

SHIPYARDS IN BRAZIL

REV D
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1. Introduction

The objective of this report is to provide an overview of the Brazilian Maritime Market. The report offers broad background information about Brazilian shipyards and detailed information about relevant projects related to the Maritime industry.

When evaluating the Brazilian market, it is impossible to avoid the dominant position of the state oil company, Petrobras (Chapter 6), and its dramatic influence on the country's energy panorama. Understanding the operations of Petrobras and identifying the sectors and directions in which the company's investments are headed therefore represents another main thread of this report. Properly understanding the intricacies of the Petrobras operating system can in many cases be the make-or-break for a foreign company attempting to establish itself in Brazil.

To Norwegian Companies, the development and characteristics of the Maritime Brazilian market will be of paramount importance to their potential operations in the country. Substantial shifts in Maritime projects remain a theme throughout this report. By understanding these shifts and the motives behind the investments forecasted for the next years, Norwegian Companies will be better qualified to identify the potential market for its product in Brazil.

Finally, this report is not intended as a final product, but rather as the beginning of a process. PASCHOALIN will in the following 12 months keep monitoring the shifts in the market in order to issue updated reports, based on new investments, projects and strategies implemented in the market.

2. Brazilian Shipbuilding Industry

The Brazilian shipbuilding industry reached its apogee at the end of the 1970s. In the end of the 1950s, the industry developed a lot after the installation of modern standards, due to the initiative of President Juscelino Kubitschek. However, after the 1970s, it experienced a progressive decline that culminated in a near deactivation of the sector at the end of the 1990s. In this period of great hardship and low production levels, only a handful of shipyards managed to remain active and continue vessel construction, with production at levels below their installed capacities.

In 1998, a movement to resume production was initiated, favored by the demands of PETROBRAS to increase their offshore oil production. The first vessels produced in this new phase were support vessels for rigs and oil production platforms. Later, in 2001, PETROBRAS launched its Program for the Modernization of the Supply Vessels Fleet, named *PROMEF*, including the standards for international competition - a requirement for Brazilian flag ships, which stimulated local construction of these ships and was the first move for the reactivation of the sector. This Program is a case of success and has now moved to its second phase.

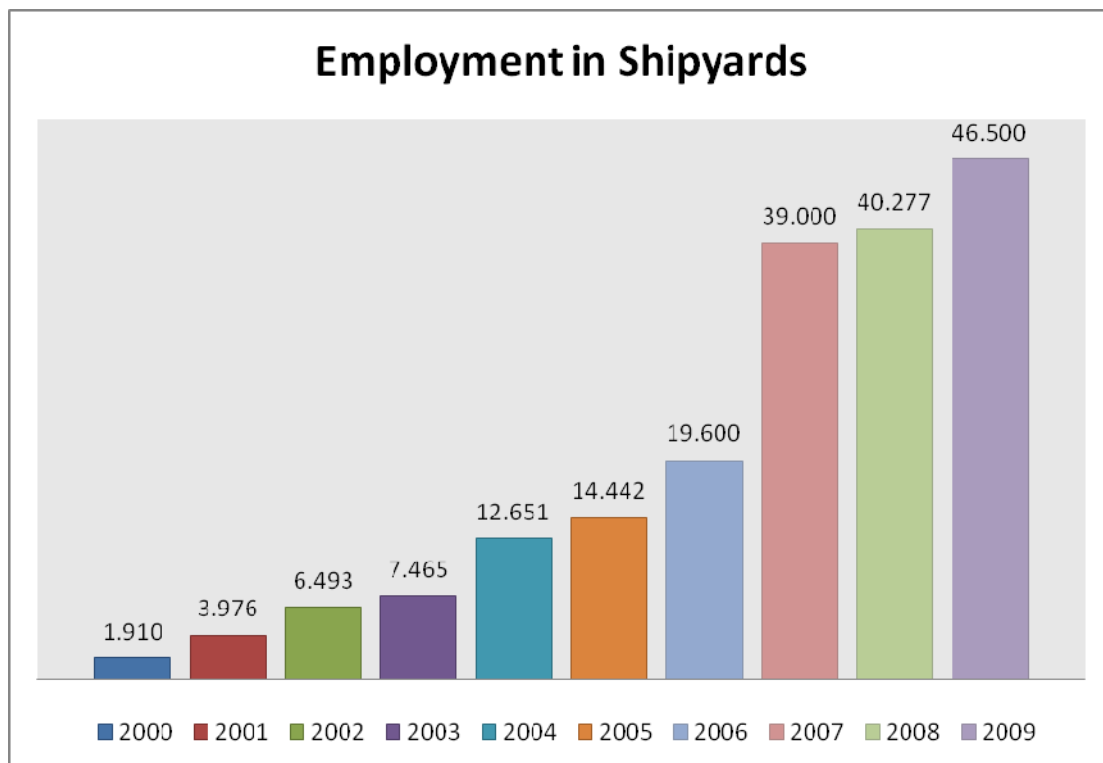
It was then decided that the Brazilian companies would participate in the construction of a variety of marine platforms, supplying some of the modules for platforms built from oil tanker hulls converted into floating production units abroad. Assembly of these modules in the platforms and the finalization of the production units would start to be conducted in Brazil as well, as decided by the Federal Government in 2003. Later, the ordering of large, semi-submersible platforms, partially or completely built in Brazil, contributed to the reactivation of a number of shipyards and attracted foreign investments. Hence, offshore construction was active once more. The national content on these platforms has progressively increased, which is bringing about a very positive impact on the Brazilian manufacturing of goods and equipment.

In 2006, TRANSPETRO (Petrobras subsidiary – chapter 6) selected, by way a public tender, the shipyards that would build the first 26 new oil tankers for the modernization and expansion of the fleet. This changed the scale of the Brazilian shipbuilding industry, ensuring the activity of the shipyards and generating thousands of new opportunities for skilled jobs.

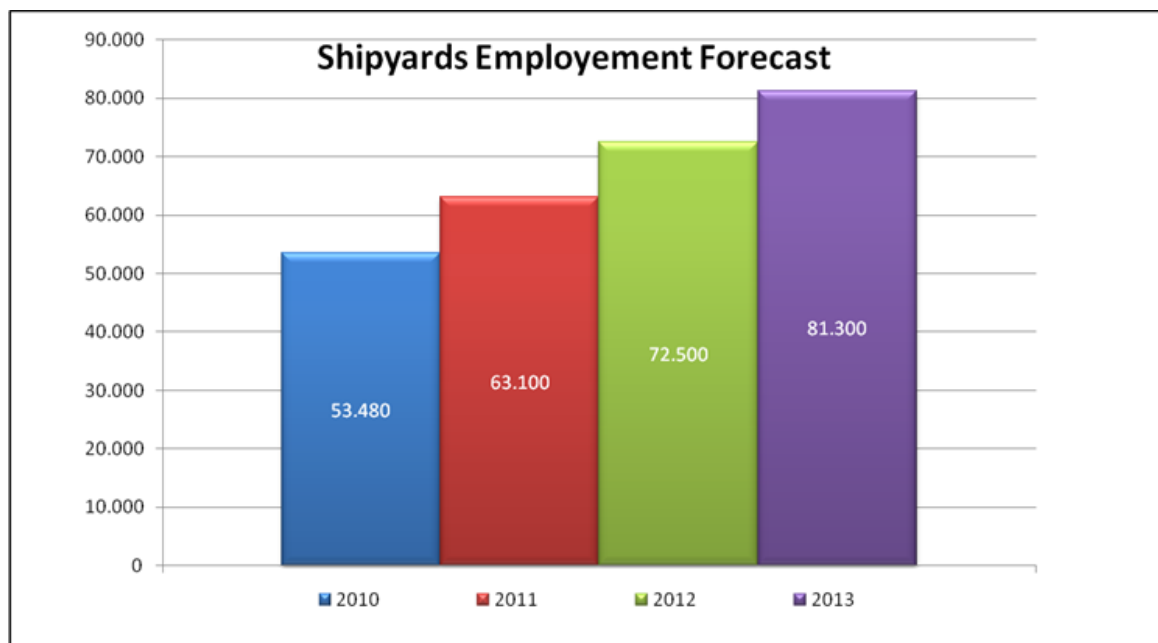
Finally, in 2007, the shipbuilding industry made it into the goals of PAC (the Federal Government’s Program of Accelerated Growth), as one of the most relevant sectors for the fulfillment of the country’s strategic goals in terms of generating job opportunities and income. This ensured the necessary resources for investments in infrastructure and for the expansion and modernization of national shipyards, which was a key condition to fulfilling the clear demand for vessels and platforms.

The Shipbuilding Industry’s Political and Strategic Vision

Throughout the world, the shipbuilding industry is considered crucial for the country and is supported by the government. It is a part of the people’s project as a whole. Given its characteristic ability of bringing together large amounts of workforce and vast financial resources, this industry has an influence on the country’s economy due to the high multiplication factor it produces throughout the production chain. One of the causes was the increase on employment created by these investments.



Source: SINAVAL



It is also a vital link in the insertion process of countries into the global economy, as a part of the transportation logistics of goods. The fact that more than 95% of global commerce is conducted by sea or waterways shows the relevance of this industry. On the other hand, its offshore segment allows for the increase in the exploration and production of oil and natural gas, crucial goods in the global economy. In the Brazilian case, self-sufficiency in oil production is a goal that is being ensured by the local construction of platforms and other products needed to accomplish this strategic goal.

The Claims of the Shipbuilding Industry

The claims already presented by SINAVAL (National Union of Industry and Shipbuilding Construction and Offshore Repair – chapter 6) on behalf of the industry are consistent with Brazil’s recovery of Maritime Power, as defined in the legislation, and with the Brazilian insertion in international trade. The premises are as follows: (a) the integration of regulatory agencies and the government with the shipbuilding industry and with shipping companies for joint and strategic action when it comes to expanding logistics and incrementing maritime business;

(b) a sustainable industrial policy, taking into consideration that this industry has a long production cycle and alternates periods of intense demand with periods of long retraction, when it comes to both shipbuilding

and the production of platforms and its modules; international experience indicates that regular orders contribute effectively when it comes to cost reduction;

(c) a counter-guarantee fund of the financing of FMM agents (Merchant Marine Fund – chapter 6) to cover the shipyards' risks in the vessel construction phase.

The Demand from the Offshore Oil Market

Petrobras continues to be the main market for the offshore sector of the shipping industry in Brazil. Petrobras' business plan for the 2010-2014 period registers total investments of US\$ 224 billion, wherein US\$ 118,8 billion alone will be in the oil exploration and production sector. Expected costs on maritime transportation up until 2010 were of US\$1 billion (around US\$ 200 million per year). All these numbers have now been overcome with the extension of the PETROBRAS business plan to 2014. The list of projects in which the local or international shipbuilding industry participated is extensive and continues with new projects which will demand a number of production platforms, a large number of shuttle tankers and many maritime support vessels (usually two for every new platform). The production of all of these assets will have extremely positive results in the production chain as well, for manufacturers of ship parts and service suppliers to the industry.

The new scenario

The industry is currently facing a new reality and a double challenge for the years to come. The first challenge is to continue meeting the requests for platforms and support vessels for Petrobras, in addition to the construction of the oil tankers ordered by TRANSPETRO, as part of the demand for at least 42 big ships. This challenge poses a great pressure for education and qualification of human resources and on the supply of systems, ship parts and naval steel at competitive prices.

The second challenge is to ensure a sustainable request process for the construction of ships beyond 2010, directed towards private shipping companies, in order to maintain and increase investments in the construction of new shipyards as well as investments to modernize and to increase the production capacity of the existing ones. It is necessary to ensure the split of financial costs in a long-term project, which requires the demand for container ships and bulk carriers from private ship owners, for cabotage and long course traffic. As Brazil already had a distinguished position among global shipbuilders in the 1970s, we see a potential for exports, considering that the slipways and docks of the world's major shipyards will be busy in

the next few years. This stage, which was expected to begin after the consolidation of the industry from local market demand, has already started, with foreign ship owners ordering many large ships from Brazilian shipyards.

Actual Scenario

The new Brazilian shipbuilding industry brings together exceptional conditions for consolidation and for becoming one of the main shipbuilding industries in the world. A set of favorable factors and an understanding, by the Government, of the social role that an industry such as this one can play in creating job opportunities and income, may ensure the progress and endurance of the shipbuilding industry. With resources from the *FMM*, the installation of new shipyards and the modernization of various companies, an ambitious program to educate and qualify the workforce, the support of universities and research centers and, especially, the political will already shown by the authorities on various levels, there is no doubt that these new times will bring great triumph to this industry, which will result in benefits for the Brazilian population as a whole.

3. Expected Orders to Brazilian Shipyards

The Brazilian shipbuilding industry directly employs over 46,000 people. Considering the indirect jobs in the supplier industry and services (4 jobs for every job in the yard), are 230 000 jobs.

Brazil has won the position of international prominence with the construction of sophisticated support vessels for offshore oil production. From 2008, with the construction of tankers, the country makes its mark as a large shipbuilder, incorporating current technologies for this type of industry.

The next phase is more ambitious, including the construction of oil production platforms and 28 drilling rigs.

The order book of records states 168 yards and ships delivered from 2000 to 2009.

Priorities given by CDFMM (Board of Directors of the Merchant Marine Fund)

The meeting of the board of directors of the *FMM* held in December 2009, approved priorities for the construction of 253 vessels (U.S. \$ 8.9 billion) and the implementation and modernization of 17 yards (U.S. \$ 2.3 billion). APPENDIX I, specifies the priority projects approved by the FMM during the last meeting.

The Brazilian shipbuilding market continues in a promising manner. Preliminary information from Petrobras estimates the need for 45 new oil rigs to meet the production needs of the pre-salt, still under evaluation. Each platform requires at least two support vessels, which opens the possibility of an additional demand of 90 support vessels (beyond the 146 already provided). There is need for another 70 tankers to Petrobras. With the economy booming and coastal shipping, more orders for container ships are expected.

The following charts highlight the undergoing and foreseen projects financed by *FMM*.

FMM Priority approved funding	Numbers of Unity	R\$ million
Maritime support	147	5.480
Port support	33	225
Inland waterway	13	69
Cabotage	48	2.421
Long haul	4	738
Program "Profrota Pesqueira"	8	15
Total	253 vessels	8.948
Shipyard - construction/modernization		2.397

Source: SINAVAL

Total numbers of ships delivered from 2000 to 2009: 168

FMM (2000-2009)	Unity	R\$ million
Maritime support	55	2.822
Port support	40	327
Inland waterway	50	188
Cabotage	12	213
Waterway crossings	7	98
Fishing fleet	4	8
Total	168	3.656

Source: SINAVAL

Ventures with FMM resources in progress: 78 ships, 3 yards – deployment/upgrading

FMM - Under construction	Unity	R\$ million
Maritime support	19	1.322
Port support	18	192
Inland Waterways	27	84
Cabotage	7	813
Long haul	4	1.020
Total	78	3.431
Shipyards - construction/modernization Aliança(RJ); STX (RJ), Mauá (RJ)	3	1.195
Total	81	4.626

Source: SINAVAL

3.1 Drilling Rigs in Brazil

Petrobras' Executive Board has approved the strategy to hire up 28 new drilling rigs to be built in Brazil, increasing national content, and to be used for ultra-deep water exploration, including the fields located in the pre-salt layer. The rigs are scheduled to be delivered between 2013 and 2018.

The first phase foresees the hiring of a minimum lot of 9 rigs. Of this first lot, seven units will be built, based on consolidated technologies widely used in the global market, and constructed in a single shipyard. Contracting these seven rigs from the same shipyard will allow the winning bidder to make the investments that are required in order to construct the needed infrastructure and to achieve the necessary economies of scale.

The two other units, which may be either vessel-type rigs or semi-submersible platforms, will be built separately and may use technologies that incorporate new concepts to the market, but which will afford Petrobras greater economic and operating benefits.

In addition to building these nine units, the Company will simultaneously conduct a process among all rig operators in which Petrobras would charter up to four units per operator. The rigs to be chartered would be built in Brazil. Under this strategy, the charterers themselves would be responsible for constructing rigs in Brazilian shipyards.

The volume of orders will make feasible not only the expansion and upgrading of existing shipyards, but also the creation of new, modern shipyards in Brazil. It is expected that the investment in new and existing yards will lead to the implementation of a new Brazilian naval industry that can compete with the best international shipyards in the offshore industry segment.

Due to the characteristics of these drilling rigs, building them in Brazil will also promote a major expansion of the related industries in goods and services that supply the shipyards' productive chain.

To assist in this process, Petrobras is analyzing how it may facilitate access to credit for the Brazilian suppliers who will form the supply chain for the drilling rigs to be chartered.

To make it feasible to execute this huge project, which will certainly drive the Brazilian economic development and may generate upwards of 40,000 new direct and indirect jobs after all orders have been

placed, the Federal Government will allocate, via *FMM*, R\$4 billion exclusively to support the construction of these 28 drilling rigs.

1st LOT

On May 25th 2010, Petrobras received seven proposals for the first round of bidding for drill rigs for the construction of two drilling units, of the semi-submersible, monocolumn or drill ship type. The envelopes were presented by:

- Engevix Engenharia,
- Keppel Fels,
- Andrade Gutierrez,
- Jurong,
- EAS,
- Estaleiro Ilha (EISA),
- OAS/UTC/Odebrecht consortium.

Three of the bidders – Engevix, Andrade Gutierrez and Eisa – presented proposals for more than one unit, although the engineering department says that the tender calls for contracting only one drill rig per company.

2nd LOT

On May 26th, nine groups made proposals for the second lot of the tender for constructing drill rigs - up to four packages of seven drill ships – 7+7+7+7. The envelopes for the competition were delivered by:

- Andrade Gutierrez,
- EAS,
- Estaleiro Ilha (ESA),
- Engevix Engenharia,
- Jurong,
- Keppel Fels,
- STX,
- Alusa/Galvão consortium,
- OAS/UTC/Odebrecht consortium.

3.2 Tankers and Gas Tankers ordered by Transpetro

PROMEF: With the Fleet Expansion and Modernization Program from Transpetro (Promef), the Brazilian industry tries to regain its former international market share.

Transpetro has a fleet of 52 vessels able to transport their products, however, these vessels have an average age of 23 years, and by 2014 this number will drop to just 19 tankers.

The Promef was launched in 2004 and aims to commission the construction of 146 supply vessels and 49 ships, costing a total of \$ 5 billion. This will provide new jobs for about 3,800 crew members. Promef may contract 26 ships in the first stage, and 26 during the second stage for a total of 52 ships. In the two stages, it is expected that the construction of the ships will take 680,000 t of heavy steel plates during the first stage and 240,000 t during the second stage.

The Plan was divided into two phases:

- In the first phase, the following will be delivered: Suezmax (10), Aframax (5), Panamax (4), Tankers (4) and Gas Tankers (3), totaling 26 ships.

PROMEF – 1st Phase Contracted Constructions	Number of Units	GWT / Unit (thousand)	Total GWP (thousand)	Shipyard	State
Suezmax	10	157	1.570	EAS	PE
Aframax	05	108	540	EAS	PE
Panamax	04	75	300	EISA	RJ
Tanker	04	48	192	MAUÁ	RJ
Gas Tanker	03	4	12	PROMAR	CE
Total	26	-	2.614		

Source: Transpetro

- In the second phase the following will be delivered: Suezmax (4), Aframax (3), Bunkers (3), Tankers (8), and Gas Tankers (8), totaling 26 ships.

PROMEF – 2nd Phase Contracted and Foreseen Constructions	Number of Units	GWT / Unit (thousand)	Total GWP (thousand)	Shipyard	State
Suezmax	04	157	628	EAS	PE
Aframax	03	108	324	EAS	PE
Panamax	03	4	12	Superpesa	RJ
Tanker (bidding)	03	45	135	-	-
Tanker (bidding)	05	30	150	-	-
Gas Tanker (bidding)	08	4	32	-	-
Total	26	-	1.282		

Source: Transpetro

The third stage of the Expansion and Modernization Program of the Transpetro Fleet will be up to the next government. The feeling is that the time is too short to carry out the bids in an election year. Since the program is going to begin from zero, it is very probable this stage will remain for the next government.

Promef 3 should contract in total 20 new vessels, three Aframax; three Panamax; eight vessels of 45,000 gross tonnage; two of 18,000 gross tonnage and four gas tankers, two of 12,000 m³ and two of 8,000 m³.

Delivery Status

Transpetro estimates that six of the 33 ships already contracted during the two stages of the Fleet Modernization and Expansion Program (Promef) will be launched in 2010. Four of the vessels are being built at the Atlântico Sul Shipyard in Pernambuco, and two at the Mauá Shipyard in Rio de Janeiro.

Today, the Atlântico Sul Shipyard (EAS) has the largest number of Promef contracts for projects with 22 ships, 14 of which are Suezmax, and eight are Aframax.

The Eisa and Mauá Shipyards, belonging to the Synergy Group, have contracts for the construction of four Panamax and four ships for product transportation, respectively.

By December the Atlântico Sul shipyard will deliver the second Suezmax that is being built for Promef – the Expansion and Modernization of Transpetro's Fleet Program. The vessel is part of the portfolio of orders that includes 22 tankers from EAS by 2014. The first Suezmax produced at Atlântico Sul shipyard was launched 7th of May 2010. It required investments of around R\$ 220 million (US\$ 120 M) and should begin operations in August. It is the first Suezmax built by the shipyard and also the first vessel to be delivered to the Petrobras System in 13 years.

Besides supporting the Brazilian Program, Brazilian shipyards also maintain orders for constructing oil tankers under the program for the renovation of the fleet belonging to PDVSA.

The Eisa shipyard already launched the first oil tanker of a series of 10 ordered by PDW Marine, the logistics subsidiary of the Venezuelan company PDVSA. The ship, named Abreu e Lima, is a Panamax type, with 70,000 tons of capacity and built to transport both clear and dark products.

Supply Vessels – PROREFAM

In 2008 Petrobras launched a massive plan of action calling for the construction of 146 supply boats, divided into seven blocks, by 2014. The new buildings of offshore supply boats are part of the government Fleet Renewal Program (PROREFAM). Of the total number of ships, 64 will be Anchor Handling Tug Supply (AHTS), 8 of 21,000 HP; 10 with 15,000 hp; 46 of 18,000 hp. Another 64 will be Platform Supply Vessels (PSVs) – 49 3,000-ton and 15 4,500-ton. And the remaining 18 will be Oil Recovery Supply Vessels (ORSVs) for the collection of oil, never before built in Brazil.

Vessel Model		Quantity
AHTS	21000 HP	8
	18000 HP	46
	15000 HP	10
PSV	4500 ton	49
	3000 ton	15
OSRV		18
TOTAL		146

Source: Transpetro

For the first phase of PROREFAM, Petrobras was supposed to contract 24 supply boats, but the company cancelled the remaining 11 units - mostly AHTSs - blaming high prices. CBO, Bram Offshore, Wilson Sons, Astromarítima, Sao Miguel and Siem-Consul got contracts to build a total of 13 vessels.

CBO won the bid for four AHTS that will be built in the Aliança shipyard in Niterói (Rio de Janeiro). Bram and Wilson, Sons won the bid for two PSVs each that will be built in the NaveShip and Wilson, Sons shipyards, respectively.

Astromarítima and Navegação São Miguel won the bids for three PSVs and two RSVs, respectively.

Each supplier may compete for up to eight ships in the first phase of the auction, when there will be an offer of 24 ships – two ORSVs, four PSVs, and 18 AHTSs. The contracts are for eight years, and may be renewed for another eight.

The domestic content must be between 70% and 80%. For this calculation, items such as motors, propellers and propulsion systems that are not manufactured in Brazil will be excluded. For the first stage, domestic content of 70% for the AHTSs and the ORSVs will be required and 80% for the PSVs.

For the second stage of PROREFAM, the tender called for the chartering of 26 new ships, of which 18 will be PSVs and eight are AHTSs.

Different than the first tender, which until now has seen the contracting of 13 ships, the new stage of the program calls for delivery of the vessels three years after the contract has been signed. During the first tender, the deadline was two years.

Today the Brazilian fleet of supply vessels is approximately 240 ships, 70% of those under foreign flag. The 30% remaining, under Brazilian flag, have an average age of 20 years.

3.3 Demand for oil production platforms

According to SINAVAL, the demand for production platforms of different types is estimated to be around 150 units by 2020.

The estimated demand of Petrobras is 95 units, in which 8 FPSO hulls were tendered and will be built by Engevix in partnership with GVA Shipyard in Rio Grande (RS).

It is estimated that 55 production platforms will be ordered from private oil companies. This includes about 48 total units ordered by OGX to its Shipyard construction, named OSX. OSX went public in early 2010 and raised R\$ 2.4 billion to invest in its implementations in Santa Catarina.

To meet this demand, several of these projects are funded by FMM for the deployment of 17 yards and expansion of five more yards.

Production platforms - historical orders

From 2007 to 2010, Petrobras and private oil companies' investments resulted in contracting 23 production platforms of different types.

Of this total, only four are fully built in Brazil:

- P-51 - built by the consortium BrasFels / Technip;
- Fixed Platform Mexilhão - built by the shipyard Mauá;
- P-55 - under construction by the consortium EAS-Quip;
- P-56 - under construction by the consortium BrasFels / Technip.

Of the 23 platforms, seven modules are going to be built and integrated in Brazil. 12 platforms were built in international shipyards and are going to be leased to Petrobras and other oil companies, with the following distribution:

PLATFORM	FIELD OPERATION	BRASIL	INTERNATIONAL	CONSTRUCTION
2007				
FPSO Rio de Janeiro	Espadarte		Total	Modec - Jurong Cingapura - rent
FPSO Macaé	B. Campos		Total	Modec - rent
P-52 semissub.	Roncador	Modules	Hull	Brasfels/ Keppel Cingapura
P-54 FPSO	Roncador	Modules	Hull	Mauá - Jurong Cingapura
2008				
P-53 FPU	Marlim	Modules	Hull	Quip/ Cingapura
FPSO Petrojarl Rio das Ostras	Badejo		Total	Teekay - Petrojarl Noruega - rent
FPSO - Niterói	Marlim		Total	Modec - rent
2009				
Mexilhão - Fixed Platform	Mexilhão	Total	Total	Mauá Shipyard
P-51 semissub	Marlim			BrasFels - Technip
FPSO BW São Vicente	Tupi		Total	BW / Keppel Cingapura - rent
FPSO Sã Mateus	Camarupim		Total	Prosafe/ Keppel - rent
FPSO Frade	Frade		Total	SBM rent
FPSO Espírito Santo	Parque das Conchas		Total	SBM/ MISC/ Keppel - rent
Platform bid				
P-55 semissub.	ND	Total		EAS/ Quip
P-56 semissub.	Marlim	Total		BrasFels/ SBM - Keppel
FPSO P-57	ND	Modules	Hull	Bid - hull Keppel Cingapura
FPSO P-58	Baleia Azul	Modules	Hull	Floatec (Keppel Fels + RJ Mc Dermott)
FPSO P-61	ND		Total	Jurong(ES)/ Jurong Cingapura
FPSO P-62	ND	Modules	Hull	Modec - rent
FPSO Santos	Uruguá		Total	Quip/ BW Noruega
FPSO P-63	ND	Modules	Hull	Modec - rent
FPSO Angra dos Reis	Tupi		Total	
8 FPSO Hulls	Pre-salt area	Hulls		ENGEVIX

Source: SINAVAL

Details of Platforms bided:

P-55 - Semisub Platform

Construction: Antlântico Sul Shipyard (EP), integration of modules in Shipyard Quip (RS).

Value: \$ 1.6 billion.

P-56 – Semisub Platform.

Construction: FSTP Consortium (Keppel Fels and Technip). The platform will be installed on the Marlim Sul field in Campos Basin. The unit is a clone of the P-51 platform, built by the same consortium, and the capacity to produce 100,000 bpd of oil and 6 million cubic meters per day of gas.

Start-up scheduled for 2011.

Value: \$ 1.2 billion.

P-57 - FPSO

Construction: SBM (Single Buoy Moorings). Hull conversion carried out by Keppel in Singapore and integration of modules in BrasFels (RJ).

Value: \$ 1.2 billion.

P-58 - FPSO.

Construction: Hull Conversion contracted with Keppel of Singapore.

Modules: Bidding in progress.

The FPSO will operate in the Field of Blue Whale.

P-61 - Tension Legs Platform

Construction: Letter of intent signed between Chevron and Petrobras for construction with Floatec (a joint venture between Keppel Fels in Singapore and Jay R. McDermott).

Value: \$ 1.1 billion.

P-62 - FPSO

Construction: Jurong Shipyard, Singapore, won the bid for the conversion of the hull. The construction and integration of modules will be held at Jurong shipyard in implantation in the Espírito Santo. The construction started in January 2010, delivery is expected in 2013.

Amount: U.S. \$ 1 billion.

P-63 - FPSO

Construction: Quip (RS) in partnership with BW Offshore will convert the case of the tanker Berge Nisa. The construction and integration of the modules will be in Quip, on the premises at the Port of Rio Grande. Value: \$ 1.3 billion

FPSO Angra dos Reis

Construction: the Modec Venture to lease to Petrobras for 20 years.
Start of operation: 2010.
The FPSO will operate at Tupi Field, Santos Basin.

8 x FPSO Hulls – Pre-salt area

Construction: ENGEVIX
Modules for the FPSO: FEED are handled by Technip

4. Market possibilities for Norwegian Suppliers

Brazilian industry is responding well for the high demand for tankers, supply vessels, FPSOs and Drilling units and equipment under construction in the country. In order to attend this demand, local companies have been seeking for technological partners and investors, opening huge opportunities for Norwegian companies.

Suppliers need to attend the local content indices that were determined by the Ministry of Mines and Energy according to a general idea that domestic industry would be able to meet the requirements. The requirement included contracts in the area of Exploration and Production. The requirement was greater in the Production stage than in the Exploration stage, where drilling rigs chartered overseas and the contracting of foreign services predominate in the cost structure.

In some areas of the segment, the indices tend to be high. Based on Petrobras' decision of constructing oil tankers in Brazil, the local content reached in a Suezmax project, for example, 73%. In refineries, the indices are also high, due to the fruit of a government policy to encourage the installation of suppliers in Brazil to help establish refineries in Brazil during the 1970s and 1980s.

The pressure for local content on the foreign supplier, in fact, began during the 7th Round of Exploration and Production Bidding, when the National Petroleum Agency (ANP) began to require minimum content for all systems and subsystems contracted for the blocks that were sold, proved by certificates issued by authorized certification agencies.

The industry has been putting a lot of effort to structure itself to attend the high demand of equipment. Suppliers of services and equipment for the oil and gas industry in Brazil can no longer grumble about the lack of information about the size of orders in the sector. There are several sources where suppliers can find information about needed equipment. One of the most structured links is The Portal of Opportunities for the Oil and Gas Industry Supply Chain (www.prominp.com.br) that brings together all the information regarding demand, divided by region, of approximately 1,500 items — from pumps to nuts and bolts — in a scenario that runs from 2010-2013. The system also identifies the companies that are able to supply components for 52 families of equipment as well as trained and qualified manpower available for recruitment in Brazil. The Portal coordination is provided by Prominp that joins together representative organizations from the industry, together with the Ministry of Mines and Energy.

The market sees the Portal as a valuable planning tool for companies that are active, or that want to be active, in the sector. Using this system, these companies will be able to know what the size of the market is,

who is supplying the necessary inputs and who is available for hire, in each region of the country, by accessing a single website. Taking as an example a valve manufacturer, the system is capable of breaking down the equipment and showing where the supply of sub-items, such as steel alloys, forged parts, screws and gaskets come from. When there is no local manufacturer available, it leaves the field open, indicating a business opportunity.

The Portal system is in Portuguese only and only open to those companies with manufacturing facilities located in Brazil. This way, Prominp will try to keep the tool from being used by companies that import equipment to perpetuate this flow. The restriction is also a way of encouraging foreign companies to establish in Brazil.

The industry identified some segments critical to the Brazilian Oil and Gas industry. These are relevant information for Brazilian Companies that are interested in providing service and equipment for the Brazilian market.

List of Equipments – Offshore E&P

Niche #1 - Mechanical Technology (Priority)

- Steam generators;
 - Offshore cranes;
 - Subsea;
- Reactors;
- Boilers and towers;
- Pressure vessels;
- Heat exchangers ;
- Winches ;
- Drilling bits;
- Fiber glass pipelines;

Niche #2 - Electrical Technology

- Tubing and casings;
- Turbo generators;
- Polyester mooring cables;

- Electrical cables;

Niche# 3 - Engineering Projects

Regarding Engineering Services, two niches are being demanded in this segment. First, building and repairing of ships and floating structures, related to the construction of platforms and ships. And the second is assembly and construction of refining plants, petrochemical and gas units.

In all three niches can be interested in:

- Companies interested in upgrading or enlarging their manufacturing already established in Brazil;
- Companies interested in installing manufacturing facilities in Brazil, either through a greenfield project or by establishing a joint venture.

4.1 Other relevant fabrication sites which are possible partners for Norwegian suppliers (Skid fabrication, assembly and testing)

Following is a list of possible partners for Norwegian companies that are interested in manufacturing, assembling or testing its equipment in Brazil. The companies are aware about achieving local content and are used to have international partners.

All following companies were contacted and informed that their company names were included on this report. So, in case of future contact, the Norwegian company can mention that their name was found on the report provided by INTSOK.

FAP do Brasil

Rua Sargento Silvio Hollembach, 350

Distrito Industrial Fazenda Botafogo

Rio de Janeiro, RJ

CEP: 21530-200

Tel/fax: +55 21 3847-2256

<http://www.fapbrasil.com.br/>

Contact Person: Eduardo Pires

Position: Director

e-mail: epires@fapbrasil.com.br

FERRAL Equipamentos Industriais

Rodovia Washington Luiz km107
Santa cruz da Serra – Duque de Caxias

CEP: 25240-000

Tel: +55 21 2773-7950

<http://www.ferral.com.br/>

Contact Person: Marcus Gomes

Position: Comercial Director

e-mail: comercial@ferral.com.br

IMETAME Metalmecânica

Rod. Demócrito Moreira, 643

Bairro de Fátima – Aracruz

Espírito Santo

CEP: 29192-243

Tel: +55 27 3302-7510

<http://www.imetame.com.br/>

Contact Person: Gilson Pereira Junior

Position: Comercial Director

e-mail: gpereira@imetame.com.br

JARAGUA Equipamentos Industriais

Av. Jaragua, 300

Distrito Industrial - Sorocaba - SP

CEP: 18087-380

Tel: +55 15 2102-9000

Fax: +55 15 2102-9090

<http://www.jaraguaequipamentos.com/>

Contact Person: Adriano Meireles

Position: Comercial Manager

e-mail: adriano.meireles@jaraguaequipamentos.com

NATEC Equipamentos

Av. Armando Lombardi, 205 sl. 202/203

Barra da Tijuca – Rio de Janeiro – RJ

CEP: 22640-020

Tel/Fax. +55 21 2494-9000

<http://www.natec.com.br/>

Contact Person: Guilherme Felix

Position: Comercial Manager

e-mail: guilherme.felix@natec.com.br

UNIÃO Engenharia, Fabricação e Montagem

Rua Joaquim Lyra, 72

Bairro de Fátima – Aracruz

Espírito Santo

CEP: 29125-050

Tel: +55 27 3089-1299

<http://www.imetame.com.br/>

Contact Person: Gilson Pereira Junior

Position: Comercial Director

e-mail: gpereira@imetame.com.br

5. Shipyards

The most critical demand for the production of oil drilling rigs, tankers and vessels, is the lack of technology that does not exist in Brazil. The decision of Petrobras to put out for tender for packages that are going to be built in Brazil was designed to force a manufacturing learning curve for the equipment. In practice, by choosing to contract a package, the company is financing the transfer of knowledge in order to obtain more competitive internal prices in the future.

Another identified bottleneck is related to sub-contractors that need to be able to provide support for the construction, vessels, tankers and mainly drill rigs. The strategy to overcome the challenge is to attract small and medium-size companies that operate within the large shipbuilding centers, such as South Korea and China. By the end of this year, Petrobras is expected to announce the launching of a website with information about financing possibilities for these types of suppliers. The idea is that some of the amounts foreseen in the contracts between Petrobras and the shipyards will serve as a guarantee for the awarding of loans to the companies contracted by the shipyards. The system is being negotiated together with large banks, including the BNDES (National Development Bank – chapter 6).

In this chapter main characteristics of some Brazilian shipyards, a brief history, projects contracted and technological partners are specified.

5.1 Atlântico Sul Shipyard - EAS



General Information

Atlântico Sul shipyard (EAS), established in November 2005, has as its Brazilian partners the groups Camargo Corrêa, Queiroz Galvão and the company PJMR. The international partner is the South Korean Samsung Heavy Industries (SHI). The company is the biggest and most modern of the shipbuilding and ship repair and offshore sector in the southern hemisphere. The project, a landmark in the revitalization of the shipping industry in Brazil, is the result of investments of R\$ 1.4 billion and has an installed processing capacity of the order of 160 tons of steel per year.

The company produces all types of cargo ships of up to 500 thousand tons of deadweight (DWT), besides offshore semi-submersible platforms, FPSO and TLP, among others. It also offers a wide range of repair services for ships and units of oil exploration, drawing up its strategic position in global shipping and privileged in relation to major producing areas of oil and gas in deep waters.

The Atlântico Sul Shipyard has been studying the feasibility of building a second dike if they win the competition launched by the Vale for the construction of four ships of the type VLOC (Very Large Ore Carries).

To become the largest shipyard of the Latin American continent, EAS was initially virtually designed. Today, EAS employs several thousand workers, who were trained by Senai Pernambuco for the different specific tasks to a shipbuilding industry. Apprentices who were illiterate were literate and then enrolled in regular primary education, especially open by the Education Department of Pernambuco to serve them.

Partner

Atlântico Sul uses technology licensed by Samsung Heavy Industries. The know-how from Samsung is being transferred through agreements of technical assistance in the areas related to the design of the industrial plant; engineering and design of vessels; supplies and training.

Characteristics - Industrial facilities

EAS has a processing capacity of 160 thousand tons of steel per year, 1.620.000 m² of land, covered industrial area of 130.000 m² and a dry dock of 400 meters long, 73 meters wide and 12 meters deep. The dry dock is served by two Goliaths Gantry cranes of 1.500 tons each, two cranes of 50 tons each and two of 35 tons each.

The size of this equipment allows reducing construction time substantially, allowing the shipyard to appear in the select team of the marine plants of the fourth generation, along with Asian shipyards, considered the forefront of the world's shipbuilding.

As to the wharf area, Atlântico Sul has a wharf 730 meters long, equipped with two cranes of 35 tons. Another wharf, 680 meters long, is used to construct and repair offshore platforms.

Total area: 780,000m²;

Covered area: 110,000m²;

Drydock: 400m x 73m x 12m, served by two 50 tons cranes, two 15 tons cranes, and one 1,000 tons Goliath crane;

Wharf: 700m outfitting quay, served by two 35 tons cranes, and 350m of wharf for the construction and repair of offshore units

Horizontal block transporters: two, load capacity of 300 tons.

Location

Atlântico Sul is located in the Complexo Industrial Portuário de Suape, Ipojuca municipality, in Pernambuco State. The complex is connected to the world's major shipping routes and to 160 ports on all continents, besides having a privileged position in relation to major producing areas of oil and natural gas as the Gulf of Mexico and the West Coast of Africa.

This strategic location offers Atlântico Sul advantages and differential in response to demands for ships and offshore units and also in providing services for repairs on vessels and platforms.

Projects

The Estaleiro Atlântico Sul has a bold department of projects, where a team of engineers with extensive experience in national and international markets are dedicated to developing and detailing the layout and engineering of ships and platforms, using modern tools of specialized software.

Projects under construction

SHIOWNER	TYPE	NUMBER
Transpetro	SUEZMAX	10
Transpetro	AFRAMAX	5
Petrobras	P-55 Hull	1

Projects Approved by FMM – during the 2009 meeting

SHIOWNER	TYPE	NUMBER
Transpetro	SUEZMAX	4
Transpetro	AFRAMAX	3

Contacts

Estaleiro Atlântico Sul

Ilha de Tatuoca, s/n

Complexo Industrial Portuário Gov. Eraldo Gueiros - Suape

Ipojuca – PE – Brasil - CEP 55590-970 - Caixa Postal 56

Tel: 55 81 3311-7200 - Fax: 55 81 3311-7278

Recife Office

Av. Engº Domingos Ferreira, 2589, 9º andar/Salas 902 e 903

Boa Viagem – Recife – PE – Brasil - CEP 51020-031

Tel: 55 81 3328-9300 - Fax: 55 81 3328-9399

Rio de Janeiro Office

Av. Rio Branco, 53/4º andar – Centro

Rio de Janeiro – RJ – Brasil - CEP 20090-004

Tel: 55 21 2276-2300 - Fax: 55 21 2276-2327

5.2 Mauá Shipyard



General Information

Mauá Shipyard is one of the largest shipyards in Brazil, and the most traditional company of the shipbuilding area still in operation. Located in Ponta d'Areia, Niterói – Rio de Janeiro, it is the only large-sized yard in Guanabara Bay, located before the Rio-Niterói Bridge, facilitating the berthing of vessels that have significant restrictions of height and/or maneuver.

To outside customers, Mauá offers a significant range of services, including docking, floating repair, specialized engineering, conversions, new construction, and many other related activities. Mauá has three industrial units, well equipped and located in Guanabara Bay.

At Caju Island, in Guanabara Bay, the unit is able to meet any requirements of ship manufacturing, offshore or industrial.

At Ilha da Conceição facility, the Mexilhão jacket was constructed.

Mauá shipyard is able to build all types of vessels such as cargo, full containers, tankers, bulk carriers, roll on/roll off, chemical, offshore equipment, oil platforms; continuing to win customers with their performance and competitive prices.

Partners

Synergy Group

Characteristics - Industrial facilities:

Unit I (Estaleiro Mauá) – Ponta d’Areia – Niterói – Rio de Janeiro

Total area of the shipyard: 180,377m² (covered: 69,140m²);

Longitudinal slipway: measuring 223m x 41m, served by two 100 tons cranes;

Drydock: measuring 167m x 22.5m; 1 floating hoist with lift capacity of 2,050 tons and 100m height;

Wharfs: two (Wharf I, measuring 350m, and Wharf II, measuring 306m), served by four cranes of 15, 20 and 30 tons;

Largest ship ever built (1996): oil tanker of 55,000 DWT, with a length of 218m and a breadth of 32.20m, for a maximum capacity of 70,000 DWT;

Steel processing capacity: 36,000 tons/year.

Unit II – Ilha do Caju – Niterói – RJ

Total area: 76,000m²;

Slipway: horizontal, for the construction of jackets for platforms in two lines, each with a capacity of 300 tons/m and an extension of up to 180m;

Wharf: with a capacity of 20 ton/m² (under construction).



Unit III (Caximbau) – Ilha da Conceição – Niterói – RJ

Total area: 78,000m²;

Slipway: horizontal, for the construction of two-line modules, each with a capacity of 280 tons/m and extensions of up to 167m;

Wharf: with a capacity of 20 ton/m² (under construction).



Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
Transpetro	Tanker (Produtos Claros)	4
Transpetro	AFRAMAX	5
Petrobras	P-55 Hull	1

Contacts

Estaleiro Mauá

Rua Dr. Paulo Frumêncio, 28

Ponta D'Areia - Niterói – Rio de Janeiro

CEP: 24.040-290

Tel: (21) 2613-9999

5.3 Aliança Shipyard



General Information

In 2004, in order to meet CBO's aggressive fleet renewal strategy and to assure the construction of the new vessels in the necessary deadlines, keeping quality standards, CBO acquired EBIN Shipyard which was renamed to Aliança Shipyard.

Companhia Brasileira de Offshore (CBO) is an offshore shipping company of maritime support to oil platforms funded with 100% national capital. With its headquarters located in Rio de Janeiro, CBO is part of Fischer Group, a Brazilian conglomerate that operates in several industrial segments and countries.

The company has approximately 450 employees and a fleet composed of thirteen support vessels that today operate on the Brazilian coast. CBO operates in Brazil's oil basins, where it provides support to oil exploration and production platforms along the country's coast. The company operates mainly in the Campos Basin, the Santos Basin, the Espírito Santo Basin, and the Ceará and Potiguar Basins.

Aliança Shipyard is strategically located in an area of 54,000 m² on BR-101 road in Niterói, alongside Baía de Guanabara.

Partners

CBO

Characteristics - Industrial facilities:

Total area: 61,000m²;

Covered area: 11,000m²;

Slipway: load capacity of up to 3,000 tons, for vessels of up to 10,000 DWT;

Cranes: 60 tons;

Wharfs: two, 100m long each.

Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
CBO	MPSV - 3000	4

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
CBO	PSV 3000	17
CBO	PSV 4500	2

Contacts

COMPANHIA BRASILEIRA DE OFFSHORE - MAIN OFFICE

Av. Pasteur, 110 - 9º andar - Botafogo 22290-000 Rio de Janeiro(RJ)

Phone: 55 21 2546 1104

Fax: 55 21 2546 1387

E-mail address: cbo@cborio.com.br

COMPANHIA BRASILEIRA DE OFFSHORE – MACAÉ

Rua Fernando Hipólito dos Santos, 132 - Barra de Macaé 27973-400 Macaé(RJ)

Phone: 55 22 2791 9390

Fax: 55 22 2772 7265

E-mail address: cbomacae@cborio.com.br

ALIANÇA SHIPYARD

Travessa Braga, 02 - Barrero 24110-200 Niterói (RJ)

Phone: 55 21 2624 9300

Fax: 55 21 2624 9331

E-mail address: estaleiro@estaleiroalianca.com.br

5.4 Rio Grande Shipyard



General Information

The construction of Brazil's first large Dry Dock, the Rio Grande Shipyard, located in the area of the Superport, started in August 2006, under the responsibility of WTORRE, the Shipyard controlling company, will now be expanded.

Petrobras financed 79% of the shipyard construction and WTorre, 21%. With this agreement, Petrobras acquired the dry dock occupation rights for 10 years.

The objective of the contract signed with Petrobras intends to increase its investment, aiming full occupation of the Dry Dock. The expansion will allow the construction, conversion and repair of hull ships, platforms, in addition to the construction and repair of semi-submersible platforms.

In June 2010, Engevix and Funcef (Federal Pension Fund) have acquired from WTorre, for US\$ 228 M, the Rio Grande dry dock as well as the expanding projects.

Characteristics - Industrial facilities:

The Dry Dock is 133 meters wide, 350 meters long and 17,10 meters deep (3,30 meters above water level and 13,80 meters below water level);

Navigation Channel: 12 meters deep;

With the expansion, the investment will reach R\$ 454.9 million;

Contacts

Office:

Rua Lauro Müller, 116, 33º andar, Sala 3305

Botafogo - Rio de Janeiro – RJ

CEP 22290-160

Tel.: 55 21 2139-4450

Shipyard:

Avenida Maximiliano da Fonseca, 4361

Rio Grande - RS

CEP 96204-040

Tel.: 55 53 3035-9700

5.5 BrasFELS Shipyard



General Information

Keppel FELS Brasil is a wholly-owned subsidiary of Keppel O&M. It operates BrasFELS yard in Angra dos Reis, which is the most comprehensive shipyard in the Southern Hemisphere.

A global leader in offshore rigs and ship conversion and repair as well as a specialised shipbuilder, Keppel O&M is a wholly-owned subsidiary of Keppel Corporation. Its 'Near Market, Near Customer' strategy is bolstered by a global network of 20 yards in the Asia Pacific, Gulf of Mexico, Brazil, the Caspian Sea, Middle East and the North Sea regions.

Integrating the experience and expertise of its yards worldwide, the group aims to be the provider of choice and partner in solutions for the offshore and marine industry.

Partners

The yard belongs to Brasfels, Keppel Fels Brasil, a subsidiary of Keppel Offshore & Marine. The company was established in March 2000 by the Keppel Fels, Singapore, to meet the market for shipbuilding and offshore oil and gas. Keppel Fels Group concentrates its activities in Asia, Europe and American markets.

Keppel Fels Group has designed and built about 250 ships and oil platforms of various types, sizes and functions. The group has projects such as mobile offshore drilling, floating production systems, floating plants operating, special vessels, fixed production platforms and drilling rigs.

Characteristics - Industrial facilities

Total area: approximately 1,000,000m²;

Covered area: approximately 135,000m²;

Slipway # 1: 174m long; 30m wide; load capacity for vessels of up to 45,000 DWT; served by two cranes, 80 tons and 40 tons;

Slipway # 2: 310m long; 45m wide; load capacity for vessels of up to 150,000 DWT; served by two 80 tons cranes;

Slipway # 3: 300m long; 70m wide; load capacity for vessels of up to 600,000 DWT; served by two cranes, 40 tons and 80 tons, and one 660 tons Gantry crane.

Drydock: 80m long; 70m wide; served by the same cranes of slipway #3 and by the Gantry crane.

Wharf: 313m long, with an extension of 54m, served by two cranes, 40 tons and 80 tons;

Outfitting quay: 200m long, with an extension of 130m, served by one 40 tons crane.

Track One: 460m in length, served by two 80 tons cranes;

Track Two: 460m in length, served by one 80 tons crane;

Track Three: 460m in length, served by one 40 tons crane.

Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
Petrobras	P-56	1
Petrobras	Module itegration P-57	1

P-56, to be delivered in December 2010 (detailed engineering and the hull of the module housing, construction of the hull including us in the corner, deck box, topsides, modules of accommodation and integration of modules, global engineering services; detailed engineering of deck box, topsides; mating operation, transport deck box after coupling of the shell).

Manufacturing and integration of modules (hull and modules) for the P-57, with delivery time for the second half of 2010.

Contacts

Estaleiro BrasFELS

Estrada Rio Santos, km 83 – Jacuecanga

Angra dos Reis – RJ

CEP: 23905-000

Phone: (24) 3361-3403

Fax: (24) 3361-3408

Site: www.kfelsbrasil.com.br

5.6 Wilson, Sons Shipyard



General Information

The “Wilson, Sons Group” has, since 1837, always kept a close relationship with marine transportation and entering into the shipbuilding industry, over 80 years ago, was just the natural outcome. It was the first company to obtain the ISO 9002 Certification, issued by LRQA – Lloyd’s Register Quality Assurance. Located in the Santos Port, it specializes in the construction of vessels to support marine platforms (PSVs), towboats and work boats in general, made of steel or aluminum. As it has a combined arrangement of dock and slipway, the shipyard can perform repair work and docking services.

Partners

Dutch group Damen, world reference in technology in the construction of tugs and other vessels. The Tugs and PSV are built using design and engineering from Damen, beyond the provision of equipment. The procedure is used only for Damen projects, while Damen undertakes to consult Wilson, Sons in advance regarding the transfer of technology to other potential customers in Brazil.

Characteristics - Industrial facilities

The shipyard is located in Guarujá, in the State of São Paulo, and has a transport way/dyke complex 205 meters long, with 16 meters of opening and a docking capacity of up to 1500 tons of light weight (all of our vessels conform with such weighing). Due to legal restrictions on the use of foreign vessels in Brazil, access to reliable shipyards providing quality services and capable of meeting demands is key for companies in the Towage and Offshore segments.

The shipyard is used to construct and repair vessels of the Towage and Offshore segments. Wilson, sons have experience in the construction of tugboats, PSV, patrol boats, ferryboats and other medium-sized steel or aluminum boats. The shipyard is also authorized to render repair and maintenance services for support and recreation vessels, including repairs in propulsion, hydraulic, and electric systems, as well as mechanical equipment and finishing.

The equipment used in the shipyard consists of cranes with a capacity of up to 50 tons, stacking machines and Computerized Numeric Control (CNC) cutting machines to cut plasma and acetylene, among others. It has maintained a strong partnership with the Dutch group Damen for over ten years, and all of their tugboats, PSV and equipment are based on Damen engineering. Damen is well known for its cutting-edge technology in tugboats, among other vessels.

Wilson Sons and Magallanes Brazilian Navigation, controlled by the Chilean Ultratug joined forces in the offshore area and have plans to grow in Brazil in the segment of larger vessels (AHTS). April of 2009, PSV “Petrel” first fruit of the ‘joint ventures’ has just been baptized in April of 2009.



Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
Magallanes	PSV-3000	1
Magallanes	PSV-4500	1
Saveiros	PSV-4500	1
Saveiros	Tug vessel	11

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
Wilson Sons Offshore	Multi Purpose de 11000 tpb	1
Wilson Sons Offshore	AHTS	1
Wilson Sons Offshore	PSV 3000	1
Wilson Sons Offshore	PSV 4500	1

Contacts

HEAD OFFICE

Rua Jardim Botânico, 518

2º e 3º andares - JARDIM BOTÂNICO

Rio de Janeiro - RJ CEP: 22461-000

Phone. (21)2126-4222

FAX (21) 2126-4224

GUARUJÁ – São Paulo

Rua Padre Arnaldo Caiaffa, 246

Vila Lúcia – SP

CEP 11430-020

PABX (0xx13) 3347 7200

Tel (0xx13) 3358-2660

Fax (0xx13) 3358-2748

ga@wilsonsons.com.br

NITERÓI – Rio de Janeiro

Rua Miguel de Lemos, 25 Ponta D´Areia – RJ

CEP 24040-260

Tel (55-21) 2719-6009 / (55-21) 2719-6050

Fax (5-21) 2719-7780

nt@wilsonsons.com.br

5.7 Cassinú Shipyard



General Information

Founded in 1995, Cassinú Shipyard has become an outstanding reference in ship repair, shipbuilding and onshore/offshore operations.

In searching for quality excellence the company has been developing and modernizing its activities, concentrating solid resources in the qualification of its staff, security of the work and awareness of the social responsibility.

The shipyard works basically repair small and medium-sized boats, tugs, barges and fishing boats. It is also able to construct small and medium-sized boats, tugs, barges and fishing boats.

Partners

Technology Partners - Caterpillar Motores (Sotreq), HRP Propulsores Azimutais, IHC Dragagens, Itur Bombas, Furuno Equipamentos Eletrônicos

Engineering - Vik Sandvik Projetos Navais, IHC Projetos Navais, Tech Survey Vistorias Navais, ABS Classificadora, DNV Classificadora, Lloyd's Register Classificadora, Bureau Veritas Classificadora.

Characteristics - Industrial facilities

Outfitting quay: 200m.

Drydock: 69m long; 12.60m wide; 3.5m loaded draft; Gantry crane for 25 tons;

Floating dock: 30m long; 14.4m wide; 4.20m draft;

Cranes: Four – 30 tons, 40 tons, 75 tons and 125 tons.

Projects

Structural assembly of a midsize Tugs Shipowner - Wilson Sons.

Construction of Tug Supply Vessel and ship-owner - Tug Brasil.

Construction of 1 Supply Vessel (PSV 3000) Shipowner - EMARINE.

Contacts

Head Facility:

Rua Cruzeiro do Sul, 454, Gradim

São Gonçalo – RJ

CEP: 24430-620

PABX/FAX: +55 (21) 2606-9043

<http://www.estaleirocassinu.com.br/en/index.php>

Arraial do Cabo Facility:

Arraial do Cabo: Rua Washington Luiz, 69

Centro – Arraial do Cabo – RJ

CEP: 28.930-000

Tel: +55 (22) 2622-3011 / 1955

5.8 INACE Shipyard



General Information

INACE has been building and repairing ships since the 60's when the shipyard was established. Located in Fortaleza, Ceará State, Brazil, the company is a middle-sized shipyard leader in steel and aluminum luxury yacht construction in Latin America, and the unique private shipyard building warships in Brazil. The company, which celebrates 35 years in business, was the first aluminum shipbuilding yard in Brazil, and over 15 years the number one in tonnage processed.

During all this time, INACE constructed, converted or repaired over 1,000 ships, including fishing boats, tugs, pushers, barges, offshore support vessels, luxury yachts and patrol crafts, and never stopped building even in the 90's when the Brazilian naval industry passed by a serious crisis. This created an impressive reputation in commercial repair and construction, in addition to leading luxury yacht construction and private military ship construction in Brazil.

In 1987, the company built and exported to the United States the first of a six yacht series, getting into the American market. After this, more than fifteen luxury yachts were delivered to USA, Canada and Europe, including the “Joana II” owned by the famous Formula 1 and Formula Indy world champion Emerson Fittipaldi. INACE has recently completed building and exported to USA two yachts 65 ft Buccaneer Class.

The relationship between INACE and the Brazilian Navy is effective and close since the company was founded. In 1996, the company has been contracted to build two patrol craft of 240 ton, delivering the first ship (“Guanabara”) in July 1999 and the second (“Guarujá”) in November 1999. The Brazilian Navy acquired 12 ships at the same project, including the 6 constructed in Germany, and these two units made by INACE become the faster in their class.

To achieve Navy and luxury yachts standards, INACE has invested in advanced computer assisted design capabilities and computer systems to support ship production, as well as in production equipment and tooling.

The company has experienced decades of change and growth and emerged as the leading regional shipyard with the capability to attract both national and international contracts in repair and construction.



Characteristics - Industrial facilities

Total area: 150,000m², approximately;

Covered area: 11,000m²;

Synchrolift: 80m long; 15.50m wide; load capacity of up to 4,000 tons; connected to a ship-carrier on rails and a large transfer yard, connected to all buildings and service sites.

Large shops and workshops are located in the covered areas.

Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
DSND Consub	UT 4000 (Fast Supply Vessel)	2
Marimar	FSV - UT - 4000	2
Marimar	Crew Boat - P 5	3
TUGBrasil	Tug vessel	6

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
Internav Navegação Ltda	Supply Boat	1
Maré Alta	PSV 4500	1
Maré Alta	UT 4000	1

Contacts

Shipyard:

Av. Presidente Kennedy, 100 - Praia de Iracema

CEP 60060-610 - Fortaleza - CE

Phone: +55 85 3455-1800

Fax: +55 85 3231-9110 / 3251-1171

www.inace.com.br • inace@inace.com.br

Rio de Janeiro Office:

Av. Nilo Peçanha, 26 - Grupo 904

Centro - - Rio de Janeiro - RJ

CEP 20020-100

Phone/Fax: +55 21 2524-0296

5.9 ITAJAÍ Shipyard



General Information

The Itajaí shipyard operates since 1995 under the control of the Metalnave Group in plants undergoing modernization and expansion following a Director plan of Investments of US\$ 12 million. The shipyard is specialized in constructing technological sophisticated vessels such as Gas Tankers, Chemical, container port, and offshore support vessels.

Characteristics - Industrial facilities

Total area: 168,422m²;

Covered area: approximately 10,000m² – processing and block assembly warehouses and various workshops, served by overhead traveling cranes and other equipment;

Launching slipway: 150m long (expanding to 200m), capacity for vessels of up to 10,000 DWT (increasing to 30,000 DWT);

Hydrolift elevator: for small vessels with a weight of up to 570tons;

Weight transfer system of up to 570 tons;

The plant has electricity and industrial gases distribution networks connecting all the shops, warehouses, the slipway and the outfitting quay.

Outfitting quay: 150m long, served by two cranes with load capacities of 30 tons and 8 tons.

Projects

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
Elcano	GLP	3
Graniter Transp. Marít. de Granéis S.A.	Multi Purpose de 11000 tpb	2

Contacts

Shipyard:

Rua Herta Thieme, 244

1º Distrito Industrial – Itajaí - SC

CEP 88305-620

Telephone: +55 47 348-1100

Fax: +55 47 348-1937

e-mail: metalnave@metalnave.com.br

Site: www.metalnave.com.br

Headquarter:

Av. Almirante Barroso, 54-6º andar – Centro

CEP 20031-002 - Rio de Janeiro – RJ

Tel.: +55 21 2125-9400

Fax: +55 21 2125-9427

5.10 Mac Laren Shipyard



General Information

The Mac Laren Group was founded in 1938 when Arthur Frederico Mac Laren started activities as a Ship-handler. Right after, he acquired his first barges and tugboats for cement and firewood in the Guanabara Bay. Due to the great number of unities used for this service, Arthur acquired his first shipyard that was meant for maintenance and fleet's repair. Later on, the shipyard built its first ship. The frequent technical and personnel's improvement combined with the development of the shipyard's industrial settlements, granted the complete domain on the modern techniques on the construction of steel, aluminum and fiberglass (G.R.P.). Excellence and high performance in its constructions lead us, with no doubts, to the Brazilian shipyard with largest experience on building merchant and military fleet of small and medium carriage, standing out for having an excellent technique level and high index of nationalization, using project, technology and know-how fully Brazilian.

The Mac Laren Group grew and expanded its activities becoming an important organization for the Brazilian economical development. The success of such development was due to a very well cultivated seed in the past that, with strong roots, provided the solid basis for all currently enterprises. Other agents, however, were crucial: the right usage of its own capital in risk investments; modernization and environmentally-friendly building practices for new buildings and rehabilitation and the respect for the employees.

Partners

Modec - <http://www.modec.com>

Characteristics - Industrial facilities

The Group Mac Laren possess two industrial units located in Niterói, State of Rio De Janeiro, destined to the construction and naval repairing and offshore, beyond other services.

PA – Unit Ponta D´Areia

The unit of Ponta D´Areia makes use of 25.000 m² and presents independent installations and infrastructure to take care of the market of maritime and terrestrial units in the construction of modules and skids.

Total area: 180.377m².

Covered area: 69.140m² (warehouse, workshops of processing of steel, structural assembly, locksmith shop, tubing, etc.)

Career: length: 270m; width: 42m; capacity for ships of up to 160.000 TPB; served for two derricks of 100t; e two derricks of 30t.

Dry levee: 167,5m of length; 22,5m of width; silenced maximum 7m; capacity for ships of up to 30.000 TPB; served for derricks of 100t, one of 30t and one of 15t.

Wharf of finishing I: 380m of length; silenced 7m; Derricks: one of 35t, one of 30t and one of 15t.

Wharf of finishing II: 306m of length; silenced 7m;

Derricks: two derricks of 20t and one of 8t.

IC – Unit Ilha da Conceição

This unit is situated in Ilha da Conceição and occupies an area of 60.000m², with availability of 500m of front for the sea and wharf with 250 meters of extension. In its industrial installations, boats of up to 90 meters of length can be constructed. It possesses a dike with 30 meters of width that allows to the construction boats of up to 1.500 TDW each.

Total area: 78.000m²

Covered area: 12.000m²

Shipment wharf: 5.000t

Been silent: 6m

Contacts

Headquarters and Shipyard:

Rua Miguel Lemos, s/nº, Lote 616

Niterói – RJ

CEP 24040-260

Phone: +55 21 2621-3374

Fax: +55 21 2621-3415

www.maclaren.com.br

5.11 Eisa Shipyard



General Information

EISA - Estaleiro Ilha S.A. was settled in 1995 at the facilities of the former EMAQ Shipyard, a traditional Brazilian shipbuilder since 1949. EISA took part in Naval Construction Programs created by the Brazilian government which in the 70's made Brazil the 2nd world largest producer, surpassed only by Japan. On that occasion, several ships were built and exported. More than 400 vessels of several sizes and types were built at these installations for traditional Brazilian and foreign clients, including offshore, port, military and supply units.

Building within the highest international technical standards, complying with delivery dates and budget, developing products with full quality guarantee, are EISA's management fundamental principles. The existence of two lateral construction ramps, allows the simultaneous construction of at least two large vessels, allowing for good production capacity and industrial flexibility.

Eisa shipyard is located in Rio de Janeiro, Brazil, at Ilha do Governador, which is an island located inside Guanabara Bay. The Rio de Janeiro International Airport is located on the same island. The shipyard has easy access by road or sea.

Partners

Eisa Shipyard is a part of the SYNERGY GROUP.

Characteristics - Industrial Facilities

Total area: 140.000m².

Covered area: 35.000m² - workshops served for 17 rolling bridges with capacities of 20t, 12t and 5t.

Area of daily pay-construction: served for two Goliath derricks of the type vestibule, with 50m of they go and 45m of height, with capacity of 50t + 20t.

Main career: for ships of until 280m of length; served for two derricks of 50 and 60t.

Career auxiliary: for ships of until 150m of length; served for two derricks of 50t and 60t.

Wharf of finishing n° 1: ships until 280m of length.

Wharf of finishing n° 2: ships until 200m of length.

Wharf of finishing n° 3: ships until 250m of length.

Projects

Projects under construction

SHIOWNER	TYPE	NUMBER
Log-in	Container carrier	5
Log-In	Grain Carrier	2
Transpetro	Panamax	4

Projects Approved by FMM – during the 2009 meeting

SHIOWNER	TYPE	NUMBER
Astromarítima	PSV 3000	2
Astromarítima	PSV OR	1
Brasil Supply	PSV 3000	2
Brasil Supply	PSV 4500	2
Brasil Supply	PSV OSRV 750	2
Brasil Supply	T 15000	2
Lachmann	Tanker	3
LOG IN	Tanker (Produto Claro)	3
LOG IN	Tanker (Produto Escuro)	3

Contacts

Shipyard

Praia da Rosa, 2

Bancários - Ilha do Governador

Rio de Janeiro - RJ

CEP 21920-140

Telefone: +55 21 2468-8002

Fax: +55 21 3396-2903

E-mail: eisa@eisa.com.br

Site: www.eisa.com.br

5.12 Detroit Shipyard



General Information

The Detroit was established in 1970 with the name of Ebrasa. It is installed in Itajaí, Santa Catarina. It constructs fish boats, ferry boats, boats, drag, pushers, towboats, research and rafts boats. In January of 2002 the Detroit Chile S/A assumed the control of the company.

The Tranship is a Brazilian navigation company authorized by the ANTAQ – Waterway National Transportation Agency.

Partners

Tranship

Characteristics - Industrial area:

Total area: 102.789m²

Industrial area is: 16.201m². An elevating dock berth, a longitudinal career, wharf, 2 cars of transference for boats of small transport.

Some workshops and sheds equipped for manufacture and assembly of parts and blocks of boats.

Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
Camorim	Tug vessel	2
Starnav	LH-5000	3
Vale	Tug vessel	10

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
Camorim Offshore	LH-3000	3
Starnav	PSV 4500	12
Tranship	Tug vessel 80 TTE	1

Contacts

Shipyard:

Rua César Augusto Dalçoquio, 4.500 - (BR-101, km 112), Salseiros

Itajaí - SC

CEP 88311-550

Tel.: +55 47 346-1155

Fax: +55 47 346-1096

E-mail: detroit@detroit.cl

Site: www.detroit.cl

5.13 Jurong Shipyard

General Information

The Jurong Shipyard yard in Singapore, will build a plant in Brazil. The idea is to install a shipyard in the city of Aracruz, in the Espírito Santo, focusing especially on the construction of platforms to exploit the pre-salt. Jurong in Brazil is a provider of services for Petrobras since 1996, besides having built platforms that represent about 40% of Petrobras' offshore production.

The Yard decided to be implemented in Espírito Santo for several reasons:

- Strategic position to meet the production fields of the Campos and Santos basins
- Political support for the installation of the yard
- Fluent communication with the environmental authorities
- Transparency in government relations institutional
- Logistics - Strategic point for easy access.

Investment in the yard will reach around US\$ 250 million. The yard area has a million square feet, dry dike construction and repair for FPSOs and semisub drilling platform.

Project

Jurong Shipyard, Singapore, won the bid for the conversion of the hull of a tanker to the platform P-62, which will operate in the Roncador field, Campos Basin, with capacity to produce 180 thousand barrels per day from 2013. The hull will be converted in Singapore. The complete unit will cost US\$ 1 billion.

Contacts

Prefeito de Aracruz/ES

(27) 3296 4520

www.pma.es.gov.br

José Jorge Araujo (Gerente Executivo – Responsável pelo projeto)

(21) 2506-5400 / 9998-9369

Tay Wee Lye (vice-president)

(21) 2506-5406 / 9867-5106.

5.14 STX Brasil Offshore



General Information

The former Aker-Promar yard is now owned by STX Europe. Located in Niteroi, Rio de Janeiro, it's a yard specialized in offshore vessels

Characteristics

Industrial Facilities

Total Area: 120.000 m²

Floating dock: Size 150m x 24,7m

Finishing wharf: Length 300m

Crane: Can hold 250 t

Steel processing capacity: 15.000 t/year

Projects

Projects under construction

SHIPOWNER	TYPE	NUMBER
Dofcon	AYP - OSCV - 06	1
Dofcon	OSCV	1

Projects Approved by FMM – during the 2009 meeting

SHIPOWNER	TYPE	NUMBER
Deep Sea	PSV 09 CD	1
DOF Navegação	AHTS 180 TTE	2
DOF Subsea	AHTS AH 05	1
DOF Subsea	AHTS AKER AH-12	2
DSND Consub	PSV 09 CD	4
Solstad Offshore	AHTS 180 TTE	1
Solstad Offshore	PSV 09 CD	1

Contacts

Shipyard

Praça Alcides Pereira, 1

Parte Ilha da Conceição - Niterói - RJ

CEP: 24.050-350

Brazil

5.15 OSX - Virtual Shipyard



General Information – OSX Holding

OSX Holding is from EBX Group which includes OGX – Oil & Gas Company. OSX was originated to supply the industry's demand for integrated service solutions to the oil & gas fields. The shipyard is also a result from the synergy that is a distinguishing feature of the EBX Group, aiming to secure OGX' production plan by providing integrated offshore services.

OSX Holding is currently divided in 3 business units: (i) OSX Shipbuilding, (ii) OSX Services, focused on operating and maintaining, and (iii) OSX Leasing, focused on developing and leasing production assets.

Due to ANP's local sourcing requirement, the units will be built in OSX facilities in Brazil and chartered to OGX to support its growth over the next 10 years.

Partner

Hyundai is partner in OSX Shipbuilding with 10% partnership. OSX signed a definitive agreement with Hyundai, which provides technology and know-how to the operations, as well as the team training.

Characteristics - Industrial facilities

OSX shipyard will feature a manufacturing plant able to process approximately 180,000 tons per year at its initial stage and the forecast to integrate additional modules that will enable processing 220,000 tons of steel per year, expandable to 460,000 tons per year. The facility will also be able to construct offshore equipment, enabling the processing, production and assembly of hulls and the manufacture of topside modules.

Location

OSX has been struggling to get the environmental license for constructing the shipyard at the city of Biguaçu - Santa Catarina, South of Brazil.

Projects

OGX estimates a demand of 48 production units equivalent to approximately US\$ 30 billion investment.

Contacts

OSX - Office

(55 21) 2555-6100

www.osx.com.br

6. RELEVANT LINKS

PETROBRAS S.A.

<http://www.petrobras.com.br/en/>

Petrobras is the state Brazilian oil company that performs activities in the following sectors: exploration and production, refining, oil and natural gas trade and transportation, petrochemicals, and derivatives, electric energy, biofuel and other renewable energy source distribution.

PETROBRAS TRANSPORTE S.A. - TRANSPETRO

<http://www.transpetro.com.br/>

Transpetro, Petrobras Transporte S.A., undertakes oil and derivatives, ethanol, biofuels, and natural gas transportation and storage activities. In addition to the pipeline network, there are also terminals and a fleet of oil tankers, joining forces with Petrobras' production, refining, and distribution areas and performing in oil and derivatives, biofuels, and natural gas imports and exports. In addition to Petrobras, the main customer, Transpetro also provides services to several distributors and to the petrochemical industry.

PROMINP

<http://www.prominp.com.br/>

Prominp - National Oil and Natural Gas Industry Mobilization Program, coordinated by the Ministry of Mines and Energy, was established by the Federal Government through Decree No. 4925 of December 19, 2003 with the objective of maximizing the participation of national industry of goods and services, implementing sustainable and competitive conditions for the Oil and Gas industry in Brazil.

IBP - PETROLEUM BRAZILIAN INSTITUTE

<http://www.ibp.org.br/>

The Brazilian Institute of Oil, Gas and Biofuels - IBP is a nonprofit organization, which has 194 member companies, and focuses on promoting the development of the national oil and gas industry, aiming a competitive, sustainable, ethical and socially responsible industry.

PETROLEUM NATIONAL AGENCY

<http://www.anp.gov.br/>

The National Agency of Petroleum, Natural Gas and Biofuels (ANP), is the regulator of activities that integrate the industry of petroleum and natural gas and biofuels in Brazil

BNDES - THE BRAZILIAN DEVELOPMENT BANK

<http://www.bndes.gov.br/>

The Brazilian Development Bank (BNDES) is a federal public company, linked to the Ministry of Development, Industry and Foreign Trade (MDIC). Its goal is to provide long-term financing aimed at enhancing Brazil's development, and, therefore, improving the competitiveness of the Brazilian economy and the standard of living of the Brazilian population.

FMM – MERCHANT MARINE FUND

<http://inter.bndes.gov.br/english/navy.asp>

The Fund intends to finance Brazilian shipyards for the accomplishment of implantation, expansion and modernization projects and for the construction and repair of ships. It also finances domestic navigation companies for the ordering of vessels and equipment, repairs and the increase of cargo capacity with Brazilian naval constructors and to the Brazilian Navy.

SINAVAL – NATIONAL UNION OF INDUSTRY AND SHIPBUILDING CONSTRUCTION AND OFFSHORE REPAIR

<http://www.sinaval.gov.br/>

SINAVAL is the institution that represents Brazilian shipyards installed in various regions of the country. SINAVAL's mission is to defend the interests of industries in this sector and participate in study groups in government agencies and educational institutions and research.

PASCHOALIN Consultoria e Representação Comercial Ltda.

PASCHOALIN is a company engaged in business development in the Brazilian oil and gas market. Utilizing personalized management techniques and a team with over 30 years of experience in the industry, **PASCHOALIN** seeks to provide the necessary assistance so that your company can enter the market in the most efficient manner.

Founded in 2007 **PASCHOALIN**'s mission is to provide personalized technical consultancy and commercial representation services for companies with technological differentials that wish to participate in the Brazilian oil & gas market, always looking for sustainable solutions that add value to our customers and contribute for the progress of Brazil.

Our team works integrated, with transparency and ethics, following high quality standards, to fulfill all of your company's needs when entering the Brazilian market.

Understanding the Market

PASCHOALIN develops market research for the Brazilian oil and gas industry products which together with our market experience can help you with the decision whether to participate or not in the Brazilian Market.

Our experienced team of engineers works closely with your company's project managers to define the best Brazilian Market entry strategy.

In the business plan one of our engineers is nominated to be responsible for the project and with the help of our whole team is fully committed to reach the project's success.

Training

PASCHOALIN's team studies intensively your products and/or services related to the project so that it fully understands your competitive advantages over your competitors. We can then represent your company in the most efficient manner.

Planning "Operational Plan"

Based on the structured Business Plan, **PASCHOALIN** develops a detailed Operational Plan.

We work hard so that your products and services become well known by your potential clients and the maximum number of opportunities can be presented to your company.

When decisive meetings with a client occur, technical or commercial, we will schedule in advance and give all the support needed for your team to be present and prepared.

Pre Meeting Briefing

Our team discusses in advance with your employees what and how the information should be presented to your Brazilian clients, orienting about the cultural differences between Brazilians and your countrymen.

We accompany your team to the meetings to help with the interpersonal interaction with your clients focusing on communication issues, because many times your clients will not have full grasp of the English language which creates an insurmountable barrier for the perfect understanding and business relations.

Petrobras' Prequalification (CRCC and Vendor List)

Our team actively works to prequalify your product or service with PETROBRAS. This is a very demanding and time consuming process and sometimes vital for your company's success in the Brazilian oil and gas market. Many companies that are already qualified to supply for other markets, but being unaware of such procedures, have found difficulties and wasted a lot of time to have the registration on the PETROBRAS's Certified Suppliers List and Vendor List.

CONTACT INFORMATION:

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