Engineering & Construction

Key performance indicators

		2009	2010	2011	2012	2013
Employees injury frequency rate	(No. of accidents per million of worked hours)	0.40	0.45	0.44	0.54	**0.46**
Contractors injury frequency rate		0.57	0.33	0.21	0.17	**0.10**
Fatality index	(No. of fatalities per 100 per million of worked hours)	0.86	2.14	1.82	0.93	**2.01**
Net sales from operations [a]	(€ million)	9,664	10,581	11,834	12,771	**11,611**
Operating profit		881	1,302	1,422	1,442	**(83)**
Adjusted operating profit		1,120	1,326	1,443	1,474	**(84)**
Adjusted net profit		892	994	1,098	1,111	**(253)**
Capital expenditure		1,630	1,552	1,090	1,011	**902**
Orders acquired	(€ million)	9,917	12,935	12,505	13,391	**10,653**
Order backlog		18,730	20,505	20,417	19,739	**17,514**
Employees at year end	(number)	35,969	38,826	38,561	43,387	**47,209**
Employees outside Italy rate	(%)	85.6	87.3	86.5	88.1	**89.1**
Local managers rate		41.1	45.3	43.0	41.3	**41.3**
Local procurement rate		47.0	61.3	56.4	51.8	**51.1**
Healthcare expenditure	(€ million)	25	20	32	21	**22**
Security expenditure		69	26	51	82	**85**
Direct GHG emissions	(mmtonnes CO_2eq)	1.28	1.11	1.32	1.54	**1.54**

(a) Before elimination of intragroup sales.

Performance of the year

- In 2013 procurement amounted to €9,066 million, 51.1% of which referred to local procurement.
- In 2013 the injury frequency rate for employees and contractors improved from 2012 (by 14.8% and 41.1%, respectively). In 2013 Eni continued its commitment in education and training for employees and contractors in the field of health and security, with initiatives such as "Leadership in Health and Safety", "Working at height and Confined Space" as well as the use of a dedicated HSE training portal and individual protection equipment.
- Health and safety expenditure registered an increase (up by 4% from 2012). In particular, the expenditure for individual protection equipment increased by 30% and the expenditure for safety training increased by 10%.
- In 2013, adjusted net loss amounted to €253 million (down by €1,264 million from the adjusted net profit of €1,111 million reported in 2012). This result reflected operating and marketing difficulties encountered in the first half of 2013, which led management to revise the profit margin estimates for important orders, in particular for the construction of onshore industrial complexes.
- Orders acquired amounted to €10,653 million (€13,391 million in 2012), 94% of which relating to the works outside Italy, while 14% orders from Eni Companies.
- Order backlog amounted to €17,514 million at December 31, 2013 (€19,739 million at December 31, 2012), of which €9,244 million to be fulfilled within 2014.
- In 2013 overall expenditure in R&D amounted approximately to €15 million, in line with the previous year. 14 patent applications were filed.
- Capital expenditure amounted to €902 million (€1,011 million in 2012), mainly regarded the upgrading of the drilling and construction fleet.

Engineering & Construction Offshore

Saipem is well positioned in the market of large projects for the development of offshore hydrocarbon fields leveraging on its technical and operational skills (supported by a technologically advanced fleet and the ability to operate in complex environments) and engineering and project management capabilities acquired on the marketplace over recent years (such as Bouygues Offshore). Saipem intends to consolidate its market share strengthening its EPIC oriented business model and leveraging on its satisfactory long-term relationships with the major oil companies and National Oil Companies. Higher levels of efficiency and flexibility are expected to be achieved by reaching the technological excellence and the highest economies of scale in its engineering hubs employing local resources in contexts where this represents a competitive advantage, integrating in its own business model the direct management of construction process through the creation of a large

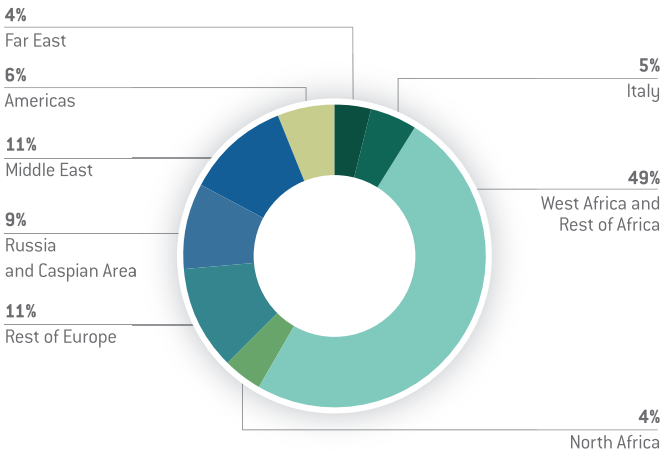
construction yard in South-East Asia and revamping/upgrading its construction fleet. Over the next years, Saipem will invest in the new construction yard in Brazil to be completed in 2014, fleet maintenance/substitutions, major upgrades on offshore fleet, equipment for the execution of awarded/expected projects and investments in strategic areas.
In 2013 revenues amounted to €5,094 million, down by 2.2% from 2012, due to lower levels of activity in the North Sea, Kazakhstan and Australia. Orders acquired amounted to €5,777 million (€7,477 million in 2012).
Among the main orders acquired were: (i) an EPCI contract on behalf of Total Upstream Nigeria Ltd, for the development of the Egina field in Nigeria that includes engineering, procurement, fabrication, installation and pre-commissioning of subsea pipelines for oil and gas production and gas export, flexible jumpers and umbilicals; (ii) a contract on behalf of Burullus Gas Company for the development of the West Delta Deep Marine - Phase IXa Project, about 90 kilometers off the Mediterranean coast of Egypt. The project is aimed to the installation of subsea facilities (in water depths up to 850 meters) in the West Delta Deep Marine Concession, where Saipem had already successfully performed some previous phases of subsea field development; (iii) an EPCI contract on behalf of ExxonMobil pertaining to the engineering, procurement, fabrication and installation of subsea pipelines of production and water injection, rigid jumpers and other related subsea structures as part of Kizomba Satellites Phase 2 project, in the Angolan offshore.
In 2013 Saipem continued to pursue the development of state of the art technologies for working in deep and ultra-deep waters, the design of floating liquefaction facilities, the development of new techniques and equipment for the installation and grounding of underwater pipes in extreme conditions. In particular, the innovative "Subsea Processing" system and floating liquefaction units (FLNG) were developed. In the process of subsea pipeline construction, new equipment was applied successfully, which enhanced the process and the quality of steel pipes' soldering with carbon and stainless materials.

Engineering & Construction Onshore

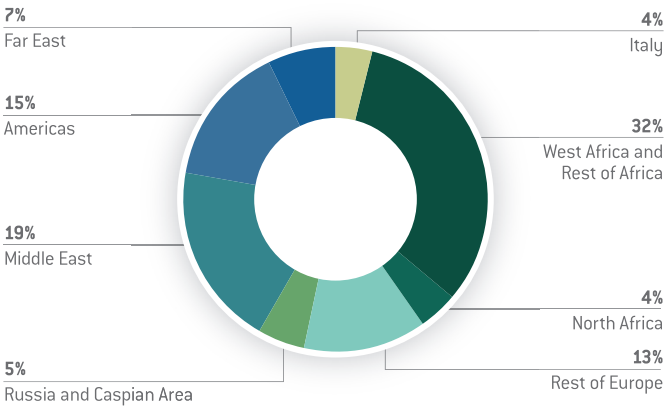
In the Engineering & Construction onshore construction business, Saipem is one of the largest operators on turnkey contract base at a worldwide level in the Oil & Gas segment. Saipem operates in the construction of plants for hydrocarbon production (extraction, separation, stabilization, collection of hydrocarbons, water injection) and hydrocarbon treatment (removal and recovery of sulphur dioxide and carbon dioxide, fractioning of gaseous liquids, recovery of condensates) and in the installation of large onshore transport systems (pipelines, compression stations, terminals).
Saipem preserves its own competitiveness through its technology excellence granted by its engineering hubs, its distinctive know-how in the construction of projects in the high-tech market of LNG and the management of large parts of engineering activities in cost efficient areas. In the medium term, underpinning upward trends in the oil service market, Saipem will be focused on taking advantage of the opportunities arising from the market in the plant and pipeline segments leveraging on its solid competitive position in the realization of complex projects in the strategic areas of Middle East, Caspian Sea, Northern and Western Africa and Russia.

In 2013 revenues amounted to €4,619 million, registering a decrease of 24.4% from 2012, due to lower levels of activity in Northern and Western Africa and Middle East. Orders acquired amounted to €2,566 million (€3,972 million in 2012). Among the main orders acquired were: (i) an EPC contract on behalf of Dangote Fertilizer for the realization of a new ammonia and urea production complex to be realized in Edo State, Nigeria. The contract encompasses the construction of two twin production streams and related utilities and off-site facilities; (ii) an EPC contract on behalf of Star Refinery AS, for the realization of Socar Refinery in Turkey, encompassing the engineering, procurement and construction of a refinery and three crude refinery jetties, to be built in the area adjacent to the Petkim Petrochemical facility; (iii) an EPC contract on behalf of Eni related to the improvements to the storage infrastructure for crude oil of Tempa Rossa field, in Italy.
R&D activities aiming at improving proprietary process technologies and increasing the company's environmental services portfolio concerned: (i) the study on the improvement of propriety technology for the production of urea, with the development of a new process "Urea Zero Emission"; (ii) the launch of the innovative project in order to improve energy efficiency.

New contracts by geographic area



Backlog by geographic area



Offshore drilling

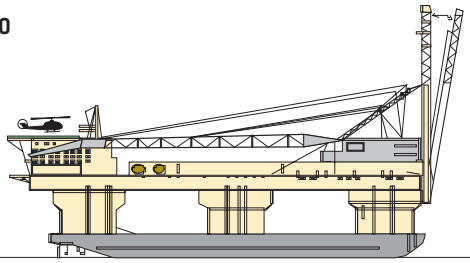
Saipem is the only engineering and construction contractor that provides both offshore and onshore drilling services to oil companies. In the offshore drilling segment, Saipem mainly operates in West Africa, the North Sea, the Mediterranean Sea and the Middle East and boasts significant market positions in the most complex segments of deep and ultra-deep offshore, leveraging on the outstanding technical features of its drilling platforms and vessels, capable of drilling exploration and development wells at a maximum water depth of 9,200 meters. In parallel, investments are ongoing to renew and to keep up the production capacity of other fleet equipment (upgrade equipment to the characteristics of projects or to clients' needs and purchase of support equipment).
In 2013 revenues amounted to €1,177 million, with an increase of 8.1% from 2012. This was due to the entry in full activity of the semisubmersible rigs Scarabeo 8, Scarabeo 3 and Scarabeo 6 and the beginning of operations of Ocean Spur vessels. Orders acquired in the year amounted to €1,401 million (€1,025 million in 2012), mainly related to: (i) five-year contract extension with Eni for the charter of the drillship Saipem 10000 starting from the third quarter of 2014 for worldwide drilling activity operations; (ii) one-year contract extension on behalf of IEOC, for the utilization of the semi-submersible Scarabeo 4 in Egypt; (iii) two-year contract extension on behalf of Eni for the charter of the Saipem TAD for drilling activity offshore Congo.

Onshore drilling

Saipem operates in this segment as contractor for the major international and national oil companies executing its activity mainly in South America, Saudi Arabia, North Africa and, at a lower extent, in Europe. In these areas Saipem can leverage its knowledge of the market, long-term relations with customers and synergies and integration with other business areas. Saipem boasts a solid track record in remote areas (in particular in the Caspian Sea), leveraging on its own operational skills and its ability to operate in complex environments.
In 2013 revenues amounted to €721 million, slightly decreasing from 2012. Lower levels of activities in Algeria were almost completely absorbed by higher levels of activities in Saudi Arabia, Kazakhstan and Mauritania. Orders acquired in the year amounted to €909 million (€917 million in 2012), mainly related to: (i) three-year contract extension on behalf of Eni Congo for the management of a client's plant; (ii) the extension of the drilling contracts with variable duration, on behalf of several clients, in South America; (iii) new contracts on behalf several clients, signed under different terms ranging from six months to five years, for the utilization of 17 rigs in Middle East, Caspian Sea, South America, West Africa, Turkey and Ukraine. Among these newly contracted rigs, two will be working for Shell under a long term global framework, engaging Saipem in a call-off agreement to facilitate new Country entries and, for exploration purposes, provide onshore drilling services worldwide, at pre-agreed terms and conditions.

Construction vessels

SAIPEM 7000

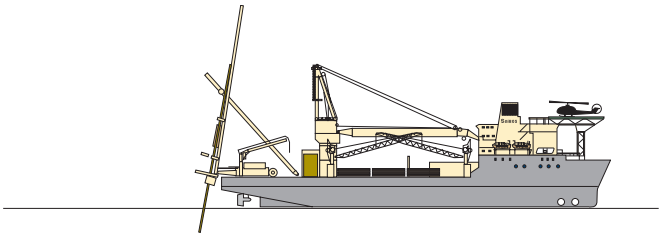


Semi-submersible crane and pipelaying (J-lay) DP vessel. Built in Italy (Trieste) by Fincantieri shipyards (1987).

Dimensions:	
Length:	198 m
Breadth:	87 m
Depth to main deck:	45 m
Transit draft:	10.5 m
Operational draft:	27.5 m

Dynamic positioning: DP (AAA) Lloyds Register; IPD 3 R.I.N.a.; Class 3 Norwegian Maritime Directorate notations. **Power plant:** total power plant 70,000 kW, 10,000 Volt; 12 diesel generators on heavy fuels divided in 4 fire segregated engine rooms; classified UMS. **Ballast system:** computer controlled system with simultaneous capabilities comprising 4 x 6,000 t/h ballast pumps, fully redundant. **Lifting facilities main crane:** 2 twin S 7000 model fully revolving bow mounted Amhoist cranes; main blocks tandem lift: 14,000 t; main block single lift: 7,000 t revolving at 40 m rad./41 m; tieback 6,000 t revolving at 45 m rad./50 m. Lowering capability to 450 m below sea level. Whip hook: 120 t revolving at 150 m rad. **J-Lay system:** pipe diameter range from 4" to 32"; main laying tension system 525 t with tensioners, up to 2,000 t with friction clamps; laying tower angle 90°-110°; number of welding stations: 1; pipe storage capacity up to 6,000 t. **Maximum laying depth:** 3,000 m.

SAIBOS FDS



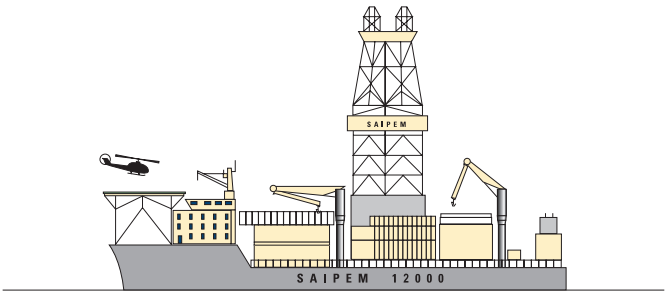
Multi-purpose monohull dynamically positioned crane and pipelay (J-lay) vessel. Built in Korea by Samsung (2000).

Dimensions:	
Length overall:	156 m
Breadth:	30 m
Operational draft:	12.4 m
Displacement:	26,608 t at operating draft
Payload:	4,300 t at 7.40 draft

Dynamic Positioning: Dynpos Autro, Dynpos Autr, 2 DGPS, 2 Lras HIPAP - 2,500 m interfaces available for Taut Wire, Artemis, Fan Beam. **Lifting capabilities:** main crane AM Clyde KPT660: main hook SWL: 600 t at 30 m, 300 t at 55 m; auxiliary cranes: 2 Liebherr CBO3100-50 Litronic SWL 50 t at 20 m, SWL 30 t at 38 m; 2 Liebherr RL-S 20/20 Litronic; starboard side fixed boom SWL 20 t at 20 m, portside telescopic boom SWL 15 t at 16 m. **Pipelay equipment:** 5 work stations + one in option; rigid pipe: 4 pipes string J-lay tower system, SWL 320 t, 3,000 m w.d., max. o.d. 22"; flexible pipe: laying through Gutter and 3 x retractable four tracks tensioners total SWL 270 t, max. i.d. 17". Assembly station has openings to allow the passage of 4 x 3 x 6 m special items.

Drilling vessels

SAIPEM 12000



Ultra deep water drillship, self-propelled, equipped with EWT (Extended Well Testing). NOV SSGD-5750 drilling plant. Built in Korea by Samsung (2010).

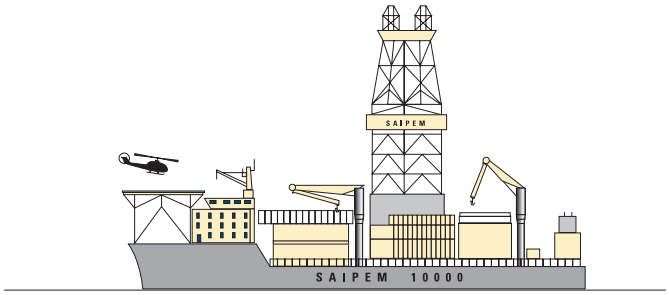
Dimensions:

Length overall:	228 m
Breadth, moulded:	42 m
Depth, moulded:	19 m
Operating draft:	12 m
Displacement:	96,000 t
Variable load:	over 20,000 t
Oil storage capacity:	140,000 bbl

Operating performance:

Drilling depth:	10,000 m
Water depth max:	3,650 m

SAIPEM 10000



Ultra deep water drillship, self-propelled, equipped with EWT (Extended Well Testing). Wirth GH 4500 EG 4200 drilling plant. Built in Korea by Samsung (2000).

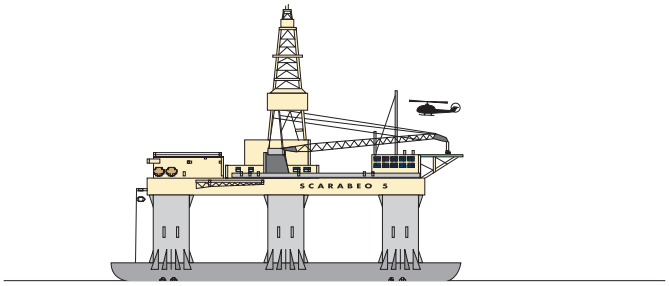
Dimensions:

Length overall:	228 m
Breadth, moulded:	42 m
Depth, moulded:	19 m
Operating draft:	12 m
Displacement:	96,455 t
Variable load:	over 20,000 t
Oil storage capacity:	140,000 bbl

Operating performance:

Drilling depth:	9,200 m
Water depth max:	3,000 m

SCARABEO 5



Semi-submersible drilling platform self-propelled; Emco C3 drilling plant. Built in Italy (Genoa) by Fincantieri shipyards (1990).

Dimensions:

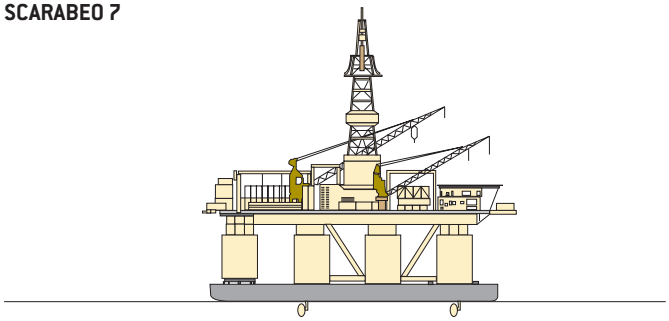
Pontoon length:	111 m
Pontoon breadth:	14.3 m
Pontoon height:	9.5 m
Main hull length:	80.8 m
Main hull breadth:	68.8 m
Main hull depth:	7.3 m

Operating performance:

Dynamic assisted mooring:	up to 900 m w.d.
Dynamic positioned mode:	up to 2,000 m w.d.
Maximum drilling depth:	9,000 m
Water depth max:	2,000 m

4,300 t variable deck load in all conditions, under the most stringent codes.

SCARABEO 7



Semi-submersible drilling platform self-propelled; Wirth SH 3000 EG drilling plant. Built in Turkey by Tusla shipyard (1999) and perfected in Italy (Palermo) by Fincantieri shipyards (1999).

Dimensions:

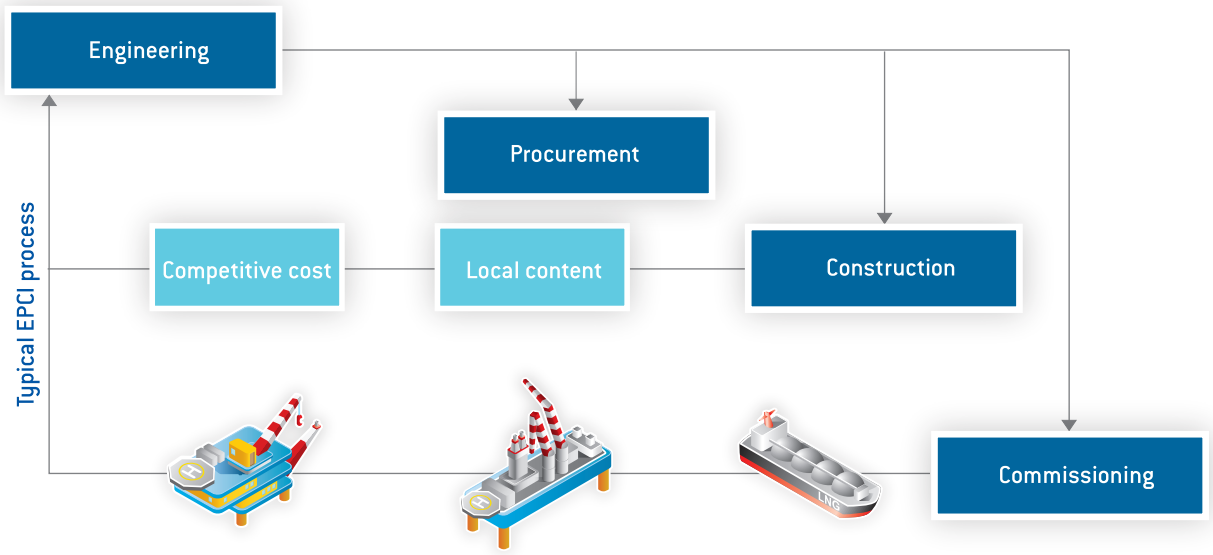
Displacement:	38,100 t
Main deck width:	61.3 m
Main deck length:	77.5 m
Main deck depth:	4.5 m
Variable deck load:	4,000 t

Operating performance:

Drilling depth W/5" DP:	25,000 ft
Drilling depth:	8,000 m
Water depth max:	1,500 m

Positioning system: automatic thruster assisted 8 leg mooring system.

Integrated project management



Main operating data		2009	2010	2011	2012	2013
Offshore pipelines laid	(km)	1,000	1,365	1,682	1,435	**1,106**
Onshore pipelines laid		716	385	889	543	**433**
Offshore structures installed	(t)	62,333	46,606	105,033	122,765	**206,959**
Onshore structures installed		76,543	874,428	353,480	261,410	**178,252**
Offshore drilling	(km)	140	130	178	194	**201**
Onshore drilling		719	881	985	953	**821**
Offshore wells drilled	(units)	54	44	64	104	**127**
Onshore wells drilled		241	279	307	373	**373**

Drilling vessels

Name	Type	Drilling plant	Maximum depth (m)	Drilling maximum (m)	Other
Perro Negro 2	Jack up	Oilwell E 2000	90	6,500	Heliport provided
Perro Negro 3	Jack up	Ideco E 2100	90	6,000	Heliport provided
Perro Negro 4	Jack up	National 110 UE	45	5,000	Heliport provided
Perro Negro 5	Jack up	National 1320 UE	90	6,500	Heliport provided
Perro Negro 7	Jack up	National 1625 UE	115	9,150	Heliport provided
Perro Negro 8	Jack up	NOV SSDG 3000	107	9,100	Heliport provided
Scarabeo 3	Semi-submersible drilling platform helped propulsion system	National 1625 DE	550	7,600	Heliport provided
Scarabeo 4	Semi-submersible drilling platform helped propulsion system	National 1625 DE	550	7,600	Heliport provided
Scarabeo 5	Semi-submersible drilling platform helped propulsion system	Emco C 3	1,900	8,000	Heliport provided
Scarabeo 6	Semi-submersible drilling platform helped propulsion system	Oilwell E 3000	500	7,600	Heliport provided
Scarabeo 7	Semi-submersible drilling platform helped propulsion system	Wirth GH 3000 EG	1,500	8,000	Heliport provided
Scarabeo 8	Semi-submersible drilling platform helped propulsion system	NOV AHD-500-4600	3,000	10,660	Heliport provided
Scarabeo 9	Semi-submersible drilling platform helped propulsion system	Aker Maritime Ram Rig	3,650	15,200	Heliport provided
Saipem 10000	Ultra deep waters drillship, self-propelled, dynamic positioning	Wirth GH 4500 EG	3,000	9,200	Oil storage capacity: 140.000 bbl; heliport provided
Saipem 12000	Ultra deep waters drillship, self-propelled, dynamic positioning	NOV SSDG 5750	3,650	10,000	Heliport provided
Saipem TAD	Tender assisted drilling barge	Bentec 1500 Hp	150	4,877	Heliport provided

Construction vessels

Name	Type	Laying technique	Transport/ lifting capability (t)	Maximum laying depth (m)	Pipelaying maximum diameter (inches)
Saipem 7000	Semi-submersible, self-propelled pipelay and DP vessel capable of lifting structures and J-laying pipelines in deep waters	J	14,000	3,000	32
Saipem FDS	Multipurpose monohull dynamically positioned crane and pipelay (J-lay) vessel utilised for the development of hydrocarbon fields in deep waters	J	600	2,100	22
Saipem FDS 2	Multipurpose monohull dynamically positioned crane and pipelay (J-lay) vessel utilised for the development of hydrocarbon fields in deep waters. The vessel is equipped with a J-lay tower	J,S	2,000	3,000	36
Castoro Sei	Semi-submersible pipelay vessel capable of laying large diameter pipe	S	300	1,000	60
Castoro Sette	Semi-submersible pipelay vessel capable of laying large diameter pipe	S		1,000	60
Castoro Otto	Crane and pipelay vessel	S	2,200	600	60
Saipem 3000	Mono-hull, self-propelled DP crane ship, capable of laying flexible pipes and umbilicals in deep waters and lifting structures		2,200		
Bar Protector	Dynamically positioned dive support vessel used for deep waters diving operations and works on platforms				
Semac 1	Semi-submersible pipelay vessel capable of laying pipes in deep waters	S	318	600	58
Castoro II	Derrick/lay barge	S	1,000		60
Castoro 10	Trench/lay barge	S		300	60
Castoro 12	Shallow waters pipelay barge	S		1.4	40
S355	Derrick/lay barge	S	600		42
Crawler	Derrick/lay barge	S	540		60
Castoro 16	Post-trenching and back-filling barge of pipelines operating in ultra-shallow waters (1.4 metres).			1.4	40
Saibos 230	Derrick pipelay barge equipped with a mobile crane for piling, marine terminals and fixed platforms	S			30
Ersai 1 [a]	Technical pontoon equipped with two crawler cranes, capable of carrying out installations whilst grounded on the seabed.		2,100		
Ersai 2 [a]	Work barge equipped with a fixed crane capable of lifting structures		200		
Ersai 3 [a]	Self-propelled workshop/storage barge used as support vessel, with storage space and office space for 50 people.				
Ersai 4 [a]	Self-propelled workshop/storage barge used as support vessel, with storage space and office space for 150 people.				
Ersai 400 [a]	Accomodation barge for up to 400 people, equipped with antigas shelter for H2S leaks.				
Castoro 9	Launching/cargo barge		5,000		
Castoro XI	Heavy duty cargo barge		15,000		
Castoro 14	Deck cargo barge		10,000		
Castoro 15	Deck cargo barge		6,200		
S42	Deck cargo barge		8,000		
S43	Deck cargo barge				
S44	Launching/cargo barge		30,000		
S45	Launching/cargo barge		20,000		
S46	Deck cargo barge				
S47	Deck cargo barge				
S 600	Deck cargo barge		30,000		
FPSO - Cidade de Vitoria	FPSO unit with a production capacity of up to 100,000 barrels a day				
FPSO - Gimboa	FPSO unit with a production capacity of up to 60,000 barrels a day				

(a) Owned by the Saipem-managed joint venture ER SAI Caspian Contractor Llc.