The Brazilian Foundry Industry

9th BRICS International Foundry Forum
São Paulo - Brasil
MAIN TOPICS

1) Brazil - Economic Scenery
2) Infrastructure and Raw Material
3) Cast Metal in Brazil
4) Foreign Trade
5) Trends – Brazil and Foundry Industry
BRAZIL in FIGURES
Population 203 Millions
GDP 2 Trillions US$
Total Exports 157.9 B US$
Total Imports 121.2 B US$
Vehicle fleet 44.4 Millions
Brazil – GDP Evolution
Billion US$/ano

Source: BACEN

*2019 estimated
Brazil – GDP Evolution (%)

Source: BACEN

*estimated
Brazil – Inflation Evolution (%) accumulated per year

Source: BACEN

*estimated
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Natural Resources

- **Electricity**
  *for its continental dimensions, hydropower generation is the main source in Brazil*

- **Mineral Reserves**
  *Brazil has large mineral reserves that meet the needs of the foundry industry*
Electric Power

Hydro Generation is the main source in Brazil (%)

- Hydro Electricity: 60.6%
- Other: 0.1%
- Import: 4.8%
- Natural Gas: 7.8%
- Oil Deriv: 5.2%
- Nuclear: 1.2%
- Wind Energy: 8.6%
- Biomass: 8.6%
- Mineral Coal: 1.9%
- Solar En: 1.2%

171.7 GW Power Install
Being 79% renewable

Source: ANEEL
Brazil continues to have a surplus in its main raw materials

Source: ABAL/ABRAFE/SINDIFER
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Foundry Industry in Brazil
Number of Companies by Metal

- IRON: 40%
- ALUMINUM: 21%
- STEEL: 14%
- OTHER NF: 25%

Total Companies: 1,170
Revenues 7.8 Billions US$ or 25 Billions R$
57,000 workers
Brazilian Production of Castings

After the 2008-09 crisis we had our worst moment in the economy in 2016. It was the longest of crises with three years of successive falls.

Source: ABIFA
* estimated
**Cast Metal World Production**  
2017 - ton

<table>
<thead>
<tr>
<th></th>
<th>Country</th>
<th>Production (millions)</th>
<th>Foundries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>China</td>
<td>49.40</td>
<td>26.000</td>
</tr>
<tr>
<td>2.</td>
<td>India</td>
<td>12.06</td>
<td>4.600</td>
</tr>
<tr>
<td>3.</td>
<td>USA</td>
<td>9.67</td>
<td>1.935</td>
</tr>
<tr>
<td>4.</td>
<td>Germany</td>
<td>5.48</td>
<td>574</td>
</tr>
<tr>
<td>5.</td>
<td>Japan</td>
<td>5.45</td>
<td>1.612</td>
</tr>
<tr>
<td>6.</td>
<td>Russia</td>
<td>4.23</td>
<td>1.140</td>
</tr>
<tr>
<td>7.</td>
<td>Mexico</td>
<td>2.91</td>
<td>800</td>
</tr>
<tr>
<td>8.</td>
<td>Korea</td>
<td>2.54</td>
<td>650</td>
</tr>
<tr>
<td>9.</td>
<td>Italy</td>
<td>2.24</td>
<td>1.038</td>
</tr>
<tr>
<td>10.</td>
<td>BRAZIL</td>
<td>2.22</td>
<td>1.170</td>
</tr>
</tbody>
</table>

*Source: Modern Casting Dec 2018*
quick analysis of cast metal production in Brazil

Total production 2.283M ton (2018)

- Total Cast iron: 1.840 M ton
- Non ferrous: 199.2 th ton

Source: ABIFA
South and Southeast Region in Brazil represent 95% of all production.
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Foundry Industry - Exports

Million US$/year and Thousand ton/year

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports Million US$</th>
<th>Exports Thousand ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,494.0</td>
<td>614.5</td>
</tr>
<tr>
<td>2009</td>
<td>763.5</td>
<td>300.9</td>
</tr>
<tr>
<td>2010</td>
<td>1,184.4</td>
<td>360.9</td>
</tr>
<tr>
<td>2011</td>
<td>1,362.1</td>
<td>431.6</td>
</tr>
<tr>
<td>2012</td>
<td>1,232.9</td>
<td>483.7</td>
</tr>
<tr>
<td>2013</td>
<td>1,216.4</td>
<td>446.7</td>
</tr>
<tr>
<td>2014</td>
<td>1,038.6</td>
<td>409.1</td>
</tr>
<tr>
<td>2015</td>
<td>886.8</td>
<td>404.9</td>
</tr>
<tr>
<td>2016</td>
<td>839.7</td>
<td>416.5</td>
</tr>
<tr>
<td>2017</td>
<td>837.0</td>
<td>404.6</td>
</tr>
<tr>
<td>2018</td>
<td>378.8</td>
<td>377.9</td>
</tr>
</tbody>
</table>
Brazil → 55% of total exports going to EUA – US$ - %
Iron + Steel + Non Ferrous (base 2018– US$ 840 millions)

Source: ABIFA,
Brazil import basically the same value from Asia, Europe and USA (base 2014 – 1.7 billion US$ - depends of foreign exchange policy)

Source: ABIFA,
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Our main costumer also suffered the effects of the crisis but grew up 12.3% in 2017.
Sales of casting are concentrated in automotive industry

Source: ABIFA
The upward trend of the Foundry Industry is the same of our Economy, that is to recover the lost space.

**Production and installed capacity (unit: thousand ton)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Install cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2283</td>
<td>4000</td>
</tr>
<tr>
<td>2019</td>
<td>2440</td>
<td>4000</td>
</tr>
<tr>
<td>2020</td>
<td>2580</td>
<td>4000</td>
</tr>
<tr>
<td>2021</td>
<td>2730</td>
<td>4000</td>
</tr>
<tr>
<td>2022</td>
<td>3000</td>
<td>4000</td>
</tr>
<tr>
<td>2023</td>
<td>3200</td>
<td>4000</td>
</tr>
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THANK YOU !

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