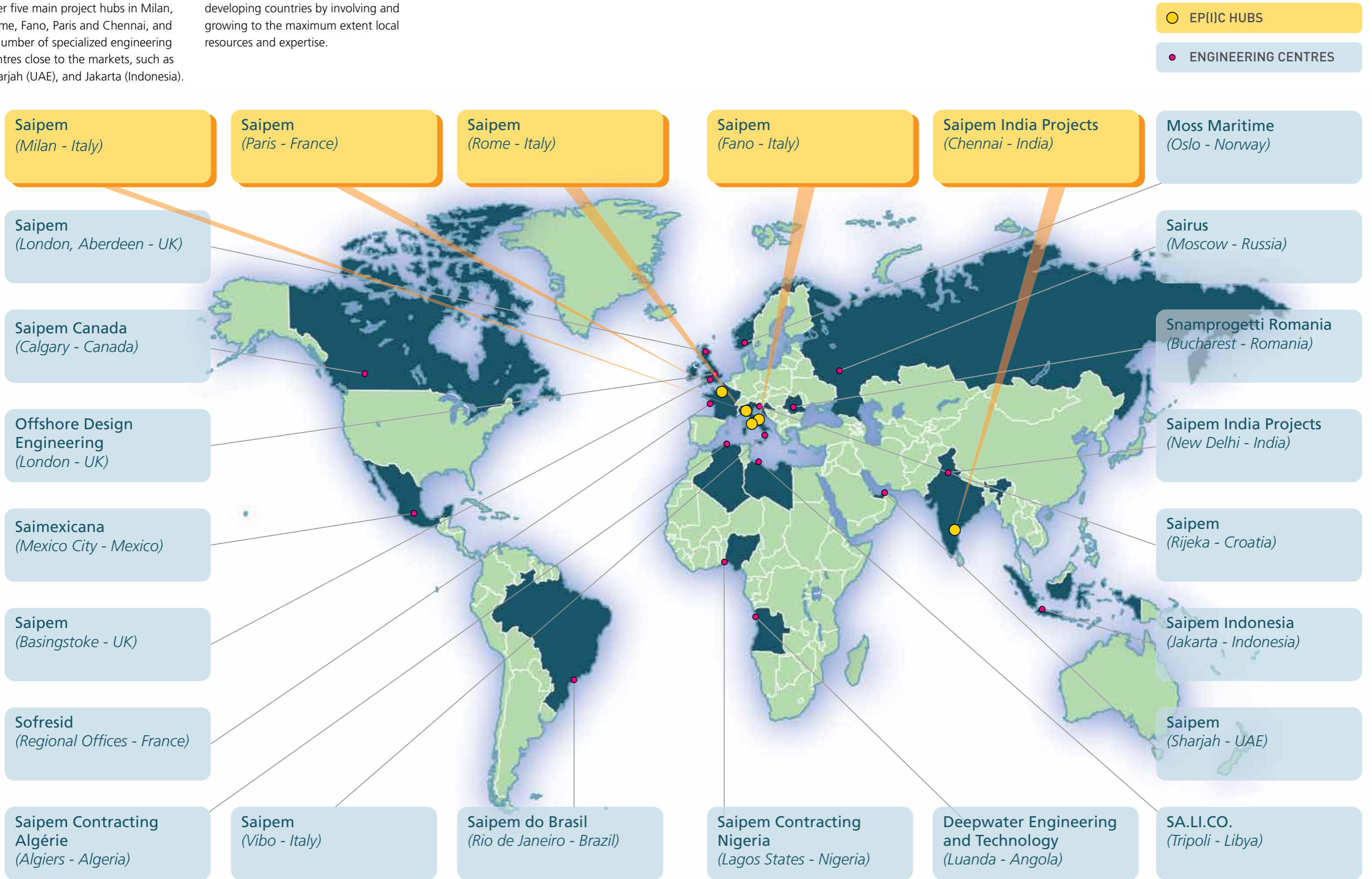
engineering capabilities was followed by a determined effort to upgrade the quality and the number of specialized personnel via training and hiring.





Today, a worldwide network of more than 7,000 project management and engineering personnel is distributed over five main project hubs in Milan, Rome, Fano, Paris and Chennai, and a number of specialized engineering centres close to the markets, such as Sharjah (UAE), and Jakarta (Indonesia).

More regional engineering centres are continuing to be established to support offshore projects in developing countries by involving and growing to the maximum extent local resources and expertise.





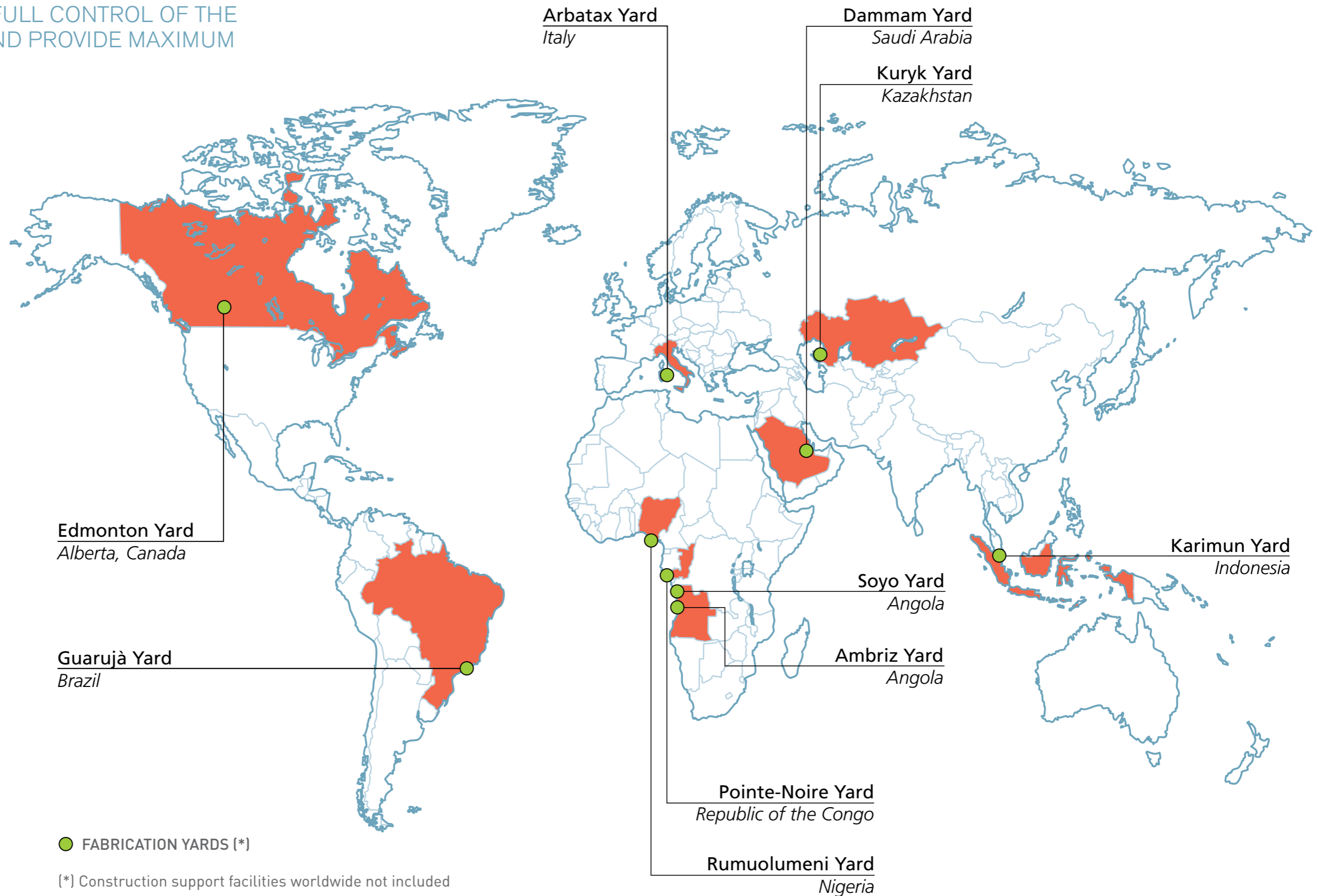
# SAIPEM ASSETS: FABRICATION YARDS WORLDWIDE

CONTRIBUTE TO SAIPEM'S FULL CONTROL OF THE OVERALL EPIC PROCESS AND PROVIDE MAXIMUM LOCAL CONTENT.

Saipem utilizes a large in-house fabrication capacity - over 200,000 t per year - distributed in various locations worldwide in order to maximize the services provided close to the project sites, while ensuring top competitiveness, as well as to reinforce the full in-house control of the EPIC chain, for both onshore and offshore projects, in order to minimize project risk.

The yards in West Africa, Central Asia, Middle East, Canada and Brazil are witnesses to Saipem's commitment to a permanent presence and significant local growth in countries deemed to be leading players in the future oil & gas markets.

These yards are normally able to provide support to the offshore projects by fabricating specific or all parts of the fixed production systems. Dedicated improvement programs and investments continuously extend the range of services that these yards can provide.





The newest yard on Karimun Island, in Indonesia - has been developed to guarantee the availability of a most competitive fabrication facility to fulfill any Saipem project need worldwide. The yard is capable of providing the full fabrication capacity needed for the largest and most complex offshore facilities.

The fabrication facilities of Kuryk in Kazakhstan contribute to Saipem's leading role in the execution of complex projects in the north Caspian Sea, an area almost fully isolated and requiring original technical solutions.

Four fabrication yards, established in Angola, Republic of the Congo, and Nigeria, witness Saipem's historic and deeply rooted presence in West Africa. The Rumuolumeni yard at Port Harcourt stands out as the largest fabrication facility in the region.

Saipem's fabrication assets also include the Arbatax yard and the Dammam yard, conveniently located in the heart of the Mediterranean Sea and in Saudi Arabia, respectively.

In Brazil, the construction of the Guarujà yard for the fabrication of subsea and floating structures is well advanced.

The yard - strategically overlooking the most important Santos and Campos offshore basins - is complementary to the services provided by the highly specialized ultra-deep water fleet recently built by the Company.



- ▾ Rumuolumeni  
Saipem Contracting Nigeria, Rumuolumeni yard, Nigeria.  
The largest yard in West Africa:
  - Over 1,000 employees (90% Nigerian)
  - 26,000 t fabrication capacity per year.



- ▾ Kuryk  
Ersai, Kuryk yard, Kazakhstan.  
The fabrication powerhouse for Saipem's activities in the north Caspian Sea.



- ▾ Guarujà  
Saipem do Brasil, Guarujà yard, Brazil.  
The yard will represent a strategic facility for the challenges of the flourishing Brazilian oil & gas market.



- ▾ Karimun  
PT Saipem Indonesia, Karimun Island yard, Indonesia.  
A top class yard for large offshore projects worldwide, with 30,000 t fabrication and 4,100,000 manhours capacities per year.



# SAIPEM ASSETS: OFFSHORE CONSTRUCTION FLEET

SAIPEM'S UNIQUE CONSTRUCTION FLEET - COMBINED WITH ITS EXTENSIVE T&I ENGINEERING EXPERTISE - PLACE THE COMPANY IN THE LEADING POSITION AS THE TOP OFFSHORE INSTALLATION GENERAL CONTRACTOR.



Out of a wholly owned fleet for offshore construction of over 40 units, Saipem owns and operates nine major lift vessels with lifting capacity performance ranging from around 1,000 t to 14,000 t in both the moored and dynamic positioning modes.

Saipem's flagship - the *Saipem 7000* - is the most powerful vessel in the market with her industry benchmark lifting capacity of 14,000 t. Indeed, the world lifting record is held by the *Saipem 7000* with the 12,100 t lift of the Sabratha platform integrated deck in the Mediterranean Sea. Her combined lifting/pipelaying capabilities provide the needed versatility to carry out large, complex and integrated projects.





Saipem's fleet for heavy lift includes Castoro Otto and Saipem 3000 vessels, with over 2,000 t lifting capacity each.

Thanks to the involvement in the Kashagan project in the north Caspian Sea, Saipem has also developed proprietary expertise, execution technologies and a dedicated fleet to carry out construction work in ultra shallow waters and in arctic like environments.





# FLOAT-OVER METHOD FOR HEAVY WEIGHT DECK INSTALLATION

USED WHEN A HEAVY INTEGRATED DECK IS TRANSPORTED TO THE OFFSHORE SITE BY CARGO BARGES AND DIRECTLY LAID ONTO THE PRE-INSTALLED SUB-STRUCTURE LEGS BY A SUITABLE LOWERING SYSTEM.

The float-over method allows for the installation in a single stage of massive platform decks - fully pre-assembled at a yard - when its weight exceeds the lifting capacity of the existing heavy lift fleet.

Since its first application in the early nineties, Saipem has successfully completed 16 float-over installations, including groundbreaking achievements, such as:

- ▶ The world record for heaviest weight deck mating in open sea (2002).
- ▶ The heaviest float-over in the Caspian (2005).
- ▶ The heaviest topside ever installed by the float-over method (PA-B platform, 28,300 t) for Sakhalin II Phase II topsides project in the Russian Far East (2007) for Sakhalin Energy Investment Company Ltd. This achievement included the heaviest load-out support frame ever built, the greatest load-out operation and the biggest barge ever built for topside offshore transportation.





Float-over operations are either passive or active: the first ones are realized through fast ballasting with a lowering speed of 4 m/hour; the second ones are applied where swell seas are present, through jacking systems with a lowering speed of 4 m/min.

Based on its extensive experience, Saipem has developed the Anteo system, an innovative proprietary active solution that ensures an improved and faster deck lowering operation - a key success factor in case of adverse environmental conditions - by a giant, fully recoverable, hydraulic jacking system.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Angola	Chevron	Congo River Crossing Project Development Platforms	3,400	T&I	Saipem 3000	Under Execution
Angola	Total	FPSO Topside Modifications Package for the Multiphase Pump System of the GiRi Project	2,000	EPIC	Saipem 3000	Under Execution
Congo	Eni Congo	Litchendjili Jacket	1,800	EPC		Under Execution
Mexico	Dragados Offshore	Platforms in Litoral Area of Campeche Bay - Gulf of Mexico	43,600	T&I	Saipem 7000	Under Execution
Norway	ConocoPhillips Skandinavia	Eldfisk II - Wellhead, process and accommodation platform	19,000	T&I	Saipem 7000	Under Execution
Norway	Det Norske Oljeselskap	Ivar Aasen Platform	21,500	T&I	Saipem 7000	Under Execution
Norway	Det Norske Oljeselskap	Ivar Aasen Jacket	8,500	EPC		Under Execution
Norway	Lundin Norway AS	Evard Grieg (formerly Luno) Platform	37,000	T&I	Saipem 7000	Under Execution
Norway	Statoil	Ekofisk 2/4-5 Jacket and Tripod Removal	11,300	T&I	Saipem 7000	Under Execution
Norway	Statoil	Gina Krog (formerly Dagny) Jacket and Topside	31,500	T&I	Saipem 7000	Under Execution
Norway	Statoil	Gullfaks A - Drilling facilities change-out	2,000	T&I	Saipem 7000	Under Execution
Norway	Statoil	Mariner Platform	54,200	T&I	Saipem 7000	Under Execution
Norway	Statoil	Valemon Topsides and Flare	9,400	T&I	Saipem 7000	Under Execution





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Russia	Lukoil	Filanovsky Field Facilities: drilling platform, living quarters platform, central processing platform, riser platform	47,000	T&I	T&I barge provided by client	Under Execution

## FILANOVSKY PROJECT – RUSSIAN FEDERATION

The Filanovsky Field Facilities are being developed in the northern territory of the Caspian Sea (Russian part) to produce oil and gas. Taking advantage from the experience on the Kashagan project in the same region, Saipem is operating in the very shallow water depths of about 10 metres to install substructures and topsides of four platforms totaling a weight of about 47,000 tons: an ice-resistant platform, a living quarters platform, a central processing platform and a riser platform. Platforms will be all linked with a connector bridge, while the topsides will be installed with the float-over method. For the same project, Saipem has also been contracted to lay the export trunklines from riser platform to landfall.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Saudi Arabia	Saudi Aramco	Al Wasit Gas Programme - Arabiyah and Hasbah Offshore Platforms, Pipelines and Cables	30,900	EPIC	Castoro II - Castoro Otto	Under Execution
United Kingdom	Talisman Energy	MAR (Montrose Area Redevelopment) Platform	17,600	T&I	Saipem 7000	Under Execution
U.S.A.	Williams Field Services - Gulf Coast Company	Gulstar FPS - Platform topsides	6,500	T&I	Saipem 7000	Under Execution
Venezuela	Cardon IV	Perla Field Early Production Development Project Platforms	8,600	T&I	Saipem 3000	Under Execution
Azerbaijan	AIOC	West Chirag Platform	41,600	Fabrication and T&I		2013
Croatia	INAgip	Ika JZ Platform	1,500	T&I	Crawler	2013
Indonesia	Pearl Oil	WHP and PQP Platforms for Ruby Field	8,800	T&I	Castoro Otto	2013
Iraq	South Oil Company	Iraq Crude Oil Export Expansion Project - Phase 2 - CMMP platform	12,600	EPIC	Castoro Otto	2013

## AL WASIT GAS PROGRAM - ARABIYAH AND HASBAH OFFSHORE PLATFORMS, PIPELINES AND CABLES - SAUDI ARABIA

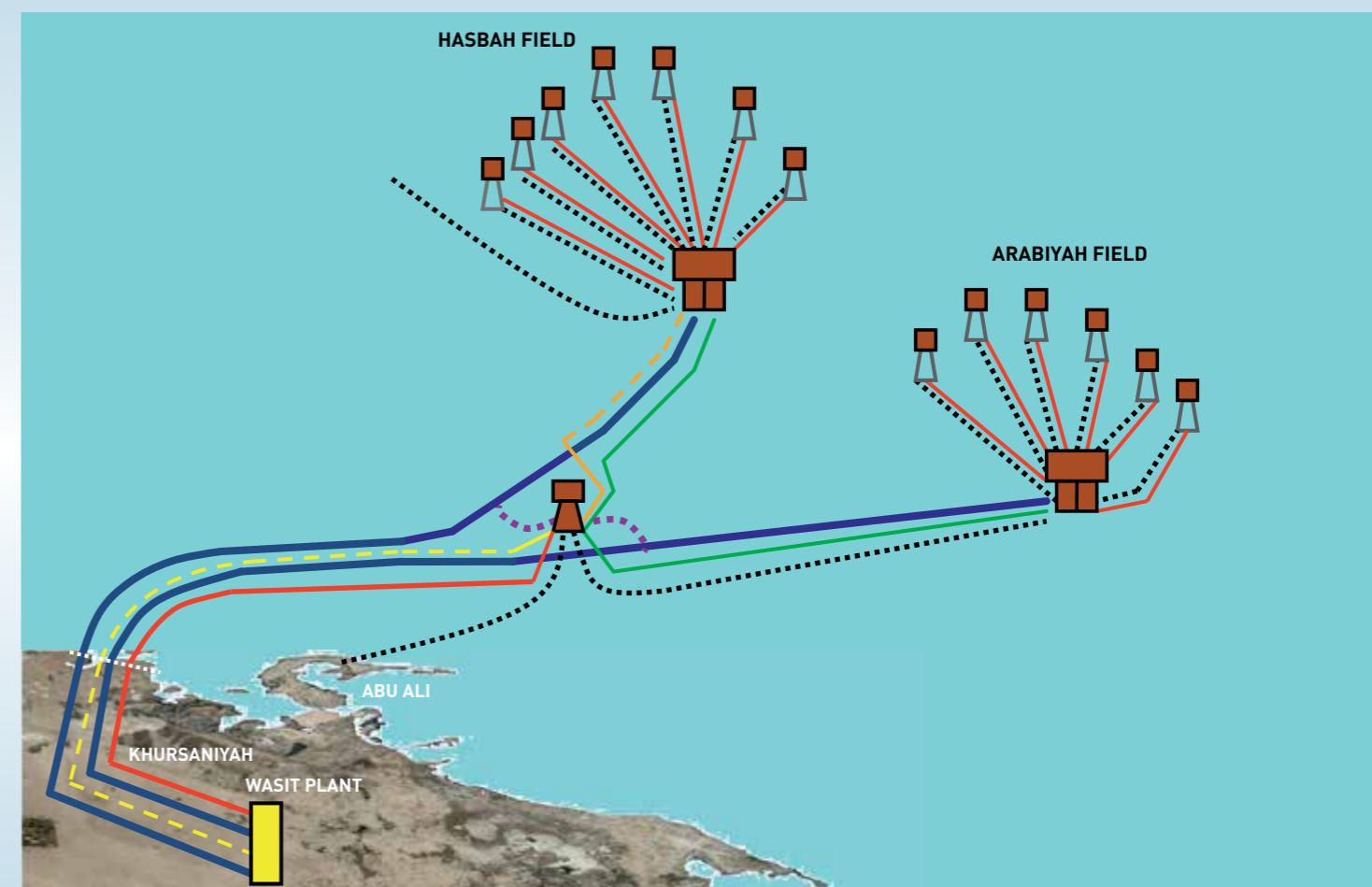
Arabiyah and Hasbah - parts of Al Wasit Gas Program - are offshore fields located in the Arabian Gulf, approximately 150 kilometres northeast of Jubail industrial city in Saudi Arabia.

Saipem is executing the engineering, procurement, fabrication and installation of the production and export facilities, comprising:

- ↳ 12 wellhead platforms
- ↳ 2 tie-in platforms
- ↳ 1 injection platform
- ↳ 36 inches 260 km export trunkline
- ↳ Approximately 200 km of Mono-Ethylene Glycol (MEG) pipelines
- ↳ 200 km of subsea electric and control cables
- ↳ 40 km of offshore flowlines.

The scope of work also includes the shore approaches and about 120 km of onshore pipelines.

The larger structures will be fabricated in Saipem's newbuilt Karimun yard in Indonesia, whereas other fabrication activities will be carried out in Star Fabricators Dammam yard, Saudi Arabia, which is owned by Saipem together with Saudi partners.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Kazakhstan	Agip KCO	Kashagan Field Development Project - Experimental Programme Hook-up and commissioning of facilities		EPIC		2013
Myanmar	SMOE	Zawtika Platform	29,000	T&I	Saipem 3000	2013
Nigeria	Total Nigeria	Ofon Phase II - EPCI & Project	7,500	EPIC	Saipem 3000	2013
Norway	Statoil	Gudrun Sigrun Development Project - Gudrun platform	18,700	T&I	Saipem 7000	2013
Norway	ConocoPhillips Skandinavia	The Greater Ekofisk Area Development Living quarters, bridge support and wellhead platforms	37,200	T&I	Saipem 7000	2013

## KASHAGAN FIELD DEVELOPMENT PROJECT EXPERIMENTAL PROGRAMME - KAZAKHSTAN

Offshore and onshore integrated mega-project for the production of crude oil and associated gas, including:

- ▾ Offshore artificial islands for drilling, process and utility facilities
- ▾ An oil and gas export system to shore
- ▾ A new onshore processing facility.

Saipem has been assigned several interconnected contracts for:

- ▾ The mobilization, installation and operation of drilling facilities for multiple wells from the artificial islands
- ▾ The Engineering, Procurement, Construction and Installation of:
  - The offshore and onshore sections of the oil and gas trunklines transport system from the artificial islands to the onshore processing facilities
  - The fuel gas transportation from shore to the offshore islands and associated fibre optic cables, power cables and control umbilicals
  - The production flowlines and associated fibre optic cables, power cables and control umbilicals interconnecting the artificial islands

- ▾ The in-shore hook-up of the modular units - part of the offshore facilities system - and their transportation and installation at site
- ▾ The fabrication, transportation & installation of additional components for the offshore facilities system, including structural piles, flares, pipe racks and other elements
- ▾ The hook-up and commissioning of the offshore facilities system.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Saudi Arabia	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Arabiyah, Hasbah, Abu Safa and Zuluf Fields - 5 platform jackets	7,000	Fabrication and T&I	Castoro II	2013
United Kingdom	ConocoPhillips	Britannia Mono Column and Compression Module		T&I	Saipem 7000	2013
United Kingdom	Nexen Petroleum UK	Golden Eagle PUQ and Wellhead Platform	30,500	T&I	Saipem 7000	2013
United Kingdom	ConocoPhillips	Jasmine Development Project - Wellhead, accomodation and process platforms	30,400	T&I	Saipem 7000	2013

## MAINTAIN POTENTIAL FACILITIES LONG TERM AGREEMENT – SAUDI ARABIA

Within the context of the Maintain Potential Facilities Programme, aimed at maintaining the country’s oil production capacity, Saipem was awarded a long term agreement for the construction, transport and installation of offshore facilities in the Kingdom. This contract is being executed by a consortium led by Saipem together with Saudi Arabian partners. A minimum guaranteed workload during the first four years of the agreement consists of 16 platforms and 80 km of sealines.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Vietnam	Petroleum Technical Services Co.	Hai Su Trang (HST) and Hai Su Den (HSD) Platforms	5,100	T&I	Castoro Otto	2013
Vietnam	PTSC	Bien Dong 1 Development Project	42,500	T&I	Castoro Otto	2013
Angola	Cabinda Gulf Oil Company	Farm Project - Flare and relief modifications and hook-up on Takula and Malongo areas platforms	1,500	EPIC	Saipem 3000 - SB 230	2012
Egypt	Petrobel	Seth Platform	4,300	T&I	Saipem 3000	2012
Gabon	Total	Anguille Field Redevelopment Project - AGM-N wellhead platform	3,000	EPIC	Saipem 3000	2012
Kazakhstan	Agip KCO	Kashagan Field Development Project - Experimental Programme - Piles and flares	65,800	Fabrication and T&I	Caspian Fleet	2012
Mexico	Pemex	KUIL-A, TSIMIN-A, TSIMIN-B and MALOOB-D Platforms	12,300	T&I	Saipem 7000	2012
U.S.A.	BP Exploration & Production	Mad Dog Drilling Rig Replacement Project	6,100	T&I		2012
United Kingdom	Elf Exploration UK	Elgin B Wellhead Platform Jacket	5,400	EPIC	Saipem 7000	2012





**FIXED OFFSHORE  
PRODUCTION FACILITIES  
MAJOR PROJECT REFERENCES**

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Indonesia	Premier Oil	Gajah Baru Project	17,000	EPIC	Castoro Otto	2011

**GAJAH BARU PROJECT – INDONESIA**

The Gajah Baru field development included a central processing platform, weighing a total of 12,900 t and installed by float-over method, a wellhead platform, a connecting bridge and a 16” gas export pipeline 3 km long. The integrated EPIC contract was executed by Saipem as the leader in a consortium with PT SMOE Indonesia.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Malaysia-Thailand JDA	Carigali Hess	Suriya-B Wellhead Platform and Pipeline Project	2,700	T&I	Castoro Otto	2011
Mexico	Dragados Offshore de Mexico/Dragados Offshore	PG-ZAAP-C Project - Power generation platform	9,700	T&I	Saipem 7000	2011
Mexico	Dragados Offshore de Mexico/Dragados Offshore	HA-LT-01 Project - Living quarter platform	7,600	T&I	Saipem 7000	2011
Saudi Arabia	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Hasbah, Arabiyah and Karan Fields - 11 platform jackets	13,400	Fabrication and T&I	Castoro II	2011
Saudi Arabia	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Safaniya and Berri Fields Platform jackets and mezzanine decks	2,700	Fabrication and T&I	Castoro II	2011
United Kingdom	Elf Exploration UK	West Franklin Wellhead Platform Jacket	5,400	EPIC	Saipem 7000	2011
Vietnam	PTSC	Block 12W - Chim Sao Development Project Wellhead platform and sealines	7,500	T&I	Castoro Otto	2011
Angola	Total Exploration & Production Angola	Single Central Platform and Injection Facilities in Block 2	1,400	EPIC	Crawler - Saipem 3000 - SB 230	2010
Brazil	Companhia Mexilhao do Brasil	PMXL-1 Mexilhao Gas Platform	28,900	T&I	Saipem 7000	2010
Congo	Total Exploration & Production Congo	Libondo - Wellhead platform and sealines	3,300	EPIC	Saipem 3000 - S 355	2010





**FIXED OFFSHORE  
PRODUCTION FACILITIES  
MAJOR PROJECT REFERENCES**

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Gabon	C.N.R. International (Gabon)	Olowi Development Project	4,400	EPIC	Saipem 3000 - Castoro II - S 355	2010
Libya	Mellitah Oil & Gas	Sabratha Platform Production Enhancement Project Phase 1		EPIC		2010
Norway	BP Norge	Valhall Redevelopment Project - Production platform	33,400	T&I	Saipem 7000	2010

**OLOWI DEVELOPMENT PROJECT – GABON**

In the frame of the development of the Olowi field, located 18 km off the coast of Gabon, 400 km south of Libreville, the project included the fixed portion of the production facilities and the installation of interconnecting subsea pipeline, riser and umbilical systems between the wellhead towers and the FPSO.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Saudi Arabia	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Zuluf Field - Platforms, jackets and flowlines and Safaniya field trunkline	8,700	Fabrication and T&I	Castoro II	2010
Spain	UTE ACS - Cobra Castoro	Castor Underground Gas Storage Development Project - Wellhead platform	3,600	T&I	Saipem 7000	2010
Tunisia	Eni Tunisia	Baraka Field - Platform and sealines	2,200	T&I	Crawler	2010
Tunisia	Eni Tunisia	Maamoura Platform and Sealines	1,500	EPIC	Crawler	2010
United Kingdom	Nexen Petroleum UK	Buzzard Enhancement Project - Production platform	13,500	T&I	Saipem 7000	2010
Vietnam	Petronas Carigali	Topaz Development Project - Wellhead platform and pipelines	3,700	T&I	Castoro Otto	2010
Australia	Eni Australia	Black Tip Development Project	1,750	EPIC	Castoro Otto	2009

## BLACK TIP DEVELOPMENT PROJECT – AUSTRALIA

Engineering, procurement, fabrication, installation and pre-commissioning of a wellhead platform, a 18" 108 km long export pipeline and a condensate pipeline system for the development of the Black Tip project.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Croatia	INAgip	INAgip Frame Agreement Campaign 2009 Annamaria A platform topside and sealines	3,300	T&I	S 355	2009
Indonesia	ConocoPhillips Indonesia	North Belut Development Project - Process platform topsides	14,000	T&I		2009
Italy	Eni E&P	Eni E&P Frame Agreement 2004/2008 - Adriatic Campaign Year 2008 Annamaria B platform jacket	1,200	T&I	S 355	2009
Italy	Eni E&P	Eni E&P Frame Agreement 2009 - Annamaria B platform topsides and sealines	2,000	T&I	Crawler	2009
Vietnam	PTSC	Pearl Development Project - Platform and sealines	1,200	T&I	Castoro Otto	2009
Australia	Coogee Resources (Ashmore Cartier)	Coogee Resources Montara Project - Wellhead platform and sealines	2,700	T&I	Castoro Otto	2008
Azerbaijan	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase III	75,100	Fabrication and T&I		2008
Azerbaijan	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase II	78,700	Fabrication and T&I		2008

## AZERI, CHIRAG AND GUNASHLI (ACG) FULL FIELD PROJECT - AZERBAIJAN

The ACG Full Field Project included the development of the Azeri, Chirag and Gunashli fields, located 120 km southeast of Baku, in water depths ranging from 100 m to 400 m.

This massive development, executed in three overlapping phases, included the execution of six large platforms for drilling, production, utilities and accommodation.

Saipem was a leading actor across all three phases, with a continuing commitment from 2001 to 2008, performing:

- ▾ The transportation of the six integrated platform decks and their installation at the site by float-over method
- ▾ The fabrication, transportation and installation of the six jackets, ranging in weight from 13,300 to nearly 16,700 t
- ▾ The fabrication, transportation and installation of other structures, such as drilling templates and platform linking bridges.

Saipem achieved the heaviest float-over deck installation (15,850 t) and the heaviest jacket launch and installation (16,670 t) to date in the Caspian region.

The fabrication activities were carried out in-house at the BOS Shelf's Baku yard, and marked the heaviest roll-up operation in the Caspian to date.

Saipem's scope also included the refurbishment, upgrading and structural reinforcement of the construction barges provided by the Client.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Congo	Eni Congo	Awa Paloukou - Wellhead platform and sealines	4,700	EPIC	Castoro II - Saipem 3000	2008
Croatia	INAgip	INAgip Frame Agreement Adriatic Campaign 2008 - Ana, Vesna, Irina platform topsides	800	T&I	S 355	2008
Malaysia-Thailand JDA	Kencana HL	Bumi, Bulan and Suriya Wellhead Platforms and Interfield Lines	7,400	T&I	Castoro 10 - Castoro Otto	2008
Congo	Eni Congo	Ikalou - Platforms and sealines	4,400	EPIC	Castoro II - Saipem 3000	2007
Denmark	Maersk Olie Og Gas	Halfdam Northeast Phase 3 Development - Platforms	10,600	T&I	Saipem 7000	2007
Indonesia	BP Berau	Tanggung GPF Platforms and Onshore Site Facilities Project	7,600	EPIC	Castoro Otto	2007

## TANGGUH GPF PLATFORMS AND ONSHORE SITE FACILITIES - INDONESIA

The first major EPIC award in the region, this project covered engineering, procurement, fabrication and installation of two platforms and two pipelines, part of the Tangguh Liquefied Natural Gas (LNG) project in the remote Berau bay area, island of Papua, about 3,000 km east of Jakarta. The two 20 km pipelines connect the platforms to the LNG shore facilities.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Mexico	Pemex	KU-MALOOB-ZAAP Field Development - Production platforms topsides and living quarter platforms	38,700	T&I	Saipem 7000	2007
Nigeria	Elf Petroleum Nigeria	Amenam Field Development - Facilities extension	14,700	EPIC	Saipem 3000 - SB 230	2007

## AMENAM FIELD DEVELOPMENT - NIGERIA

The EPIC project, executed in two subsequent phases, consists of the Amenam field facilities, 60 km offshore Bonny, and includes a production platform, a gas compression and injection platform, both installed by float-over method, two tripod platforms and several connecting bridges.





COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Russia	Samsung Heavy Industries	Sakhalin II Phase 2 Development Project	60,000	EPIC	Castoro Otto	2007

## SAKHALIN II PHASE 2 DEVELOPMENT PROJECT – RUSSIA

The offshore portion of the Sakhalin II project in the Russian Far East - one of the biggest integrated oil and gas projects in the world - included the development of the Lunskoye and Piltun-Astokhskoye fields by fixed facilities, their connection via sealines to the Sakhalin Island shores, and an export oil terminal at Aniva bay, in the southern part of the island.

Saipem's involvement included:

- ▾ The engineering, procurement, construction and installation of oil and gas pipelines and subsea power and communication cables
- ▾ The transportation and installation of the huge LUN-A and PA-B platform topsides, securing to Saipem, in close sequence, the world's records for the heaviest deck installation by float-over method. The 28,300 t PA-B integrated deck, installed in 2007, is still today the heaviest float-over operation ever undertaken worldwide.

In parallel, Saipem successfully completed the major twin onshore pipeline system linking the offshore field's landfalls in the northeast of the island with the LNG plant in the south.

More recently, as part of the Sakhalin 3 project, Saipem has been awarded a contract for the subsea development of Kirinskoye gas condensate field, off the east coast of Sakhalin Island, the first subsea development of this type in Russia.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Canada	ExxonMobil Canada Properties	Sable Offshore Energy Project - Tier II compression platform	12,800	EPIC	Saipem 7000	2006
Egypt	Petrobel	Temsah NW2 Platform	5,300	T&I	Saipem 3000	2006
Ivory Coast	CNR International (Côte d'Ivoire)	West Espoir Development - Wellhead platform and sealines	3,000	EPIC	Saipem 3000 - S 355	2006

## SABLE OFFSHORE ENERGY PROJECT – CANADA

The Sable Offshore Energy Project - the largest construction project ever undertaken in Nova Scotia - is located offshore Sable island, approximately 250 km from Nova Scotia, and is divided into two tiers of offshore development. The first tier was completed in 1999 and involved the development of the Thebaud, North Triumph and Venture fields. The second tier, including the development of Alma and South Venture fields, was completed in 2004.

Saipem's continued commitment across all phases, with a total of over 40,000 t of installed structures, consisted in the EPIC of Thebaud, North Triumph and Venture platforms (Tier I), along with a new compression platform (Tier II).





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Libya	Agip Gas	Western Libya Gas Project - Sabratha platform	47,400	EPIC	Saipem 7000 - Crawler	2006
Nigeria	Mobil Producing Nigeria	East Area Project EPC2A	4,000	EPIC	Saipem 3000 - S 355 - SB 230	2006

## WESTERN LIBYA GAS PROJECT – SABRATHA PLATFORM - LIBYA

One of the largest Mediterranean offshore platforms ever built:

- ↳ 12,500 t integrated deck (establishment of a new world record for offshore lifting: 12,100 t)
- ↳ 23,000 t jacket, ranked among the world biggest offshore substructures ever constructed and installed.

The contract for project management, engineering, procurement, fabrication, transportation & installation, hook-up & commissioning, start-up and six months of operational assistance, was awarded to a consortium of Saipem as the leader and Hyundai Heavy Industries.

In parallel to the design and installation of the Sabratha platform, the Western Libya Gas Project had also seen Saipem's involvement in the design (Snamprogetti, now Saipem) and construction or laying of the GreenStream gas pipeline between Libya and Sicily, successfully completed in 2004, as well as for the completion of three additional EP(I)C projects:

- ↳ The offshore gathering pipelines and the export trunklines from the Sabratha platform to the onshore plant at Mellitah
- ↳ The subsea production system, in JV with others
- ↳ The 6.66 mmscfd gas treatment and the 2 x 23,000 bopd oil production plant at Mellitah, completed in 2007.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Nigeria	Mobil Producing Nigeria	Yoho Development Projects EPC2	22,700	EPIC	Castoro Otto - Saipem 7000	2006
Thailand	PTT Exploration and Production Public Co.	Third Transmission Pipeline Project - Offshore platform system	13,600	EPIC	Castoro Otto	2006
United Kingdom	EniCanada UK	Buzzard Platforms	49,100	T&I	Saipem 7000	2006
Azerbaijan	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase I	66,300	Fabrication and T&I		2005
China	Offshore Oil Engineering Co.	Dong Fang and Lu Feng Fields - Wellhead platform jackets and sealines	1,300	T&I	Castoro Otto	2005
Croatia	INAgip	Ika, Ida and Ivana Gas Fields - Unmanned gas platforms and sealines	8,600	T&I	Crawler	2005
Denmark	Maersk	DAN FG Platform and Bridge	11,400	T&I	Saipem 7000	2005
Qatar	SMOE	PS-1K Platform	13,500	T&I	Saipem 3000	2005

## YOHO DEVELOPMENT PROJECTS EPC2 – NIGERIA

Production facilities to develop the Yoho field, located in block OML 104, in water depths ranging from 65 to 90 m.

The contractual scope of work included project management, engineering, procurement, construction, transportation and installation, hook-up and commissioning of one production platform, two wellhead platforms, one living platform, along with 20 km of subsea pipelines.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Thailand	PTT Exploration and Production Public Co.	Bongkot Field Development Project Phase III C - Package 2 - Platforms and sealines	8,400	EPIC	Castoro 10 - Castoro II - Castoro Otto	2005
Indonesia	TotalFinaElf	Peciko Field Development Phase IV (PCK 4 EPSC2) - Platforms and sealines	10,900	EPIC	Castoro 10 - Castoro II - Saipem 3000	2004
U.S.A.	ConocoPhillips	Magnolia Tendons and Integrated Platform		T&I	Saipem 3000	2004
U.S.A.	ConocoPhillips	Magnolia TLP Piles	4,400	T&I	Saipem 7000	2004
United Kingdom	BP	Clair Phase I Development Project	27,400	T&I	Saipem 7000	2004
Angola	Cabinda Gulf Oil Company	Kuito Development Project Phase 2 A - Installation of FPSO modules	3,600	T&I	Castoro Otto - SB 230	2003
Denmark	Dong A/S	Nini and Cecilie Wellhead Platforms	6,400	T&I	Saipem 7000	2003
Malaysia	Nippon Oil	Helang Project - Processing platform	14,500	T&I	Pearl Marine	2003
Mexico	Dragados Offshore de Mexico/Dragados Offshore	Cantarell EPC - 78B (AKAL-L) - Production platform, flare and bridge structures	14,700	T&I	Saipem 7000	2003
Nigeria	Agip Energy & Natural Resources	Okpoho and Okono Fields Development - Wellhead platform and sealines	3,000	EPIC	Castoro Otto	2003
Nigeria	Elf Petroleum Nigeria	Amenam Field Development	17,700	EPIC	Castoro Otto	2003
Norway	BP	Valhall Jacket Repair and Topside Installation	11,100	T&I	Saipem 7000	2003
Norway	Statoil	Kvitebjorn PDQ Platform	16,200		Saipem 7000	2003
Norway	TotalFinaElf	K5PK Compression Platform	3,700	T&I	Saipem 7000	2003
Libya	Compagnies des Petroles Total Libye	BD-1 Platform	9,300	EPIC		2002





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Malaysia	Carigali-Triton Operating Company	Cakerawala Project	52,400	T&I	Castoro II - Pearl Marine	2002
Norway	Aker Stord	Valhall Water Injection Platform	6,800	T&I	Saipem 7000	2002
Congo	Agip Recherches Congo	Foukanda and Mwafi Field Development - Platforms and sealines	5,800	EPIC	Castoro Otto	2001
Ivory Coast	Ranger Oil Cote d'Ivoire	Espoir Field Development - Wellhead platform and sealines	2,300	EPIC	Castoro Otto	2001
Norway	Hyundai Heavy Industries	Hanze Integrated Production Deck	7,100	T&I	Saipem 7000	2001
Norway	Phillips Petroleum Co.	Jade Platform	6,300	T&I	Saipem 7000	2001
Norway	Statoil	Huldra Phase 1 - Platform jacket	8,100	T&I	Saipem 7000	2001
Norway	Statoil	Huldra Phase 2 - Platform topsides	4,300	T&I	Saipem 7000	2001
Croatia	INAgip	Ivana E, B, and D Platforms and Sealines	1,000	T&I	Castoro II - Crawler	2000
Italy	Agip	Frame Agreement 1999/2003 - Year 2000 - Platforms	12,800	T&I	Crawler - Pearl Marine	2000
Norway	Norsk Hydro Produksjon	Oseberg Sor Platform	25,100	T&I	Saipem 7000	2000
Norway	Statoil	Asgard B - Semisubmersible platform topsides		EPC		2000





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
U.S.A.	Exxon Company Usa	Diana Hoover Project - Spar and flowlines	64,600	T&I	Saipem 7000	2000
Canada	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 3	14,600	EPIC	Saipem 7000	1999
Canada	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 2	8,000	EPIC	Saipem 7000	1999
Canada	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 1	5,600	EPIC	Saipem 7000	1999

## DIANA HOOVER PROJECT – GULF OF MEXICO

The major facility for the Diana Hoover deepwater field development included a moored production system in the form of a Deep Draft Caisson Vessel (DDCV), supporting about 22,000 t of drilling and production topsides.

Saipem installed the massive DDCV, its mooring system, the topside modules, the flowlines, and the Steel Catenary Risers (SCR).

The heavy lift and laying activities were both performed by *Saipem 7000*, converted in 1999 to a combination derrick and pipelaying vessel by the addition of the world’s largest J-lay tower for deepwater operations.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Congo	Elf Congo	Kombi Likala Project - Production platforms and sealines	5,000	EPIC	Castoro Otto	1999
Croatia	INAgip	Ivana A - Platform and sealines	1,100	T&I	Crawler	1999
Ivory Coast	Apache L.D.C.	Foxtrot Development - Gas production platform and sealines	3,800	T&I	Castoro Otto	1999
Mexico	Pemex	Cantarell EPC-1 Phase 1 - Platform jackets		T&I	Pearl Marine	1999
Myanmar	Texaco Myanmar	Yetagun Project - Andaman Sea	18,000	T&I	Pearl Marine	1999
Nigeria	Mobil Producing Nigeria	Iodho Q and E Revamping Project - Platform topsides	900	EPIC	Castoro Otto	1999
Nigeria	Mobil Producing Nigeria	Oso 2y-2 Development Project	6,600	EPIC	Castoro Otto - SB 230	1999
Norway	Norsk Hydro Produksjon	Oseberg Gass (D) Platform	9,800	T&I	Saipem 7000	1999
Norway	Phillips Petroleum Co. Norway	Eldfisk - 2/7E platform	8,100	EPIC	Saipem 7000	1999
United Kingdom	Bluewater Engineering	Bleo Holm Project - FPSO topsides		EPIC		1999
Australia	Apache Energy	Stag - CPF platform	7,800	EPIC		1998
Brunei	Elf Brunei	Mahraja Lela/Jamalulalam Platforms		T&I	Pearl Marine	1998
Congo	Agip Recherches Congo	Kitina EPC Project - Platform and sealines	12,000	EPIC	Castoro Otto - Saipem 7000	1998
Congo	Agip Recherches Congo	Zatchi Zaf-4 Field Development Project - Production platform and sealines	2,100	EPIC	Castoro Otto	1998
Italy	Agip	1998 Adriatic Sea Campaign - Platforms and sealines	3,300	T&I	Crawler	1998





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Norway	Norsk Hydro Produksjon	Oseberg OST Platform	20,600	T&I	Saipem 7000	1998
U.S.A.	Transco	Mobile Bay Expansion and Extension Project	800	T&I	Castoro Otto	1998
Congo	Agip Recherches Congo	Kitina Platform Topsides	4,900	T&I	Saipem 7000	1997
Italy	Agip	1997 Adriatic Sea Campaign - Platform and sealines	5,200	T&I	Crawler - Pearl Marine	1997
Italy	TMF	Bonaccia Gas Field Development Project - Production platform and sealines	2,600	EPIC	Crawler - Pearl Marine	1997
Nigeria	Chevron Nigeria	Escravos Gas Project Phase 1 Development		T&I	Castoro II	1997
Nigeria	Mobil Producing Nigeria	Oso NGL Topsides Installation	9,700	EPIC	Saipem 7000	1997
Nigeria	Mobil Producing Nigeria	Usari Development Project - Production, wellhead and riser platforms; sealines	11,600	EPIC	Castoro Otto - S 355 - Saipem 7000	1997
Nigeria	Mobil Producing Nigeria	Usari Topsides	3,100	T&I	Saipem 7000	1997
Norway	Phillips Petroleum Company Norway	Ekofisk 2/4J Platform Jacket Phase 1	17,800	T&I	Saipem 7000	1997
Norway	Phillips Petroleum Company Norway	Ekofisk 2/4J Topsides Phase 2	25,600	T&I	Saipem 7000	1997
Norway	Saga Petroleum	Varg Field Development - Wellhead platform	5,000	T&I	Saipem 7000	1997
Thailand	Total	Bongkot Phase B 3 - Wellhead platforms and sealines		T&I		1997
United Kingdom	Elf Exploration UK	Elgin and Franklin Wellhead Jacket Installation	9,100	EPIC	Saipem 7000	1997
Vietnam	Petechim	White Tiger Central Compression Platform	11,200	EPIC		1997





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Angola	Cabinda Gulf Oil Company	Cabinda Phase 2 (S. Sanha and North N'Dola) - Production platforms and sealines	11,500	T&I	Castoro Otto	1996
Angola	Texaco Panama	Bagre Central Field Area Development - Well protector and production platforms, tripod platform jackets, sealines	4,800	T&I	Castoro Otto - SB 230	1996
Colombia	Guajira Gas Services	Chuchupa B - Production platform and sealines	2,400	T&I	Castoro II	1996
Malaysia	Sarawak Shell Berhard	Transportation and Installation of Platforms	53,000	T&I	Pearl Marine	1996
Malaysia	Shell Sarawak	MNLG-DUA Platforms Project	49,900	T&I	Pearl Marine	1996
Nigeria	Liberty Technical Services	Ngo Field Development - Platform and sealines	500	EPIC	Castoro Otto - SB 230	1996
Nigeria	Mobil Producing Nigeria	Unam C and D, Edop E and Asasa A and B Wellhead Platforms and Sealines	3,900	T&I		1996
Norway	BP Exploration	Andrew Project	17,400	T&I	Saipem 7000	1996

## ANDREW PROJECT - NORWAY

The Andrew development consisted of a piled steel jacket supporting an integrated deck with production, drilling and accommodation facilities.

The operator BP chose an "alliance-based" contract structure under which the primary contractors, including Saipem, committed themselves to completing the project within a preset costs and time frame, sharing risks and rewards associated with the overall performance.

Saipem was involved in the transportation, installation and commissioning of the platform components. The installation of the 10,400 t integrated deck by *Saipem 7000* set the world heavy lift record in Dynamic Positioning at that time.

The project was completed below target cost and six months ahead of target date.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Norway	Statoil	Sleipner Vest SLT Gas Treatment Platform	25,600	T&I	Saipem 7000	1996
United Kingdom	Texaco North Sea UK	Captain Field WPP Platform	13,700	T&I	Saipem 7000	1996
United Kingdom	Texaco North Sea UK	Erskine Field Development - Platform jacket	2,700	EPIC	Saipem 7000	1996
United Kingdom	Texaco North Sea UK	Captain Field Development Project - Wellhead protection platform and sealines	16,000	EPIC	Maxita - Saipem 7000	1996
Congo	Elf Congo	N'Knossa (NKF2) Jacket	7,400	EPC		1995
Italy	Agip	Daria B - Drilling and production platform	2,100	EPC		1995
Nigeria	Mobil Producing Nigeria	Ubit Expansion Project - Production and compression platforms		EPIC		1995
Norway	Elf Norge	Froy Wellhead Platform Phase 2	12,300	T&I	Saipem 7000	1995
Norway	Elf Norge	Froy Wellhead Platform Phase 3	3,200	T&I	Saipem 7000	1995
Norway	Elf Norge	Froy Wellhead Platform Template Phase 1		T&I	Saipem 7000	1995
Norway	Phillips Petroleum Company Norway	"J" Block Judy Wellhead Platform	30,900	T&I	Saipem 7000	1995
Norway	Statoil	Sleipner Vest SLB Wellhead Platform	7,500	T&I	Saipem 7000	1995
Tunisia	SEREPT	Ashtart Field - ASPF3 platform	3,700	Fabrication and T&I	Castoro Otto	1995
United Kingdom	Brown & Root Highland Fabricators	Amoco Davy Bessemer Monotower Platforms	2,600	T&I	Saipem 7000	1995
United Kingdom	Elf Enterprise Caledonia	Claymore Accommodation Platform (CAP) Project	10,500	T&I	Saipem 7000	1995





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Angola	Chevron	Cabinda Area B, C Phase 1 Project		T&I	Castoro Otto	1994
Congo	Lummus Overseas	West Kokongo Field Platforms		T&I	Castoro Otto	1994
Nigeria	Mobil Producing Nigeria	Ubit Expansion Project - Platforms and sealines		EPIC	Castoro Otto	1994
Norway	Statoil	Europipe 16/11E Riser Platform	11,500	T&I	Saipem 7000	1994
United Kingdom	Total Oil Marine	Dunbar Integrated Deck		EPC		1994
Angola	Elf Aquitaine Angola	Cob-F1 and Pac-F4 Platform Jackets	5,900	EPIC		1993
Congo	Agip Recherches Congo	Zatchi - Zap production deck	3,700	EPC		1993
Congo	Agip Recherches Congo	ZAP Project - Production platform and sealines	6,500	T&I	Castoro Otto	1993
Italy	Agip	1993 Adriatic Sea Campaign - Platforms and sealines		T&I	Castoro II	1993
Nigeria	Elf Petroleum Nigeria	Platform and Sealine for IME Edikan	1,600	EPIC	BOS 400	1993
Saudi Arabia	Saudi Aramco	Safaniya GOSP-4 Project - Accommodation, tie-in, bridge and production platforms	16,100	EPIC	Pearl Marine	1993
Trinidad	Amoco/Brown & Root	Galeota Point - Platform and sealines installation	600	T&I	Castoro Otto	1993
United Kingdom	BP Exploration	Hyde Alliance Project - Production platform	2,000	T&I		1993
United Kingdom	Chevron UK	Alba Field Development - Alba Northern platform	15,100	T&I	Saipem 7000	1993
United Kingdom	Hyde Project Alliance	Hyde Platform	2,300	T&I	Saipem 7000	1993





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Angola	Cabinda Gulf Oil Company	Takula O Well Platform	1,100	EPIC		1992
Italy	Agip	Platforms Installation in Adriatic Sea		T&I	Castoro II - Pearl Marine	1992
Nigeria	Elf Petroleum Nigeria	Odudu Odpi Afia Afd1 Drilling and Production Platforms	5,600	EPIC		1992
Nigeria	Mobil Producing Nigeria	Edop C, D and 12 Wellhead Platforms	900	EPIC		1992
Nigeria	Mobil Producing Nigeria	Oso Field Condensate Development Facilities	5,500	EPIC		1992
Norway	Britoil	Bruce Area Development	51,400	T&I	Saipem 7000	1992
Norway	Lasmo-Ultramar Exploration	Markham J6A Platform	5,200	T&I	Saipem 7000	1992
Norway	Phillips Petroleum Company Norway	Embla Field Development	8,700	T&I	Saipem 7000	1992
Papua New Guinea	Chevron Niugini PTY	Kutubu Petroleum Platform	1,800	T&I	S 355	1992





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
United Kingdom	Agip UK	Tiffany Field Development	30,700	T&I	Saipem 7000	1992
United Kingdom	Amoco Exploration Company	Central Graben Development	30,700	T&I	Saipem 7000	1992
United Kingdom	Amoco Exploration Company	Central Graben Development - Lomond integrated deck	9,800	PC		1992
Angola	Agip	Safueiro Field Development - Platform and sealine		EPIC		1991
Congo	Agip Recherches Congo	Zatchi, Zaf-2 and Zaf-3 Platform Decks	2,300	EPC		1991
Congo	Agip Recherches Congo	Loango Field - DP6 platform	4,800	T&I	Castoro Otto	1991
Congo	Elf Congo	Techendo - TCFP platform jacket	5,100	EPIC	BOS 400	1991
Egypt	Wepco	Platform and Sealine Installation		T&I	Castoro Otto	1991

## TIFFANY FIELD DEVELOPMENT – UNITED KINGDOM

All the components of the fixed Tiffany platform, part of the overall field development project, were installed by *Saipem 7000* in 126 m water depth, under a transportation and installation contract.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
India	ONGC	South Bassein BPB Complex Project Phase 2 - Gas platforms and gathering sealines		EPIC		1991
Indonesia	Atlantic Richfield	FM, FNB and FWB Platforms and Sealines	1,100	EPIC		1991
Indonesia	Total	Handfil Gaslift Compression Platform	700			1991
Italy	Agip	Platforms and Sealines Installation		T&I	Castoro II	1991
Italy	Elf	Rospo Mare C - Platform and sealine	5,000	T&I	Castoro II	1991
Italy	Elf Italiana	Rospo Mare RSMC Platform	4,300	EPIC		1991
Nigeria	Mobil Producing Nigeria	Ubit-I and Ubit-B Drilling Platforms and Sealines	1,000	EPIC		1991
Norway	Norsk Hydro Produksjon	Oseberg 2 Topsides	17,300	T&I	Saipem 7000	1991
South Africa	Mossgas	FA Platform	6,300	T&I	Saipem 7000	1991
Angola	Cabinda Gulf Oil Company	Numbi-F Well Platform	1,000	EPIC		1990
Indonesia	Hubay Oil	Hudbay Selatan Field - Msn production platform and sealines	700	EPIC		1990
Italy	Agip	Luna B and Giovanna Platforms		Fabrication and T&I	Castoro II	1990
Norway	BP Development	Gyda Platform	19,200	T&I	Saipem 7000	1990
Norway	Statoil	Veslefrikk Platform	14,700	T&I	Saipem 7000	1989
United Kingdom	Volker Stevin Aerospace	British Aerospace Platforms	1,800	T&I	Saipem 7000	1989





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Brazil	Petrobras	Polo Nordeste Project - Platforms and sealines	35,400	T&I	Castoro Sei - Pearl Marine - Saipem 7000	1988
Congo	Agip Recherches Congo	ZAF 1 Platform and Sealine	3,200	EPIC	Castoro Otto	1988
Libya	Agip Name	Bouri Field Development	26,000	EPIC	Castoro Otto	1988
Nigeria	Agip Energy & Natural Resources	Agbara Production Platform	9,000	EPIC	Castoro Otto	1988
Italy	Agip	Armida, Pennina and Barbara D Topsides	1,700	Fabrication and T&I	Castoro II	1987
Egypt	Petrobel	Belayim Oil Production Increase Project - Production platforms topsides		EPIC		1986
Italy	Agip	Nilde Oil Field Development - Single point mooring and sealines		EPC		1986
Nigeria	Agip Energy & Natural Resources	Agbara Drilling Platform	3,500	EPIC	Castoro Otto	1986
Congo	Agip Recherches Congo	Loango Field - DP5 and DP4 platforms	6,700	T&I	Castoro Otto	1985

## BOURI FIELD DEVELOPMENT – LIBYA

Two drilling and production platform topsides standing in 160 m water depths, composed by 27 modules ranging in weight from 500 to 1,700 t, designed and built in partnership with others. The first large scale integrated EPIC project for fixed production facilities ever undertaken by Saipem.





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR PROJECT REFERENCES

COUNTRY	CLIENT	PROJECT	TOTAL WEIGHT [t]	SCOPE OF WORK	MAIN VESSELS EMPLOYED	ON STREAM
Egypt	Petrobel	Hook-up of PP2 and PP3 Process Platforms		T&I	Castoro 7 - Castoro V	1985
Saudi Arabia	Saudi Aramco	Zuluf Field Project - Compression platform		EPIC	Castoro Otto	1984
Egypt	Petrobel	Drilling and Production Platforms and Sealines in the Gulf of Suez	2,900	EPIC	Castoro II	1983
Italy	Agip	Platforms and Sealines - Risers installation		T&I	Castoro II	1978
Iran	SIRIP	Revamping of a Fixed Production Platform		T&I		1971
Italy	Agip	Platforms Installation - Adriatic Sea	4,200	T&I	Castoro II	1971
Italy	Agip	Revamping of Drilling Platforms	1,200	T&I		1971
Norway	Phillips Petroleum Company Norway	Ekofisk Field - Drilling and production platform	5,500	T&I		1971
Italy	Agip	Drilling and Production Platforms - Adriatic Sea	4,500	T&I	Castoro II	1970
Italy	Agip	Platforms Installation - Adriatic Sea	2,500	T&I		1969
Italy	Agip	Drilling and Production Platforms - Adriatic Sea	5,000	T&I		1968
Italy	Elf Italiana	Drilling and Production Platforms - Adriatic Sea	800	T&I		1968
Italy	Agip	Drilling and Production Platform - Offshore Sicily	900	T&I		1967
Italy	Agip	Drilling and Production Platforms - Adriatic Sea	1,800	T&I		1967
Egypt	COPE	Drilling and Production Platform Offshore Sinai Peninsula	500	T&I		1962
Italy	Agip	Platform Installation - Offshore Sicily	1,200	T&I		1961





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR ENGINEERING REFERENCES

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Congo	Total E&P	Yanga - YAFP and SEFP platforms compressors	Conceptual Design	2011
Gabon	Eiffel	Anguille Wellhead Platform AGMN	Detail Engineering	2011
Congo	Total E&P	Moho Nord - FPU integration	Conceptual Design	2010
Iraq	Eni E&P	Offshore Sea Water Intake for Zubair Oil Field Development	Screening Study	2010
Cameroon	Total E&P Cameroun	Dissoni Wellhead Platform	Basic Engineering	2009
Congo	Eni E&P	Integrated Gas Power Generation Project	FEED	2009
Libya	Eni E&P	Further Field Development in Block NC-41	Pre-feasibility Study	2009
Undisclosed	Confidential	Development of a New Offshore Field Connected to an Existing Onshore LNG Plant	Screening Study	2009
Congo	Eni E&P	Flaring Down Project	Feasibility Study	2008
Congo	Eni E&P	Djeno Export Project	FEED	2008
Congo	Eni E&P	Mboundi Water Injection	FEED	2008
Congo	Eni E&P	Flaring Down Project - Offshore	Feasibility Study	2008
Congo	Eni Congo	Ikalou and Ikalou Sud Development Project	Feasibility, FEED and Detail Design	2007
Spain	Repsol/Initec	Alga 1600 Project	Basic Design and FEED	2007
Tunisia	Eni E&P	Zinnia Plant Updating - Baraka development	Feasibility Study	2007
Congo	Eni Congo	Awa Paloukou Platform	Feasibility Study and FEED	2006
Congo	Eni Congo	Awa Paloukou Platform	Feasibility, FEED and Detail Design	2006

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Congo	Eni E&P	Integrated Gas Power Generation	Basic Design	2006
Denmark	Maersk Olie & Gas	Halfdan Northeast Phase III Development	Detail Design	2006
Italy	Eni E&P	Angela Angelina Phase 2 - Water injection plant	Conceptual Study	2006
Italy	Eni E&P/INAgip	Annamaria A/B	Basic Design and Detail Design	2006
Kazakhstan	Agip KCO	Aktote and Kairan Project - Post evaluation phase	Feasibility Study	2006
Nigeria	Eni E&P	Okono/Okpoho Gas Export	Feasibility Study	2006
Nigeria	Eni E&P	Agbara Gas Export	Feasibility Study	2006
Nigeria	Total E&P	Ofon 2 Epci 5 Living Quarters	Basic Engineering	2006
Nigeria	Total E&P	Ofon 2 Epci 5 Modifications and Tie-in Activities	Detail Engineering	2006
Egypt	Eni E&P	Anshuga Tripode	FEED and Detail Design	2005
Egypt	Eni E&P	Temsah Concession - Temsah NW2 platform	FEED & Detail Design	2005
Egypt	Eni E&P	Early LNG Supply	FEED and Detail Design	2005
Kazakhstan	Agip KCO	Aktote and Kairan Development Project	Feasibility and Constructability Study	2005
Croatia	Eni E&P/INAgip	Katarina Field Development Katarina platform concept definition	Basic Engineering	2004
Croatia	Eni E&P/INAgip	Ivana Field Development - Ivana-K platform	Follow-up of EPC Contractor Detail Engineering	2004
Libya	Agip Oil Libyan Branch Co.	Bouri Field Removal of Rig A and Enhancement of Rig B on DP4 Platform	Basic and Detail Engineering	2003





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR ENGINEERING REFERENCES

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Nigeria	EPNL (Total)	Oml 100 - Upgrade of Edikan and Odudu platforms	Basic Engineering	2003
Nigeria	EPNL (Total)	Amenam Amp 2 Gas Production Platform, Bridges and Flare	Basic Engineering	2003
Egypt	I/IEOC	RPP and PF-D New Platforms - Upgrading of existing PF-A platform and El Gamil onshore plant	FEED and Detail Design	2002
Libya	Agip Oil	Debottlenecking of Bouri Production Facilities	Conceptual Study	2002
Nigeria	Eiffel for EPNL (Total)	Amenam Living Quarter	Detail Engineering and Procurement Services	2002
Nigeria	EPNL (Total)	Amenam Amp 1 Platform	Technical Services	2002
Nigeria	Agip Energy & Natural Resources	Okono/Okpoho Fields	Conceptual Study and Basic Design	2001
Egypt	I/IEOC	Temsah Field	FEED	2000
Libya	Elf Aquitaine Libye	Elf Libye 137B Field - Wellhead platform and flowlines	FEED	2000
Qatar	Rasgas	Rasgas Field Development	FEED	2000
Iran	Eni E&P	Soroosh Oil Field Development	Feasibility Study	1999
Nigeria	Agip	Abo Field Development	Feasibility and Conceptual Design, FEED	1999
Congo	Agip Recherches Congo	Zaf 4 Platform Project	FEED	1998
Gabon	Agip	Limande Platform Project	FEED	1998
Italy	Agip	Bonaccia Gas Field Development - Phase 2	Detail Engineering, Assistance to Procurement	1998

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Libya	Elf EP	Impact Study for Connection of 137 B Field to Bouri Field	Feasibility Study	1998
Nigeria	Elf Nigeria	Ofon Project	Detail Engineering, Procurement and Commissioning Services	1998
Nigeria	Shell	Obigbo Soku Flowstation	Engineering Services	1998
Romania	Petrom R.A.	Lebada Est Eocene Gas Field Development	Detail Engineering, FEED, Follow-up of Procurement Activities for EPC Project	1997
Libya	Agip Name OGTT	Western Libya Gas Project Offshore gas development NC41	Feasibility Study	1996
Congo	Elf Congo	Nkossa Drilling Platforms	Basic and Detail Engineering, Procurement and Commissioning Services	1995
Italy	Agip	Alto Adriatico Project - Unmanned production platforms: Ada A and Giuditta, Chioggia A, B and C	Engineering Services	1995
Italy	Agip	Alto Adriatico Project BEAF 4 slots standard production platforms	Engineering Services	1995
Nigeria	ETPM/McDermott	IME Edikan Development	Detail Engineering and Procurement Services	1994
U.S.A.	Agip Petroleum Company	Grand Isle Offshore Project - Production platform	Engineering Services	1994
Italy	Agip	Platine Project - S.CO.O.TER.OIL unmanned platform	Engineering Services	1993
Nigeria	ETPM/McDermott	AFIA Odudu Development	Detail Engineering and Procurement Services	1993





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR ENGINEERING REFERENCES

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Qatar	Qatar Europe LNG Co.	Qatar Europe LNG Project Project definition phase - Offshore portion	Engineering Services	1993
Italy	Agip	Barbara F - Eight legged jacket - Unmanned DP platform	Engineering Services	1991
Italy	Agip	Hewett Platform - Block 48/29A	Engineering Services	1990
Italy	Agip	Barbara F - Eight legged jacket Unmanned DP platform (gas)	Engineering Services	1990
Italy	Eni	Research Project for Prestressed Concrete Platform	Engineering Services	1990
United Kingdom	Agip UK	T-Block Project Phase 1 - Drilling/production platform	Engineering Services	1990
Italy	Eni	Porto Corsini C Gas Platform Eight pile jacket unmanned platform	Engineering Services	1989
Argentina	Total	Hidra Project	Basic Engineering	1988
Italy	Agip	Barbara D Drilling and Production Remote Control Gas Platform	Engineering Services	1988
Italy	Agip	Pennina 1 - Eight pile jacket Unmanned drilling/production platform	Engineering Services	1988
Italy	Agip	Barbara C - Eight pile jacket - Unmanned DP platform	Engineering Services	1987
Nigeria	Agip	Agbara DP 1-4 Pile Jacket Drilling and PP-4 Pile Jacket Production Platforms	Engineering Services	1987
Congo	Agip	Zatchi Oil Field Development - Topsides facilities	Basic Engineering	1986
Congo	Agip Recherches Congo	Loango Field Expansion DP6 four pile jacket drilling platform	Engineering Services	1986

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Italy	Agip	PCW-C Platform	Engineering Services	1986
Italy	Agip	Adriatic Sea Project - PCC gas platform	Engineering Services	1986
Italy	Agip	Adriatic Sea Project - PCW A platform	Engineering Services	1986
Tunisia	SEREPT	Asstart Oil Field - Gas lift project and general revamping - New platform	Engineering Services	1986
Egypt	Suez Oil Company	Ras Budran Offshore Project Oil production platform and submarine pipeline	Engineering Services	1985
Italy	Montedison	Mila Project - Production platform	Engineering Services	1985
Brazil	Petrobras	Pampo Project - New production platform	Engineering Services	1983
Italy	Agip	Saf Project - Automation technology development for offshore unmanned extraction platforms	Engineering Services	1983
Italy	Agip	Adriatic Sea Project - Basil gas production platform	Engineering Services	1983
Angola	Gulf/Sonangol	Gas Injection and LPG Recovery Platforms	Engineering Services	1982
Congo	Elf Congo	Sendji (SEFP) Project	Detail Engineering, Procurement and Commissioning Services	1982
Congo	Elf Congo	Yanga (YAQ) Project	Detail Engineering, Procurement, Construction and Commissioning Services	1982
Italy	Agip	Adriatic Sea Project - Barbara and Barbara B gas production and drilling platform	Engineering Services	1982





# FIXED OFFSHORE PRODUCTION FACILITIES MAJOR ENGINEERING REFERENCES

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Italy	Agip	Adriatic Sea Project - Porto Corsini gas production and drilling platform	Engineering Services	1982
Italy	Agip	Adriatic Sea Project - Fulvia production platform	Engineering Services	1981
Italy	Agip	Adriatic Sea Project - Emma production platform	Engineering Services	1981
Italy	Agip	Adriatic Sea Project Diana gas production and drilling platform	Engineering Services	1981
Italy	Agip	Adriatic Sea Project - Flavia production platform + C105	Engineering Services	1980
Italy	Agip	Adriatic Sea Project - Giulia production platform	Engineering Services	1980
Italy	Agip	Adriatic Sea Project - Fratello Cluster/Fratello Est 2/ Fratello Nord 1/2 production platform	Engineering Services	1979
Italy	Agip	Adriatic Sea Project - Ada gas production platform	Engineering Services	1979
Italy	Agip	Adriatic Sea Project - Squalo production platform	Engineering Services	1979
Italy	Agip	Adriatic Sea Project Anemone and Anemone 2 platforms	Engineering Services	1979
Italy	Agip	Adriatic Sea Project - David gas production platform	Engineering Services	1978
Italy	Agip	Adriatic Sea Project Antonella gas drilling and production platform	Engineering Services	1976
Italy	Agip	Adriatic Sea Project Angela drilling and production platform	Engineering Services	1975

COUNTRY	CLIENT	PROJECT	SCOPE OF WORK	YEAR
Italy	Agip	Adriatic Sea Project - Azalea gas production platform	Engineering Services	1975
Italy	Agip	Luna Project - Offshore gas drilling/production platform	Engineering Services	1974
Italy	Agip	Adriatic Sea Project Armida gas production and drilling platform	Engineering Services	1973
Italy	Agip	Adriatic Sea Project Cervia gas production and drilling platform	Engineering Services	1971
Italy	Agip	Adriatic Sea Project Amelia gas production and drilling platform	Engineering Services	1971
Iran	SIRIP	Now Rouz Project - Oil gathering platform	Engineering Services	1970
Italy	Agip	Adriatic Sea Project Porto Garibaldi gas production and drilling platform	Engineering Services	1970
Italy	Agip	Adriatic Sea Project Agostino gas production and drilling platform	Engineering Services	1970
Italy	Agip	Adriatic Sea Project Porto Corsini Ovest gas production and drilling platform	Engineering Services	1968
Italy	Agip	Adriatic Sea Project Ravenna gas production and drilling platform	Engineering Services	1968
Italy	Agip	Adriatic Sea Project - Cesenatico gas production and drilling platform	Engineering Services	1965





# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
ANGOLA	Cabinda Gulf Oil Company	Farm Project - Flare and relief modifications and hook-up on Takula and Malongo areas platforms	EPIC	Under Execution
	Chevron	Congo River Crossing Project Development Platforms	T&I	Under Execution
	Total	FPSO Topside Modifications Package for the Multiphase Pump System of the GiRi Project	EPIC	Under Execution
	Total Exploration & Production Angola	Single Central Platform and Injection Facilities in Block 2	EPIC	2010
	Cabinda Gulf Oil Company	Kuito Development Project Phase 2 A Installation of FPSO modules	T&I	2003
	Cabinda Gulf Oil Company	Cabinda Phase 2 (S. Sanha and North N'Dola) Production platforms and sealines	T&I	1996
	Texaco Panama	Bagre Central Field Area Development - Well protector and production platforms, tripod platform jackets, sealines	T&I	1996
	Chevron	Cabinda Area B, C Phase 1 Project	T&I	1994
	Elf Aquitaine Angola	Cob-F1 and Pac-F4 Platform Jackets	EPIC	1993
	Cabinda Gulf Oil Company	Takula O Well Platform	EPIC	1992
	Agip	Safueiro Field Development - Platform and sealine	EPIC	1991
	Cabinda Gulf Oil Company	Numbi-F Well Platform	EPIC	1990
	Gulf/Sonangol	Gas Injection and LPG Recovery Platforms	Engineering Services	1982
ARGENTINA	Total	Hidra Project	Basic Engineering	1988
AUSTRALIA	Eni Australia	Black Tip Development Project	EPIC	2009
	Coogee Resources (Ashmore Cartier)	Coogee Resources Montara Project Wellhead platform and sealines	T&I	2008
	Apache Energy	Stag - CPF platform	EPIC	1998
AZERBAIJAN	AIOC	West Chirag Platform	Fabrication and T&I	Under Execution
	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase II	Fabrication and T&I	2008
	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase III	Fabrication and T&I	2008
	AIOC	Azeri, Chirag, Gunashli (ACG) Full Field Project Phase I	Fabrication and T&I	2005

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
BRAZIL	Companhia Mexilhao do Brasil	PMXL-1 Mexilhao Gas Platform	T&I	2010
	Petrobras	Polo Nordeste Project - Platforms and sealines	T&I	1988
	Petrobras	Pampo Project - New production platform	Engineering Services	1983
BRUNEI	Elf Brunei	Mahraja Lela/Jamalulalam Platforms	T&I	1998
CAMEROON	Total E&P Cameroun	Dissoni Wellhead Platform	Basic Engineering	2009
CANADA	ExxonMobil Canada Properties	Sable Offshore Energy Project - Tier II compression platform	EPIC	2006
	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 1	EPIC	1999
	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 2	EPIC	1999
	Mobil Oil Canada Properties	Sable Offshore Energy Project Phase 3	EPIC	1999
CHINA	Offshore Oil Engineering Co.	Dong Fang and Lu Feng Fields Wellhead platform jackets and sealines	T&I	2005
COLOMBIA	Guajira Gas Services	Chuchupa B - Production platform and sealines	T&I	1996
CONGO	Eni Congo	Litchendjili Jacket	EPC	Under Execution
	Total E&P	Yanga - YAFP and SEFP platforms compressors	Conceptual Design	2011
	Total Exploration & Production Congo	Libondo - Wellhead platform and sealines	EPIC	2010
	Total E&P	Moho Nord - FPU integration	Conceptual Design	2010
	Eni E&P	Integrated Gas Power Generation Project	FEED	2009
	Eni Congo	Awa Paloukou - Wellhead platform and sealines	EPIC	2008
	Eni E&P	Flaring Down Project	Feasibility Study	2008
	Eni E&P	Djeno Export Project	FEED	2008
	Eni E&P	Mboundi Water Injection	FEED	2008
	Eni E&P	Flaring Down Project - Offshore	Feasibility Study	2008
	Eni Congo	Ikalou - Platforms and sealines	EPIC	2007



# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
Eni Congo	Ikalou and Ikalou Sud Development Project	Feasibility, FEED and Detail Design	2007
Eni Congo	Awa Paloukou Platform	Feasibility Study and FEED	2006
Eni Congo	Awa Paloukou Platform	Feasibility, FEED and Detail Design	2006
Eni E&P	Integrated Gas Power Generation	Basic Design	2006
Agip Recherches Congo	Foukanda and Mwafi Field Development - Platforms and sealines	EPIC	2001
Elf Congo	Kombi Likala Project - Production platforms and sealines	EPIC	1999
Agip Recherches Congo	Kitina EPC Project - Platform and sealines	EPIC	1998
Agip Recherches Congo	Zatchi Zaf-4 Field Development Project Production platform and sealines	EPIC	1998
Agip Recherches Congo	Zaf 4 Platform Project	FEED	1998
Agip Recherches Congo	Kitina Platform Topsides	T&I	1997
Elf Congo	N'Knossa (NKF2) Jacket	EPC	1995
Elf Congo	Nkossa Drilling Platforms	Basic and Detail Engineering, Procurement and Commissioning Services	1995
Lummus Overseas	West Kokongo Field Platforms	T&I	1994
Agip Recherches Congo	Zatchi - Zap production deck	EPC	1993
Agip Recherches Congo	ZAP Project - Production platform and sealines	T&I	1993
Agip Recherches Congo	Zatchi, Zaf-2 and Zaf-3 Platform Decks	EPC	1991
Agip Recherches Congo	Loango Field - DP6 platform	T&I	1991
Elf Congo	Techendo - TCFP platform jacket	EPIC	1991
Agip Recherches Congo	ZAF 1 Platform and Sealine	EPIC	1988
Agip	Zatchi Oil Field Development - Topsides facilities	Basic Engineering	1986
Agip Recherches Congo	Loango Field Expansion - DP6 four pile jacket drilling platform	Engineering Services	1986
Agip Recherches Congo	Loango Field - DP5 and DP4 platforms	T&I	1985
Elf Congo	Sendji (SEFP) Project	Detail Engineering, Procurement and Commissioning Services	1982
Elf Congo	Yanga (YAQ) Project	Detail Engineering, Procurement, Construction and Commissioning Services	1982

CONGO (cont'd)

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
INAgip	Ika JZ Platform	T&I	2013
INAgip	INAgip Frame Agreement Campaign 2009 Annamaria A platform topside and sealines	T&I	2009
INAgip	INAgip Frame Agreement Adriatic Campaign 2008 Ana, Vesna, Irina platform topsides	T&I	2008
INAgip	Ika, Ida and Ivana Gas Fields - Unmanned gas platforms and sealines	T&I	2005
Eni E&P/INAgip	Katarina Field Development - Katarina platform concept definition	Basic Engineering	2004
Eni E&P/INAgip	Ivana Field Development - Ivana-K platform	Follow-up of EPC Contractor Detail Engineering	2004
INAgip	Ivana E, B, and D Platforms and Sealines	T&I	2000
INAgip	Ivana A - Platform and sealines	T&I	1999
Maersk Olie Og Gas	Halfdam Northeast Phase 3 Development - Platforms	T&I	2007
Maersk	DAN FG Platform and Bridge	T&I	2005
Dong A/S	Nini and Cecilie Wellhead Platforms	T&I	2003
Maersk Olie & Gas	Halfdan Northeast Phase III Development	Detail Design	2006
Petrobel	Seth Platform	T&I	2012
Petrobel	Temsah NW2 Platform	T&I	2006
Eni E&P	Anshuga Tripode	FEED and Detail Design	2005
Eni E&P	Temsah Concession - Temsah NW2 platform	FEED & Detail Design	2005
Eni E&P	Early LNG Supply	FEED and Detail Design	2005
I/IEOC	RPP and PF-D New Platforms - Upgrading of existing PF A platform and EI Gamil onshore plant	FEED and Detail Design	2002
I/IEOC	Temsah Field	FEED	2000
Wepco	Platform and Sealine Installation	T&I	1991
Petrobel	Belayim Oil Production Increase Project Production platforms topsides	EPIC	1986
Petrobel	Hook-up of PP2 and PP3 Process Platforms	T&I	1985
Suez Oil Company	Ras Budran Offshore Project - Oil production platform and submarine pipeline	Engineering Services	1985
Petrobel	Drilling and Production Platforms and Sealines in the Gulf of Suez	EPIC	1983

CROATIA

DENMARK

EGYPT



# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
EGYPT (cont'd)	COPE	Drilling and Production Platform Offshore Sinai Peninsula	T&I	1962
GABON	Total	Anguille Field Redevelopment Project - AGM-N wellhead platform	EPIC	Under Execution
	Eiffel	Anguille Wellhead Platform AGMN	Detail Engineering	2011
	C.N.R. International (Gabon)	Olowi Development Project	EPIC	2010
	Agip	Limande Platform Project	FEED	1998
INDIA	ONGC	South Bassein BPB Complex Project Phase 2 Gas platforms and gathering sealines	EPIC	1991
INDONESIA	Pearl Oil	WHP and PQP Platforms for Ruby Field	T&I	Under Execution
	Premier Oil	Gajah Baru Project	EPIC	Under Execution
	ConocoPhillips Indonesia	North Belut Development Project - Process platform topsides	T&I	2009
	BP Berau	Tanggung GPF Platforms and Onshore Site Facilities Project	EPIC	2007
	TotalFinaElf	Peciko Field Development Phase IV (PCK 4 EPSC2) Platforms and sealines	EPIC	2004
	Atlantic Richfield	FM, FNB and FWB Platforms and Sealines	EPIC	1991
	Total	Handfil Gaslift Compression Platform		1991
	Hubay Oil	Hudbay Selatan Field - Msn production platform and sealines	EPIC	1990
IRAN	Eni E&P	Soroosh Oil Field Development	Feasibility Study	1999
	SIRIP	Revamping of a Fixed Production Platform	T&I	1971
	SIRIP	Now Rouz Project - Oil gathering platform	Engineering Services	1970
IRAQ	South Oil Company	Iraq Crude Oil Export Expansion Project - Phase 2 - CMMP platform	EPIC	Under Execution
	Eni E&P	Offshore Sea Water Intake for Zubair Oil Field Development	Screening Study	2010
ITALY	Eni E&P	Eni E&P Frame Agreement 2004/2008 Adriatic Campaign Year 2008 - Annamaria B platform jacket	T&I	2009
	Eni E&P	Eni E&P Frame Agreement 2009 Annamaria B platform topsides and sealines	T&I	2009
	Eni E&P	Angela Angelina Phase 2 - Water injection plant	Conceptual Study	2006

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
ITALY (cont'd)	Eni E&P/INAgip	Annamaria A/B	Basic Design and Detail Design	2006
	Agip	Frame Agreement 1999/2003 - Year 2000 - Platforms	T&I	2000
	Agip	1998 Adriatic Sea Campaign - Platforms and sealines	T&I	1998
	Agip	Bonaccia Gas Field Development - Phase 2	Detail Engineering, Assistance to Procurement	1998
	Agip	1997 Adriatic Sea Campaign - Platform and sealines	T&I	1997
	TMF	Bonaccia Gas Field Development Project - Production platform and sealines	EPIC	1997
	Agip	Daria B - Drilling and production platform	EPC	1995
	Agip	Alto Adriatico Project - Unmanned production platforms: Ada A and Giuditta, Chioggia A, B and C	Engineering Services	1995
	Agip	Alto Adriatico Project - BEAF 4 slots standard production platforms	Engineering Services	1995
	Agip	1993 Adriatic Sea Campaign - Platforms and sealines	T&I	1993
	Agip	Platine Project - S.CO.O.TER.OIL unmanned platform	Engineering Services	1993
	Agip	Platforms Installation in Adriatic Sea	T&I	1992
	Agip	Platforms and Sealines Installation	T&I	1991
	Elf	Rospo Mare C - Platform and sealine	T&I	1991
	Elf Italiana	Rospo Mare RSMC Platform	EPIC	1991
	Agip	Barbara F - Eight legged jacket - Unmanned DP platform	Engineering Services	1991
	Agip	Luna B and Giovanna Platforms	Fabrication and T&I	1990
	Agip	Hewett Platform - Block 48/29A	Engineering Services	1990
	Agip	Barbara F - Eight legged jacket - Unmanned DP platform (gas)	Engineering Services	1990
	Eni	Research Project for Prestressed Concrete Platform	Engineering Services	1990
	Eni	Porto Corsini C Gas Platform - Eight pile jacket unmanned platform	Engineering Services	1989
	Agip	Barbara D Drilling and Production Remote Control Gas Platform	Engineering Services	1988
	Agip	Pennina 1 - Eight pile jacket Unmanned drilling/production platform	Engineering Services	1988
	Agip	Armida, Pennina and Barbara D Topsides	Fabrication and T&I	1987
Agip	Barbara C - Eight pile jacket - Unmanned DP platform	Engineering Services	1987	
Agip	Nilde Oil Field Development - Single point mooring and sealines	EPC	1986	

# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
Agip	PCW-C Platform	Engineering Services	1986
Agip	Adriatic Sea Project - PCC gas platform	Engineering Services	1986
Agip	Adriatic Sea Project - PCW A platform	Engineering Services	1986
Montedison	Mila Project - Production platform	Engineering Services	1985
Agip	Saf Project - Automation technology development for offshore unmanned extraction platforms	Engineering Services	1983
Agip	Adriatic Sea Project - Basil gas production platform	Engineering Services	1983
Agip	Adriatic Sea Project - Barbara and Barbara B gas production and drilling platform	Engineering Services	1982
Agip	Adriatic Sea Project - Porto Corsini gas production and drilling platform	Engineering Services	1982
Agip	Adriatic Sea Project - Fulvia production platform	Engineering Services	1981
Agip	Adriatic Sea Project - Emma production platform	Engineering Services	1981
Agip	Adriatic Sea Project - Diana gas production and drilling platform	Engineering Services	1981
Agip	Adriatic Sea Project - Flavia production platform + C105	Engineering Services	1980
Agip	Adriatic Sea Project - Giulia production platform	Engineering Services	1980
Agip	Adriatic Sea Project - Fratello Cluster/Fratello Est 2/Fratello Nord 1/2 production platform	Engineering Services	1979
Agip	Adriatic Sea Project - Ada gas production platform	Engineering Services	1979
Agip	Adriatic Sea Project - Squalo production platform	Engineering Services	1979
Agip	Adriatic Sea Project - Anemone and Anemone 2 platforms	Engineering Services	1979
Agip	Platforms and Sealines - Risers installation	T&I	1978
Agip	Adriatic Sea Project - David gas production platform	Engineering Services	1978
Agip	Adriatic Sea Project - Antonella gas drilling and production platform	Engineering Services	1976
Agip	Adriatic Sea Project - Angela drilling and production platform	Engineering Services	1975
Agip	Adriatic Sea Project - Azalea gas production platform	Engineering Services	1975
Agip	Luna Project - Offshore gas drilling/production platform	Engineering Services	1974
Agip	Adriatic Sea Project - Armida gas production and drilling platform	Engineering Services	1973
Agip	Platforms Installation - Adriatic Sea	T&I	1971

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
Agip	Revamping of Drilling Platforms	T&I	1971
Agip	Adriatic Sea Project - Cervia gas production and drilling platform	Engineering Services	1971
Agip	Adriatic Sea Project - Amelia gas production and drilling platform	Engineering Services	1971
Agip	Drilling and Production Platforms - Adriatic Sea	T&I	1970
Agip	Adriatic Sea Project - Porto Garibaldi gas production and drilling platform	Engineering Services	1970
Agip	Adriatic Sea Project - Agostino gas production and drilling platform	Engineering Services	1970
Agip	Platforms Installation - Adriatic Sea	T&I	1969
Agip	Drilling and Production Platforms - Adriatic Sea	T&I	1968
Elf Italiana	Drilling and Production Platforms - Adriatic Sea	T&I	1968
Agip	Adriatic Sea Project - Porto Corsini Ovest gas production and drilling platform	Engineering Services	1968
Agip	Adriatic Sea Project - Ravenna gas production and drilling platform	Engineering Services	1968
Agip	Drilling and Production Platform - Offshore Sicily	T&I	1967
Agip	Drilling and Production Platforms - Adriatic Sea	T&I	1967
Agip	Adriatic Sea Project - Cesenatico gas production and drilling platform	Engineering Services	1965
Agip	Platform Installation - Offshore Sicily	T&I	1961
CNR International (Cote d'Ivoire)	West Espoir Development - Wellhead platform and sealines	EPIC	2006
Ranger Oil Cote d'Ivoire	Espoir Field Development - Wellhead platform and sealines	EPIC	2001
Apache L.D.C.	Foxtrot Development - Gas production platform and sealines	T&I	1999
Agip KCO	Kashagan Field Development Project - Experimental Programme Hook-up and commissioning of facilities	EPIC	Under Execution
Agip KCO	Kashagan Field Development Project - Experimental Programme Piles and flares	Fabrication and T&I	Under Execution
Agip KCO	Aktote and Kairan Project - Post evaluation phase	Feasibility Study	2006
Agip KCO	Aktote and Kairan Development Project	Feasibility and Constructability Study	2005



# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
LIBYA	Mellitah Oil & Gas	Sabratha Platform Production Enhancement Project Phase 1	EPIC	2010
	Eni E&P	Further Field Development in Block NC-41	Pre-feasibility Study	2009
	Agip Gas	Western Libya Gas Project - Sabratha platform	EPIC	2006
	Agip Oil Libyan Branch Co.	Bouri Field Removal of Rig A and Enhancement of Rig B on DP4 Platform	Basic and Detail Engineering	2003
	Compagnies des Petroles Total Libye	BD-1 Platform	EPIC	2002
	Agip Oil	Debottlenecking of Bouri Production Facilities	Conceptual Study	2002
	Elf Aquitaine Libye	Elf Libye 137B Field - Wellhead platform and flowlines	FEED	2000
	Elf EP	Impact Study for Connection of 137 B Field to Bouri Field	Feasibility Study	1998
	Agip Name OGTT	Western Libya Gas Project - Offshore gas development NC41	Feasibility Study	1996
Agip Name	Bouri Field Development	EPIC	1988	
MALAYSIA	Nippon Oil	Helang Project - Processing platform	T&I	2003
	Carigali-Triton Operating Company	Cakerawala Project	T&I	2002
	Sarawak Shell Berhard	Transportation and Installation of Platforms	T&I	1996
	Shell Sarawak	MNLG-DUA Platforms Project	T&I	1996
MALAYSIA-THAILAND JDA	Carigali Hess	Suriya-B Wellhead Platform and Pipeline Project	T&I	Under Execution
	Kencana HL	Bumi, Bulan and Suriya Wellhead Platforms and Interfield Lines	T&I	2008
MEXICO	Dragados Offshore	Platforms in Litoral Area of Campeche Bay - Gulf of Mexico	T&I	Under Execution
	Pemex	KUIL-A, TSIMIN-A, TSIMIN-B and MALOOB-D Platforms	T&I	Under Execution
	Dragados Offshore de Mexico Dragados Offshore	PG-ZAAP-C Project - Power generation platform	T&I	2011
	Dragados Offshore de Mexico Dragados Offshore	HA-LT-01 Project - Living quarter platform	T&I	2011

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
MEXICO (cont'd)	Pemex	KU-MALOOB-ZAAP Field Development - Production platforms topsides and living quarter platforms	T&I	2007
	Dragados Offshore de Mexico Dragados Offshore	Cantarell EPC - 78B (AKAL-L) - Production platform, flare and bridge structures	T&I	2003
	Pemex	Cantarell EPC-1 Phase 1 - Platform jackets	T&I	1999
MYANMAR	SMOE	Zawtika Platform	T&I	Under Execution
	Texaco Myanmar	Yetagun Project - Andaman Sea	T&I	1999
NIGERIA	Total Nigeria	Ofon Phase II - EPCI 8 Project	EPIC	Under Execution
	Elf Petroleum Nigeria	Amenam Field Development - Facilities extension	EPIC	2007
	Mobil Producing Nigeria	East Area Project EPC2A	EPIC	2006
	Mobil Producing Nigeria	Yoho Development Projects EPC2	EPIC	2006
	Eni E&P	Okono/Okpoho Gas Export	Feasibility Study	2006
	Eni E&P	Agbara Gas Export	Feasibility Study	2006
	Total E&P	Ofon 2 Epci 5 Living Quarters	Basic Engineering	2006
	Total E&P	Ofon 2 Epci 5 Modifications and Tie-in Activities	Detail Engineering	2006
	Agip Energy & Natural Resources	Okpoho and Okono Fields Development Wellhead platform and sealines	EPIC	2003
	Elf Petroleum Nigeria	Amenam Field Development	EPIC	2003
	EPNL (Total)	Oml 100 - Upgrade of Edikan and Odudu platforms	Basic Engineering	2003
	EPNL (Total)	Amenam Amp 2 Gas Production Platform, Bridges and Flare	Basic Engineering	2003
	Eiffel for EPNL (Total)	Amenam Living Quarter	Detail Engineering and Procurement Services	2002
	EPNL (Total)	Amenam Amp 1 Platform	Technical Services	2002
	Agip Energy & Natural Resources	Okono/Okpoho Fields	Conceptual Study and Basic Design	2001
	Mobil Producing Nigeria	Iodho Q and E Revamping Project - Platform topsides	EPIC	1999
Mobil Producing Nigeria	Oso 2y-2 Development Project	EPIC	1999	
Agip	Abo Field Development	Feasibility and Conceptual Design, FEED	1999	

# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
Elf Nigeria	Ofon Project	Detail Engineering, Procurement and Commissioning Services	1998
Shell	Obigbo Soku Flowstation	Engineering Services	1998
Chevron Nigeria	Escravos Gas Project Phase 1 Development	T&I	1997
Mobil Producing Nigeria	Oso NGL Topsides Installation	EPIC	1997
Mobil Producing Nigeria	Usari Development Project - Production, wellhead and riser platforms; sealines	EPIC	1997
Mobil Producing Nigeria	Usari Topsides	T&I	1997
Liberty Technical Services	Ngo Field Development - Platform and sealines	EPIC	1996
Mobil Producing Nigeria	Unam C and D, Edop E and Asasa A and B Wellhead Platforms and Sealines	T&I	1996
Mobil Producing Nigeria	Ubit Expansion Project - Production and compression platforms	EPIC	1995
Mobil Producing Nigeria	Ubit Expansion Project - Platforms and sealines	EPIC	1994
ETPM/McDermott	IME Edikan Development	Detail Engineering and Procurement Services	1994
Elf Petroleum Nigeria	Platform and Sealine for IME Edikan	EPIC	1993
ETPM/McDermott	AFIA Odudu Development	Detail Engineering and Procurement Services	1993
Elf Petroleum Nigeria	Odudu Odpi Afia Afd1 Drilling and Production Platforms	EPIC	1992
Mobil Producing Nigeria	Edop C, D and 12 Wellhead Platforms	EPIC	1992
Mobil Producing Nigeria	Oso Field Condensate Development Facilities	EPIC	1992
Mobil Producing Nigeria	Ubit-I and Ubit-B Drilling Platforms and Sealines	EPIC	1991
Agip Energy & Natural Resources	Agbara Production Platform	EPIC	1988
Agip	Agbara DP 1-4 Pile Jacket Drilling and PP-4 Pile Jacket Production Platforms	Engineering Services	1987
Agip Energy & Natural Resources	Agbara Drilling Platform	EPIC	1986

NIGERIA (cont'd)

CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
ConocoPhillips Skandinavia	Eldfisk II - Wellhead, process and accommodation platform	T&I	Under Execution
ConocoPhillips Skandinavia	The Greater Ekofisk Area Development - Living quarters, bridge support and wellhead platforms	T&I	Under Execution
Det Norske Oljeselskap	Ivar Aasen Platform	T&I	Under Execution
Det Norske Oljeselskap	Ivar Aasen Jacket	EPC	Under Execution
Lundin Norway AS	Evard Grieg (formerly Luno) Platform	T&I	Under Execution
Statoil	Ekofisk 2/4-S Jacket and Tripod Removal	T&I	Under Execution
Statoil	Gina Krog (formerly Dagny) Jacket and Topside	T&I	Under Execution
Statoil	Gullfaks A - Drilling facilities change-out	T&I	Under Execution
Statoil	Mariner Platform	T&I	Under Execution
Statoil	Valemon Topsides and Flare	T&I	Under Execution
Statoil	Gudrun Sigrun Development Project - Gudrun platform	T&I	2013
BP Norge	Valhall Redevelopment Project - Production platform	T&I	2010
BP	Valhall Jacket Repair and Topside Installation	T&I	2003
Statoil	Kvitebjorn PDQ Platform		2003
TotalFinaElf	K5PK Compression Platform	T&I	2003
Aker Stord	Valhall Water Injection Platform	T&I	2002
Hyundai Heavy Industries	Hanze Integrated Production Deck	T&I	2001
Phillips Petroleum Co.	Jade Platform	T&I	2001
Statoil	Huldra Phase 1 - Platform jacket	T&I	2001
Statoil	Huldra Phase 2 - Platform topsides	T&I	2001
Norsk Hydro Produksjon	Oseberg Sor Platform	T&I	2000
Statoil	Asgard B - Semisubmersible platform topsides	EPC	2000
Norsk Hydro Produksjon	Oseberg Gass (D) Platform	T&I	1999
Phillips Petroleum Co. Norway	Eldfisk - 2/7E platform	EPIC	1999
Norsk Hydro Produksjon	Oseberg OST Platform	T&I	1998
Phillips Petroleum Company Norway	Ekofisk 2/4J Platform Jacket Phase 1	T&I	1997

NORWAY



# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
NORWAY (cont'd)	Phillips Petroleum Company Norway	Ekofisk 2/4J Topsides Phase 2	T&I	1997
	Saga Petroleum	Varg Field Development - Wellhead platform	T&I	1997
	BP Exploration	Andrew Project	T&I	1996
	Statoil	Sleipner Vest SLT Gas Treatment Platform	T&I	1996
	Elf Norge	Froy Wellhead Platform Phase 2	T&I	1995
	Elf Norge	Froy Wellhead Platform Phase 3	T&I	1995
	Elf Norge	Froy Wellhead Platform Template Phase 1	T&I	1995
	Phillips Petroleum Company Norway	"J" Block Judy Wellhead Platform	T&I	1995
	Statoil	Sleipner Vest SLB Wellhead Platform	T&I	1995
	Statoil	Europipe 16/11E Riser Platform	T&I	1994
	Britoil	Bruce Area Development	T&I	1992
	Lasmo-Ultramar Exploration	Markham J6A Platform	T&I	1992
	Phillips Petroleum Company Norway	Embla Field Development	T&I	1992
	Norsk Hydro Produksjon	Oseberg 2 Topsides	T&I	1991
	BP Development	Gyda Platform	T&I	1990
	Statoil	Veslefrikk Platform	T&I	1989
	Phillips Petroleum Company Norway	Ekofisk Field - Drilling and production platform	T&I	1971
PAPUA NEW GUINEA	Chevron Niugini PTY	Kutubu Petroleum Platform	T&I	1992
QATAR	SMOE	PS-1K Platform	T&I	2005
	Rasgas	Rasgas Field Development	FEED	2000
	Qatar Europe LNG Co.	Qatar Europe LNG Project - Project definition phase - Offshore portion	Engineering Services	1993

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
ROMANIA	Petrom R.A.	Lebada Est Eocene Gas Field Development	Detail Engineering, FEED, Follow-up of Procurement Activities for EPC Project	1997
RUSSIA	Lukoil	Filanovsky Field Facilities: drilling platform, living quarters platform, central processing platform, riser platform	T&I	Under Execution
	Samsung Heavy Industries	Sakhalin II Phase 2 Development Project	EPIC	2007
SAUDI ARABIA	Saudi Aramco	Al Wasit Gas Programme - Arabiyah and Hasbah Offshore Platforms, Pipelines and Cables	EPIC	Under Execution
	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Arabiyah, Hasbah, Abu Safa and Zuluf Fields - 5 platform jackets	Fabrication and T&I	Under Execution
	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Hasbah, Arbiyah and Karan Fields - 11 platform jackets	Fabrication and T&I	2011
	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Safaniya and Berri Fields - Platform jackets and mezzanine decks	Fabrication and T&I	2011
	Saudi Aramco	Maintain Potential Facilities Long Term Agreement - Zuluf Field Platforms, jackets and flowlines and Safaniya field trunkline	Fabrication and T&I	2010
	Saudi Aramco	Safaniya GOSP-4 Project - Accomodation, tie-in, bridge and production platforms	EPIC	1993
	Saudi Aramco	Zuluf Field Project - Compression platform	EPIC	1984
	SOUTH AFRICA	Mossgas	FA Platform	T&I
SPAIN	UTE ACS - Cobra Castoro	Castor Underground Gas Storage Development Project Wellhead platform	T&I	2010
	Repsol/Initec	Alga 1600 Project	Basic Design and FEED	2007
THAILAND	PTT Exploration and Production Public Co.	Third Transmission Pipeline Project Offshore platform system	EPIC	2006
	PTT Exploration and Production Public Co.	Bongkot Field Development Project Phase III C Package 2 - Platforms and sealines	EPIC	2005
	Total	Bongkot Phase B 3 - Wellhead platforms and sealines	T&I	1997

# MAJOR ENGINEERING & PROJECT REFERENCES (BY COUNTRY)

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
TRINIDAD	Amoco/Brown & Root	Galeota Point - Platform and sealines installation	T&I	1993
TUNISIA	Eni Tunisia	Baraka Field - Platform and sealines	T&I	2010
	Eni Tunisia	Maamoura Platform and Sealines	EPIC	2010
	Eni E&P	Zinnia Plant Updating - Baraka development	Feasibility Study	2007
	SEREPT	Ashtart Field - ASPF3 platform	Fabrication and T&I	1995
	SEREPT	Ashtart Oil Field - Gas lift project and general revamping New platform	Engineering Services	1986
UNITED KINGDOM	ConocoPhillips	Britannia Mono Column and Compression Module	T&I	Under Execution
	Elf Exploration UK	Elgin B Wellhead Platform Jacket	EPIC	Under Execution
	Nexen Petroleum UK	Golden Eagle PUQ and Wellhead Platform	T&I	Under Execution
	Talisman	Auk Development - Block 30/16 UK North Sea	T&I	Under Execution
	Talisman Energy	MAR (Montrose Area Redevelopment) Platform	T&I	Under Execution
	ConocoPhillips	Jasmine Development Project - Wellhead, accomodation and process platforms	T&I	Under Execution
	Elf Exploration UK	West Franklin Wellhead Platform Jacket	EPIC	Under Execution
	Nexen Petroleum UK	Buzzard Enhancement Project - Production platform	T&I	2010
	EniCanada UK	Buzzard Platforms	T&I	2006
	BP	Clair Phase I Development Project	T&I	2004
	Bluewater Engineering	Bleo Holm Project - FPSO topsides	EPIC	1999
	Elf Exploration UK	Elgin and Franklin Wellhead Jacket Installation	EPIC	1997
	Texaco North Sea UK	Captain Field WPP Platform	T&I	1996
	Texaco North Sea UK	Erskine Field Development - Platform jacket	EPIC	1996
	Texaco North Sea UK	Captain Field Development Project - Wellhead protection platform and sealines	EPIC	1996
	Brown & Root Highland Fabricators	Amoco Davy Bessemer Monotower Platforms	T&I	1995
	Elf Enterprise Caledonia	Claymore Accommodation Platform (CAP) Project	T&I	1995
Total Oil Marine	Dunbar Integrated Deck	EPC	1994	

	CLIENT	PROJECT	SCOPE OF WORK	ON STREAM
UNITED KINGDOM (cont'd)	BP Exploration	Hyde Alliance Project - Production platform	T&I	1993
	Chevron UK	Alba Field Development - Alba Northern platform	T&I	1993
	Hyde Project Alliance	Hyde Platform	T&I	1993
	Agip UK	Tiffany Field Development	T&I	1992
	Amoco Exploration Company	Central Graben Development	T&I	1992
	Amoco Exploration Company	Central Graben Development - Lomond integrated deck	PC	1992
	Agip UK	T-Block Project Phase 1 - Drilling/production platform	Engineering Services	1990
	Volker Stevin Aerospace	British Aerospace Platforms	T&I	1989
U.S.A.	BP Exploration & Production	Mad Dog Drilling Rig Replacement Project	T&I	Under Execution
	Williams Field Services - Gulf Coast Company	Gulstar FPS - Platform topsides	T&I	Under Execution
	ConocoPhillips	Magnolia Tendons and Integrated Platform	T&I	2004
	ConocoPhillips	Magnolia TLP Piles	T&I	2004
	Exxon Company Usa	Diana Hoover Project - Spar and flowlines	T&I	2000
	Transco	Mobile Bay Expansion and Extension Project	T&I	1998
	Agip Petroleum Company	Grand Isle Offshore Project - Production platform	Engineering Services	1994
	Cardon IV	Perla Field Early Production Development Project Platforms	T&I	Under Execution
VIETNAM	PTSC	Bien Dong 1 Development Project	T&I	Under Execution
	Petroleum Technical Services Co.	Hai Su Trang (HST) and Hai Su Den (HSD) Platforms	T&I	2013
	PTSC	Block 12W - Chim Sao Development Project Wellhead platform and sealines	T&I	2011
	Petronas Carigali	Topaz Development Project - Wellhead platform and pipelines	T&I	2010
	PTSC	Pearl Development Project - Platform and sealines	T&I	2009
	Petechim	White Tiger Central Compression Platform	EPIC	1997
	Confidential	Development of a New Offshore Field Connected to an Existing Onshore LNG Plant	Screening Study	2009



