Brazilian shipbuilding and offshore industry: an overview
“Mare Forum South America” – September 13, 2011
Scenario 2nd quarter 2011

Executive summary: Brazilian shipbuilding and offshore scenario
Oil production and drilling platforms
World shipbuilding scenario
Capacity of Brazilian shipyards to meet the demand
New shipyards in Brazil
The importance of pre-salt area
Petrobras Investment Plan 2011-2015
Demand for new equipment
The new Brazilian shipbuilding and offshore industry
Labor relations, employment and new jobs
Local content
International and local agreements
Conclusions
Executive summary: Brazilian shipbuilding and offshore scenario

The challenges continue:
- qualification and training of HR;
- increase of productivity;
- increase of local content.

Brazilian shipyards associated to SINAVAL presented, in the second quarter of 2011, little variation when compared with the results at the end of 2010.

Direct employment: 56,368 registered people.

Volume of works: 6,243 million DWT.

Works in progress: 278 works.

Contract forecast for 2011:
- 14 ships of EBN program;
- 21 drill ships or drill platforms;
- 30 offshore support vessels.
Executive summary: Brazilian shipbuilding and offshore scenario

There is a policy that promotes industrialization, creates opportunities for productive investment of international capital and stimulates investments in the development of technologies and innovation.

POSITIVE FACTS:

The declaration of President Dilma Rousseff affirming government support for the development of shipbuilding industry, in the ceremony of delivery of P-56 platform in BrasFELS shipyard (RJ);

The assignment to SINAVAL coordination of an effective program to increase local content in vessels, production platforms and drilling platforms;

"I Local Content Forum" in August 5, 2011, coordinated by SINAVAL, with the presence of Ministers, Presidents and Directors of government organisms, official support banks, and shipbuilding industry and equipment supply representatives.
Executive summary: Brazilian shipbuilding and offshore scenario

- Brazilian shipbuilding industry, after being the 2\textsuperscript{nd} orderbook in the world in the ’70s, entered in collapse in the ’80s and ’90s;

- The growth of offshore oil & natural gas exploration and production became this segment an important market for this industry in the last ten years;

- From the 2000s, the sector is being retaken by the demand in the internal and external markets;

- In the past, the sector was strongly concentrated in the southeast region, particularly in Rio de Janeiro;

- In the current phase, the perspectives are to decentralize the segment with the implementation of large shipyards in the Northeast, Southeast and South regions.
### Executive summary: Brazilian shipbuilding and offshore scenario

<table>
<thead>
<tr>
<th>Shipyards in Brazil (the most representative)</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel throughput</td>
<td>570,000 tons / year</td>
</tr>
<tr>
<td>Total area</td>
<td>4,7 million sq. meters</td>
</tr>
<tr>
<td>Dry or floating docks</td>
<td>19</td>
</tr>
<tr>
<td>Slipways</td>
<td>22</td>
</tr>
<tr>
<td>Outfitting quays</td>
<td>43</td>
</tr>
</tbody>
</table>
Sindicato Nacional da Indústria da Construção e Reparação Naval e Offshore

Executive summary: Brazilian shipbuilding and offshore scenario

<table>
<thead>
<tr>
<th>Merchant Marine Fund Council (CDFMM)</th>
<th>Official acts published on 6/22/2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Quantity</strong></td>
</tr>
<tr>
<td>Offshore support vessels</td>
<td></td>
</tr>
<tr>
<td>PSV</td>
<td>18</td>
</tr>
<tr>
<td>AHTS</td>
<td>3</td>
</tr>
<tr>
<td>UT</td>
<td>6</td>
</tr>
<tr>
<td>LH</td>
<td>2</td>
</tr>
<tr>
<td>Oil, gas and products vessels</td>
<td>16</td>
</tr>
<tr>
<td>Clear products (EBN)</td>
<td>3</td>
</tr>
<tr>
<td>Chemical products (EBN)</td>
<td>2</td>
</tr>
<tr>
<td>Gas (EBN)</td>
<td>3</td>
</tr>
<tr>
<td>Gas (Promef)</td>
<td>8</td>
</tr>
<tr>
<td>Inland navigation</td>
<td>148</td>
</tr>
<tr>
<td>Tugs</td>
<td>24</td>
</tr>
<tr>
<td>Barges</td>
<td>124</td>
</tr>
<tr>
<td>Port support vessels</td>
<td>24</td>
</tr>
<tr>
<td>Shipyards</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>223</td>
</tr>
</tbody>
</table>

The meeting of the Board of Merchant Marine Fund of the (CDFMM), held in May 2011, approved priorities for funding to six shipyards and 217 new ships, a total of $ 9.8 billion (up to 90% can be funded in this total), projects which, for the most part, are not included in the portfolio of the shipyards.
Executive summary: Brazilian shipbuilding and offshore scenario

<table>
<thead>
<tr>
<th>State</th>
<th>Works</th>
<th>DWT</th>
<th>Part. %</th>
<th>Jobs</th>
<th>Part. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio de Janeiro</td>
<td>58</td>
<td>1,479,600</td>
<td>23.70</td>
<td>24,374</td>
<td>43.24</td>
</tr>
<tr>
<td>Total Southeast</td>
<td>166</td>
<td>1,810,100</td>
<td>28.99</td>
<td>25,151</td>
<td>44.62</td>
</tr>
<tr>
<td>Rio Grande do Sul</td>
<td>13</td>
<td>1,120,000</td>
<td>17.94</td>
<td>5,500</td>
<td>9.76</td>
</tr>
<tr>
<td>Total South</td>
<td>61</td>
<td>1,276,785</td>
<td>20.45</td>
<td>7,576</td>
<td>13.44</td>
</tr>
<tr>
<td>Pernambuco</td>
<td>30</td>
<td>3,072,000</td>
<td>49.21</td>
<td>12,111</td>
<td>21.49</td>
</tr>
<tr>
<td>Total Northeast</td>
<td>30</td>
<td>3,072,000</td>
<td>49.21</td>
<td>16,111</td>
<td>28.59</td>
</tr>
<tr>
<td>Total North</td>
<td>21</td>
<td>84,000</td>
<td>1.35</td>
<td>7,530</td>
<td>13.36</td>
</tr>
<tr>
<td>Total</td>
<td>278</td>
<td>6,242,885</td>
<td>100.00</td>
<td>56,368</td>
<td>100.00</td>
</tr>
</tbody>
</table>

VARIATION of DWT
December 2010 = 6,253,934
June 2011 = 6,242,885

VARIATION of EMPLOYMENT
December 2010 = 56,112
June 2011 = 56,368
**Executive summary: Brazilian shipbuilding and offshore scenario**

### DWT in construction

<table>
<thead>
<tr>
<th>Position</th>
<th>State</th>
<th>DWT x 1,000</th>
<th>Works</th>
<th>Part. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Pernambuco</td>
<td>3,072</td>
<td>30</td>
<td>49.27</td>
</tr>
<tr>
<td>2nd</td>
<td>Rio de Janeiro</td>
<td>1,479</td>
<td>58</td>
<td>23.73</td>
</tr>
<tr>
<td>3rd</td>
<td>Rio Grande do Sul</td>
<td>1,120</td>
<td>13</td>
<td>17.96</td>
</tr>
<tr>
<td>4th</td>
<td>São Paulo</td>
<td>330</td>
<td>108</td>
<td>5.30</td>
</tr>
<tr>
<td>5th</td>
<td>Santa Catarina</td>
<td>148</td>
<td>35</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>85</td>
<td>34</td>
<td>1.36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,234</strong></td>
<td><strong>278</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

### Direct jobs generated in shipyards

<table>
<thead>
<tr>
<th>Position</th>
<th>State</th>
<th>Jobs</th>
<th>Part. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Rio de Janeiro</td>
<td>24,374</td>
<td>43.23</td>
</tr>
<tr>
<td>2nd</td>
<td>Pernambuco</td>
<td>12,111</td>
<td>21.49</td>
</tr>
<tr>
<td>3rd</td>
<td>Amazonas</td>
<td>7,201</td>
<td>12.78</td>
</tr>
<tr>
<td>4th</td>
<td>Rio Grande do Sul</td>
<td>5,500</td>
<td>9.76</td>
</tr>
<tr>
<td>5th</td>
<td>Bahia</td>
<td>2,800</td>
<td>4.97</td>
</tr>
<tr>
<td>6th</td>
<td>Santa Catarina</td>
<td>2,076</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2,172</td>
<td>3.86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>56,234</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>
## Oil production platforms

### Framework of orders – 2011

<table>
<thead>
<tr>
<th>Platforms 2011</th>
<th>Brazil</th>
<th>International market</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-56 (semisub)</td>
<td>Total</td>
<td>-</td>
<td>BrasFELS / Technip Delivered in June 2011</td>
</tr>
<tr>
<td>P-55 (semisub)</td>
<td>Total</td>
<td>-</td>
<td>EAS / QUIP / UTC</td>
</tr>
<tr>
<td>8 hulls of FPSO</td>
<td>Modules to bid – total</td>
<td>-</td>
<td>RG Shipyards – Rio Grande (RS)</td>
</tr>
</tbody>
</table>

10 platforms entirely built in local shipyards: P-56 (already delivered); P-55; 8 hulls of FPSO for the pre-salt under construction in RG Shipyards, in Rio Grande (RG).

—There was a positive evolution in local construction of platforms in the past 2 years.
Oil production platforms

Framework of orders – 2011

<table>
<thead>
<tr>
<th>Platforms 2011</th>
<th>Brazil</th>
<th>International market</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPSO P-58</td>
<td>Modules</td>
<td>Hull</td>
<td>Bidding – hull Keppel (Singapore)</td>
</tr>
<tr>
<td>FPSO P-62</td>
<td>Modules</td>
<td>Hull</td>
<td>Hull Jurong (Singapore) Modules QUIP (RS)</td>
</tr>
<tr>
<td>FPSO P-63</td>
<td>Modules</td>
<td>Hull</td>
<td>QUIP / BW (Norway)</td>
</tr>
<tr>
<td>FPSO Cidade de Paraty</td>
<td>Modules integration at BrasFELS</td>
<td>Hull</td>
<td>Schahin/Modec and SBM/Queiroz Galvão Conversion of the hull Keppel FELS (Singapore)</td>
</tr>
<tr>
<td>FPSO Cidade de São Paulo</td>
<td>Modules integration</td>
<td>Hull</td>
<td>Schahin/Modec and SBM/Queiroz Galvão – Modules BrasFELS (RJ)</td>
</tr>
</tbody>
</table>

These 5 platforms had their hulls built abroad, but their process modules are being built in Brazil.
### Oil production platforms

#### Framework of orders – 2011

<table>
<thead>
<tr>
<th>Platforms 2011</th>
<th>Brazil</th>
<th>International market</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP P-61</td>
<td>-</td>
<td>Total</td>
<td>Floatec (Keppel FELS + RJ McDermott)</td>
</tr>
<tr>
<td>FPSO Santos</td>
<td>-</td>
<td>Total</td>
<td>Modec - hire</td>
</tr>
<tr>
<td>FPSO Angra dos Reis</td>
<td>-</td>
<td>Total</td>
<td>Modec - hire</td>
</tr>
</tbody>
</table>

3 fully constructed platforms at international shipyards: P-61; FPSO Santos; FPSO Angra dos Reis.
There was a political decision to hire in Brazil the 21 drilling platforms that have not yet been bidded. The bidding will be conducted by “Sete Brasil”.

Two drilling platforms jack-up are under construction in Bahia by Rio Paraguaçu.
## World shipbuilding scenario

<table>
<thead>
<tr>
<th>World orderbook (quantity of ships under construction)</th>
<th>World</th>
<th>Brazil (1)</th>
<th>A/B %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>6,873</td>
<td>271</td>
<td>3.94</td>
</tr>
<tr>
<td><strong>Oil transportation</strong></td>
<td>1,197</td>
<td>55</td>
<td>4.59</td>
</tr>
<tr>
<td>ULCC / VLCC</td>
<td>158</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td><em>Suezmax</em></td>
<td>131</td>
<td>14</td>
<td>10.69</td>
</tr>
<tr>
<td><em>Aframax</em></td>
<td>115</td>
<td>8</td>
<td>6.96</td>
</tr>
<tr>
<td><em>Panamax</em></td>
<td>64</td>
<td>4</td>
<td>6.25</td>
</tr>
<tr>
<td>Products</td>
<td>334</td>
<td>20</td>
<td>5.99</td>
</tr>
<tr>
<td>Other</td>
<td>395</td>
<td>*9</td>
<td>2.28</td>
</tr>
<tr>
<td><strong>Gas transportation</strong></td>
<td>172</td>
<td>7</td>
<td>4.07</td>
</tr>
<tr>
<td>Chemical</td>
<td>478</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Bulk carriers</strong></td>
<td>2,914</td>
<td>2</td>
<td>0.07</td>
</tr>
<tr>
<td>Containers ships</td>
<td>669</td>
<td>4</td>
<td>0.60</td>
</tr>
<tr>
<td><strong>Offshore support vessels</strong></td>
<td>753</td>
<td>47</td>
<td>6.24</td>
</tr>
<tr>
<td>AHT</td>
<td>33</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>AHTS</td>
<td>298</td>
<td>5</td>
<td>1.68</td>
</tr>
<tr>
<td>PSV</td>
<td>250</td>
<td>34</td>
<td>13.60</td>
</tr>
<tr>
<td>Other</td>
<td>172</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>FPSO</td>
<td>14</td>
<td>8</td>
<td>57.14</td>
</tr>
<tr>
<td>Other types</td>
<td>690</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Brazilian participation in world orders = 3.94%
- Suezmax tankers = 10.69%;
- Support vessels PSV type = 13.60%;
- Order book of FPSOs = 57.4%.

### Brazilian participation is still timid in:
- Bulk carriers = 0.07%;
- Containers ships = 0.60%.

Source: *Clarksons* – June 2011

Brazil: Inclusive orders from Transpetro and Petrobras / EBN – exclusive drillships

*Nine bunker ships*
Need for new shipyards:

- 3 to 4 large shipyards;
- 5 to 6 medium shipyards.

Source: ABENAV/SINAVAL
## New shipyards in Brazil

<table>
<thead>
<tr>
<th>SHIPYARD</th>
<th>CITY</th>
<th>COUNTRY</th>
<th>TYPE OF PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alusa-Galvão</td>
<td>Barra do Furado</td>
<td>Rio de Janeiro</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>EISA</td>
<td>Coruripe</td>
<td>Alagoas</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Hermasa</td>
<td>Manaus</td>
<td>Amazonas</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Corema</td>
<td>Salvador</td>
<td>Bahia</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Estaleiros do Brasil - EBR</td>
<td>São José do Norte</td>
<td>Rio Grande do Sul</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Odebrecht-OAS-UTC</td>
<td>Paraguaçu</td>
<td>Bahia</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Promar</td>
<td>Recife</td>
<td>Pernambuco</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Aliança</td>
<td>Niterói</td>
<td>Rio de Janeiro</td>
<td>Expansion</td>
</tr>
<tr>
<td>Mac Laren</td>
<td>Niterói</td>
<td>Rio de Janeiro</td>
<td>Expansion</td>
</tr>
<tr>
<td>Mauá</td>
<td>Niterói</td>
<td>Rio de Janeiro</td>
<td>Expansion</td>
</tr>
<tr>
<td>Renave</td>
<td>Niterói</td>
<td>Rio de Janeiro</td>
<td>Expansion</td>
</tr>
<tr>
<td>STX</td>
<td>Quissamã</td>
<td>Rio de Janeiro</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>São Miguel</td>
<td>São Gonçalo</td>
<td>Rio de Janeiro</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>RG Estaleiros</td>
<td>Rio Grande</td>
<td>Rio Grande do Sul</td>
<td>Expansion</td>
</tr>
<tr>
<td>Wilson, Sons</td>
<td>Rio Grande</td>
<td>Rio Grande do Sul</td>
<td>New industrial plant</td>
</tr>
<tr>
<td>Wilson, Sons</td>
<td>Guarujá</td>
<td>São Paulo</td>
<td>Expansion</td>
</tr>
<tr>
<td>OSX</td>
<td>Porto de Açu</td>
<td>Rio de Janeiro</td>
<td>New industrial plant</td>
</tr>
</tbody>
</table>

11 new industrial plant and 6 expansion project.
New shipyards in Brazil
(Situation in May 2011)

**EBR – Shipyards of Brazil S/A (RS)**
Location: São José do Norte (RS).
Situation: waits environmental license for the second half of 2011.

**Wilson, Sons (RS)**
Location: Guarujá (SP) – doubling the existing productive capacity of the yard.
Location: Rio Grande (RS) – construction of a new large shipyard.
Situation: works in progress.

**Promar (PE)**
Location: Suape industrial complex (PE).
Situation: installation license granted. Works to start in the second half of 2011.
New shipyards in Brazil
(Situation in May 2011)

Aliança Offshore (RJ)
Location: São Gonçalo (Guaxindiba).
Situation: the unit for steel processing, metal mechanics and building blocks has scheduled opening August 2011.

RG Shipyards S/A – ERG 2 (RS)
Location: Port of Rio Grande.
Situation: installation license granted.

OSX shipyard – Porto Açu, RJ

OSX (RJ)
Location: Porto Açu, Northern region of State of Rio de Janeiro.
Situation: installation license granted.
New shipyards in Brazil
(Situation in May 2011)

Shipyard for construction of submarines (RJ)
Location: Itaguaí, Southern region of State of Rio de Janeiro.
Situation: Odebrecht has been selected by DNCS to build the shipyard.
Business plan: construction, in France and in Brazil, of five submarines one of them nuclear powered, with technology transfer from French DNCS. The first submarine will be ready in 2016. The location of the shipyard and the base of submarine fleet in Itaguaí responds to strategic need of protection of the areas of offshore oil production in the pre-salt, in Santos basin.
The importance of pre-salt area
The importance of pre-salt area

Proved reserves

Production

Million barrels per day

Billions of Barrels

Venezuela
Saudi Arabia
Iran
Iraq
Kuwait
UAE
Russia
Libya
Kazakhstan
Nigeria
Canada
USA
Qatar
China
Brazil Future (2020)
Brazil Today
Angola
Algeria
Mexico
Azerbaijan
Norway
The importance of pre-salt area

Estimates discovered basin – reserves

<table>
<thead>
<tr>
<th>Field</th>
<th>Estimate reserves (billion barrels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lula (Tupi)</td>
<td>6.5</td>
</tr>
<tr>
<td>Azulão</td>
<td>4.0</td>
</tr>
<tr>
<td>Carioca</td>
<td>5.5</td>
</tr>
<tr>
<td>Caxaréu</td>
<td>1.0</td>
</tr>
<tr>
<td>Cermambi</td>
<td>1.5</td>
</tr>
<tr>
<td>Franco</td>
<td>4.0</td>
</tr>
<tr>
<td>Guará</td>
<td>2.0</td>
</tr>
<tr>
<td>Iara</td>
<td>4.0</td>
</tr>
<tr>
<td>Jubarte</td>
<td>1.5</td>
</tr>
<tr>
<td>Jupiter</td>
<td>1.8</td>
</tr>
<tr>
<td>Libra</td>
<td>8.0</td>
</tr>
<tr>
<td>Peroba</td>
<td>2.0</td>
</tr>
<tr>
<td>Lula (Tupi)</td>
<td>6.5</td>
</tr>
</tbody>
</table>

**Estimated total**: 41.8
Petrobras Investment Plan 2011-2015

Source: Petrobras
Petrobras Investment Plan 2011-2015

Exploration and Production Investment
US$ 117.7 billion

Pre-salt
US$ 53.4 billion

Pos-salt
US$ 64.3 billion

Exploration
68%
26%
6%

Production Development
48%
37%
15%

Source: Petrobras
## Demand for new equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Situation in Dec 2009</th>
<th>Total to contract until 2020</th>
<th>Value total (US$ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Platforms and Drilling Rigs</td>
<td>137</td>
<td>+ 105</td>
<td>126.0</td>
</tr>
<tr>
<td>Platform Support Vessels</td>
<td>287</td>
<td>+ 542</td>
<td>39.0</td>
</tr>
<tr>
<td>PROMEF I ~ II and EBN (Oil Tankers)</td>
<td>-</td>
<td>+139</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**US$ 180 billion until 2020**

Source: ABENAV/SINAVAL
The importance of shipbuilding and offshore industry in the next years

- US$ 7.5 billion per year
- US$ 20 billion per year until 2020

Aircraft

Shipbuilding and offshore industry
The new Brazilian shipbuilding and offshore industry

(July 2011)

An overview of the shipbuilding and offshore industry

In these eight years since 2003, when SINAVAL presented to Ministers of President of Brazil, Luiz Inácio Lula da Silva, the study carried out by shipyards on the resumption of the shipbuilding industry.

In 2003, as nowadays, the participation of the Brazilian flag in international maritime transport was inexpressive.

Navigation between Brazilian ports had reduced. A fleet of ships exceeding the operating age required renewal.

In the offshore segment, Petrobras acknowledged the lack of a local capacity for construction of vessels, production platforms and drill ships.

In that year of 2003, it was decided to recover the Brazilian shipbuilding and offshore industry.
The new Brazilian shipbuilding and offshore industry  
(July 2011)

Goals achieved:

The shipyards decided to run the new shipbuilding and offshore industry in three steps:

- **Recovery**, with the construction of offshore support vessels and oil tankers;

- **Consolidation**, with technological renewal of the shipyards and a schedule of orders for ten years;

- **Expansion**, by increasing the competitiveness of shipyards to export ships and platforms.

Brazil is now visible in international statistics. These positive facts are the result of the industrial policy set by Presidents Lula and Dilma, considering that this industry needs public policies and strong decisions of industrial, tax and financing policies.
The new Brazilian shipbuilding and offshore industry

(July 2011)

Goals achieved:

Relief of tax on supplies for shipbuilding:
- Decree Nr. 6,704, 12/19/2008, which deals with the reduction of the IPI tax for the supply of materials and equipment for shipbuilding;
- Law Nr. 11,774, 9/17/2008, which deals with the reduction to zero of aliquots of COFINS and PIS/PASEP taxes on equipment for shipbuilding.

Creation of the guarantee fund for shipbuilding (FGCN): in 9/25/2008, by Law Nr. 11,786, complemented by Law Nr. 12,058, 10/13/2009, with allocation of R$ 5 billion for the formation of the Fund's assets. Definition of rules for financial applications and maintenance of the Fund.
Labor relations, employment and new jobs

The International Labor Organization (ILO) Three Parts Commission considers Brazilian rules for labor an example of successful action. Brazilian Three Parts Commission is formed by shipyards, workers (represented by CNM/CUT and the unions of workers), and tax auditors of the Ministry of Labor and Employment (MTE).

The goal has been reached with the edition of NR-34 (Regulatory Norm Nr. 34) by the Ministry of Labor and Employment, presented and discussed in meetings with shipyards in the various Brazilian regions.
The increasing of employment estimated by SINAVAL implies the creation of 15,000 new direct jobs, until 2014, considering three main indicators:

1 – the investments planned and announced in new shipyards;

2 – Petrobras' investment plan for the period 2011 to 2015;

3 – the current program of shipbuilding and offshore construction in progress, which ensures the current 56,000 direct jobs created.
Labor relations, employment and new jobs

Human resources required:

Engineers – in mechanics, naval, electric, production and security specialities;

Technicians – in design, production, administration, steel works, buyers;

Workers – specialized in cutting and automatic and manual welding, in machine operation, installations, steel structures, piping, mechanics, electricity and instrumentation.

Support – administrative, security, industrial kitchen and others.

Distribution by categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineers</td>
<td>10%</td>
<td>1,500</td>
</tr>
<tr>
<td>Technicians</td>
<td>10%</td>
<td>1,500</td>
</tr>
<tr>
<td>Specialized workers</td>
<td>70%</td>
<td>10,500</td>
</tr>
<tr>
<td>Administrative support</td>
<td>5%</td>
<td>750</td>
</tr>
<tr>
<td>Support, other</td>
<td>5%</td>
<td>750</td>
</tr>
</tbody>
</table>
The beginning:

The institution of a network between the SINAVAL and suppliers' associations ABINEE, ABIMAQ and ABITAM to increase local content in vessels and platforms started in June 2009.

"I Local Content Forum" – 8/5/2011, to discuss and point solutions for the development of shipbuilding and offshore production chain, sources of funding, product quality, deadlines and other decisive factors for business success.
Local content

The local content is not only a government policy: is contractual obligation imposed by the ANP - National Petroleum Agency for operators of oil and gas in Brazil.

For all cases of pre-salt exploration under “Sharing Production regime”, this obligation will be defined by law and subject to high penalties.
Objectives:

• Industry development;

• Creation of employments;

• Economy growth.
To ensure accuracy in the measurement of the local content indices in the equipment built in Brazil, the ANP and PROMINP has implemented the guidebook system that defines a methodology for calculating the index of local content in goods, systems and services related to the oil and natural gas fields.

Local content is a reality and must be fulfilled.
Brazilian Government Program

PROMINP - mobilization program of the national industry of petroleum and natural gas, is a government program created in 2003 as the objective to identify and find solutions to growth of industrial base and increasing of local content.

For more information, visit www.prominp.com.br
Local content

The Working Group for vessels:

Equipment for ships were detailed from two types of vessels: a tanker to clear products and an offshore support vessel (OSV – Offshore Supply Vessel). The spreadsheets consider the following groups of materials and equipment:

A – structure: structural steel and bulb profiles;
B – machinery: engines, compressors and pumps;
C – networks and pipes: steel and copper, alloy and valves;
D – electricity: networks, cables and control panels;
E – hull accessories;
F – finishing materials;
G – treatment and painting.
Local content

The Working Group for vessels:

The most critical equipments for local delivery are:
- engines for propulsion with more than 650 HP;
- auxiliary engines for power generation;
- cargo pumps and ballast;
- navigation, communication and security equipments.
Local content

The Working Group for drilling and production platforms:

Local content production for the drilling rigs (drillships and semissub) involves actions of qualification of human resources and supply of equipment, together with the ANP and the MME – Ministry of Mines and Energy.

11 groups of equipment; 111 subgroups; Total: 534 items.

Platform P-56, more than 70% of local content
The Working Group of drilling and production platforms: The studies cover supplies for two types of platforms and analyze the following areas: process; mechanics; electric; instrumentation/automation; piping; security; Air conditioning; telecommunications; structure, hull and accommodations.
International and local agreements

SINAVAL signed agreements for the development of partnerships with institutions that represent industries in Argentina, Spain, Korea and Japan, to expand the options of Brazilian shipyards in the development of its activities.

International cooperation agreements signed:

- FINA – Shipbuilding Federation of Argentina;
- Official Chamber of Commerce, Industry and Navigation of Pontevedra (Galicia, Spain);
- KICOX NCPD – Korean Industry Complex Corp. – Noksan Cluster;
- KOTRA – Korea Trade Investment Promotion Agency;
- ASIME – Industrial Association of Metalúrgicos (Galicia, Spain);
- Vasco Maritime Forum (Basque country, Spain);
Local agreements

SINAVAL signed agreements with financial institutions and representatives of Merchant Marine Fund (FMM) to exchange information, business development and other activities.

**Agreements signed:**

- Bank of Brazil; BNDES; Caixa Econômica Federal.
- Partnership agreement with Fundação Getulio Vargas (FGV) for the development of research projects, training courses and specialization, seminars, preparation of indexes and other activities.
Conclusions

1 – Brazilian shipbuilding industry has reached the step of consolidation, with the creation of jobs, regional distribution of production and services and international standards and certifications.

2 – The industry is receiving funding from the Merchant Marine Fund and effectively is constructing new shipyards and training human resources in several States.

3 – Vessels and platforms built in Brazil meet international quality standards.

4 – Brazilian and international business groups continue to make investments in the installation of new shipyards.

5 – The industrial policy for the reactivation of the sector is being successful and already exists a huge local capacity for the construction of vessels and platforms, creating employment and income.

6 – Good practices in labor relations in Brazilian shipyards deserve recognition of the International Labor Organization (ILO).
Conclusions

7 – The new phase of expansion of the shipbuilding industry aims to comply to the investment plan of Petrobras, as well as the expansion of long distance and coastal shipping and river transport.

8 – The expected growth of employment in the new shipyards places the training and qualification of human resources as one of the challenges of the industry.

9 – The increase of local content in shipbuilding and construction of platforms gains priority, in 2011. SINAVAL advances to become one of the coordinators of this effort to increase local production systems and equipment.

10 – Agreements signed with the financial institutions that are the main financial agents of Merchant Marine Fund will allow SINAVAL to integrate the development of local content effort to the largest banks in the country.

11 – The challenges are identified and their solutions are being forwarded.
SINAVAL has confidence in the continuity of the industrial policy for the Brazilian shipbuilding and offshore industry, which presents itself as a strong segment in socioeconomic development for promoting the improvement of quality of life for all Brazilians.
Sindicato Nacional da Indústria da Construção e Reparação Naval e Offshore

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