BAHRAIN STEEL
A KEY PLAYER IN
DR PELLETS SUPPLY
Bahrain Steel

Kuwait
KSA
Bahrain
Qatar
UAE
Oman
Strong Ownership

Organizational Structure Chart

Gulf Cooperation Council - Member States

- Govt. of Kuwait (16.6%)
- Govt. of UAE (16.6%)
- Govt. of Saudi Arabia (16.6%)
- Govt. of Oman (16.6%)
- Govt. of Bahrain (16.6%)
- Govt. of Qatar (16.6%)

Gulf Investment Corporation

- 50% owned by the Gulf Cooperation Council

Qatar Steel

- 25% owned by the Gulf Investment Corporation
- Listed via Industries Qatar (IQ), Qatar

Foulath Holding B.S.C. (c)

- United Stainless Steel Company B.S.C. (c) (100%)
- BAHRAIN STEEL B.S.C.C. E.C. (100%)
- SULB Company B.S.C. (c) (51%)
- Kuwait Foundry Company K.S.C. (5%)

Listed via Industries Qatar (IQ), Qatar

- Listed on Kuwaiti Exchange

- Gulf Cable & Electrical Industries Company K.S.C. (10%)
- National Industries Group Holding K.S.C. (10%)

United Steel Company – SULB Bahrain Venture Company W.L.L (51%)
Bahrain Steel

B. Foulath Subsidiaries

Foulath is partnering with leading regional and international key players in the steel industry to develop the steel sector in the GCC & MENA region:

- **FOULATH**
  - **Bahrain Steel**
    - Shareholder(s): Foulath 100%
  - **SULB Bahrain**
    - Shareholder(s): 1. Foulath 51%, 2. Yamato Kogyo 49%
      - DRI unit 1.5mtpa
      - Melt Shop
      - Rolling Mill (Heavy & Medium Section)
  - **SULB Saudi**
    - Shareholder(s): 1. Foulath 51%, 2. Yamato Kogyo 49%
      - Rolling Mill (Medium & Light Section)
Company Overview

- Bahrain Steel B.S.C.C. E.C. or the (“Company”), formerly known as Gulf Industrial Investment Company E.C. (“GIIC”), was established in 1984 in the Kingdom of Bahrain.
- Producer of high quality Direct Reduction (“DR”) grade iron oxide pellets, importing iron ore as a raw material and exporting pellets as a finished products.
- Owns and operates 2 pelletizing plants with a combined design capacity of 11 million tons per annum.
- Strong client base primarily in Bahrain, Saudi Arabia, Qatar, Oman, India, and South East Asia.
- The only “non-affiliated” entity in the world, as it is not part of an iron ore mining company.

Bahrain Steel is strategically located at the center of a sizeable and rapidly growing GCC Steel Industry( ) that requires pellets as its primary feedstock.

Pelletizing Plant 1
Operating since 1984, with a design capacity of 4 million tons per annum, upgraded in-house to 5 million tons per annum in 2007.

Pelletizing Plant 2
Design capacity of 6 million tons per annum (capable of producing 7 million tons per annum), being the largest rotary kiln of its kind in the world.

Stockyard
Stock Yard Capacity - Iron Ore 1.2 million ton and Pellet 0.6 million ton.
## Captive Jetty

1. BS Manages its own captive jetty (600 meters long) to receive the required raw material (Iron Ore, Bentonite, Limestone etc.) and load its final product "pellets".
2. Capable of receiving cape size vessels after lighterage.
3. Can discharge and load 5 vessels concurrently.
4. Capable of loading pellets in cape size vessels after top off.

### Captive Jetty

<table>
<thead>
<tr>
<th></th>
<th>Plant No.1</th>
<th>Plant No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jetty</strong></td>
<td>300 meters long</td>
<td>300 meters long</td>
</tr>
<tr>
<td></td>
<td>2 berths (Unloading and Loading)</td>
<td>2 berths (Unloading and Loading)</td>
</tr>
<tr>
<td><strong>Unloaders</strong></td>
<td>2 x trolley grab type</td>
<td>2 x trolley grab type</td>
</tr>
<tr>
<td></td>
<td>Capacity 1,500 tph each</td>
<td>Capacity 1,500 tph each</td>
</tr>
<tr>
<td><strong>Ship Loaders</strong></td>
<td>1 x tripper boom type</td>
<td>1 x tripper boom type</td>
</tr>
<tr>
<td></td>
<td>Capacity 3,000 tph</td>
<td>Capacity 3,000 tph</td>
</tr>
<tr>
<td><strong>Draft</strong></td>
<td></td>
<td>12.8 meters</td>
</tr>
<tr>
<td><strong>Lighter age/Top off point</strong></td>
<td>40 Miles from Jetty</td>
<td></td>
</tr>
<tr>
<td><strong>Transfer vessel</strong></td>
<td></td>
<td>70,000 dwt</td>
</tr>
</tbody>
</table>
Port Facilities
Raw Material Supply

To ensure the Company continues uninterrupted production of its DR Pellets, Bahrain Steel has secured its high-quality iron ore requirements for its plants from the most reliable and reputable iron ore suppliers through long-term (up to 25 years) contracts.

Bahrain Steel’s major suppliers include the following suppliers:

- Anglo American PLC, **Brazil**
- Companhia Siderurgica Nacional (CSN), **Brazil**.
- Compania Minera Del Pacifico S.A (CAP), **Chile**
- Zamin Ferrous – Amapa, **Brazil**
- Northland Resources, **Sweden**
- Northern Iron, **Norway**
Minas Rio Mines

1. Bahrain Steel and Anglo American entered into a long term contract for the supply of 13 Million Ton annually for a period of 20 years.

2. Anglo American “Minas-Rio iron ore project” in Brazil is expected to start commercial production in November 2014.

3. During its first phase of operation, the mine is expected to produce 26.5 Mtpa of high quality, low contaminant iron ore over a life of approximately 60 years.

4. Minas Rio is an open-pit mine where Iron ore is extracted and processed at the beneficiation plant to upgrade Fe content up to 68% Fe pellet feed following the crushing, grinding and concentrating.

5. The pellet feed will be transported through a 525km long slurry pipeline to connect to the Port of Açú. The port is designed to load Cape size vessels.
## Expected BS Pellets Quality based on Minas Rio PF

<table>
<thead>
<tr>
<th>Chemical Characteristics</th>
<th>Ore Quality %</th>
<th>Pellet Quality %</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Fe</td>
<td>67.5</td>
<td>68.1</td>
</tr>
<tr>
<td>SiO$_2$</td>
<td>1.2</td>
<td>1.35</td>
</tr>
<tr>
<td>Al$_2$O$_3$</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>CaO</td>
<td>0.3</td>
<td>0.32</td>
</tr>
<tr>
<td>MgO</td>
<td>0.3</td>
<td>0.31</td>
</tr>
<tr>
<td>MnO</td>
<td>0.38</td>
<td>0.3</td>
</tr>
<tr>
<td>P</td>
<td>0.046</td>
<td>0.046</td>
</tr>
<tr>
<td>K$_2$O</td>
<td>0.015</td>
<td>0.016</td>
</tr>
<tr>
<td>LOI</td>
<td>1.2</td>
<td>0.1</td>
</tr>
<tr>
<td>B2</td>
<td></td>
<td>0.23</td>
</tr>
</tbody>
</table>

### Physical Characteristics

| CCS, Kg/Pellet (min)    | 350           |
| TI (ISO) + (+6.3 MM)    | 94%           |
| AI (ISO) - (-0.50 MM)   | 3%            |

<table>
<thead>
<tr>
<th>Size Distribution (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+16mm</td>
</tr>
<tr>
<td>9-16mm</td>
</tr>
<tr>
<td>-5mm</td>
</tr>
</tbody>
</table>

The Physical Properties of BS Pellets have excellent parameters and superior to most of the DR pellets supplied in the market.
1. In 2013, the World DRI production was as follows:

<table>
<thead>
<tr>
<th>Region</th>
<th>MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America</td>
<td>13.83</td>
</tr>
<tr>
<td>MENA</td>
<td>32.36</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>17.77</td>
</tr>
<tr>
<td>Indonesia/Malaysia/Pakistan</td>
<td>2.77</td>
</tr>
<tr>
<td>Russia</td>
<td>5.33</td>
</tr>
<tr>
<td>Others</td>
<td>3.16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75.22</strong></td>
</tr>
</tbody>
</table>
2. India’s DRI Production

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage</td>
<td>22.03</td>
<td>23.42</td>
<td>21.97</td>
<td>20.05</td>
<td>17.77</td>
</tr>
<tr>
<td>World Total</td>
<td>64.33</td>
<td>70.28</td>
<td>73.21</td>
<td>73.14</td>
<td>75.22</td>
</tr>
<tr>
<td>% of World</td>
<td>34</td>
<td>33</td>
<td>30</td>
<td>27</td>
<td>24</td>
</tr>
</tbody>
</table>

3. India produces about 30% of World’s DRI.

4. MENA and Asia produce 70% of World’s DRI.

5. Bahrain Steel is strategically located in the vicinity of MENA & Asia.
Demand of DR Pellets

1. In 2013, the world DRI production reached 75.2 Mt an increase of 2.8% over 2012. the primary growth was from the Middle East/North Africa (MENA) Source: Midrex
2. Requirement of Oxide feed for DRI reached 113 Mt in 2013. Source: Midrex
3. Lump ore availability is scarce.
4. Most of DRI units will use 100% pellets in the future. (Environmental friendly)
5. Increase demand in GCC, far East and N. Africa.
   a) Increase steel consumption driven by strong GDP growth, and infrastructure projects in the GCC region.(117 major program costing in excess of US$1 trillion) Source: Meeds
6. Additional demand of about 10Mtpa from USA.
   a) Discovery of shale gas
   b) Shortage of high grade scrap

<table>
<thead>
<tr>
<th>Region</th>
<th>DRI-Production Capacity</th>
<th>DR Pellets Requirements</th>
<th>DRI-Production Capacity</th>
<th>DR Pellets Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015</td>
<td>2017/2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GCC</td>
<td>17.43</td>
<td>26.15</td>
<td>18.93</td>
<td>28.4</td>
</tr>
<tr>
<td>N. Africa</td>
<td>7.78</td>
<td>11.67</td>
<td>9.73</td>
<td>14.6</td>
</tr>
<tr>
<td>S.E Asia</td>
<td>4.74</td>
<td>7.11</td>
<td>4.71</td>
<td>7.11</td>
</tr>
<tr>
<td>Total</td>
<td>29.95</td>
<td>44.93</td>
<td>33.4</td>
<td>50.11</td>
</tr>
</tbody>
</table>

* The table above does not include DRI capacity in India, Iran and the Americas
Pellets Premium

1. In recent years, pellets increasingly represent a larger portion of burdens at Chinese blast furnaces, as many of the new furnaces recently built in China have been designed to consume a relatively larger proportion of pellets in the burden as sinter plant capacities are reducing due to environmental reasons.

2. Presently, the market for BF pellets is tight and premiums in the first half of 2014 have continued on an upward trajectory since Q4’2013.

3. The demand of DR Pellets will also be influenced by the scarcity of high grade DR pellet feed, which requires huge investment in mining and beneficiation.

4. The quality of DR Pellet feed is gradually deteriorating with the existing producers, as the Mining levels are going down.

5. In future High Grade Pellet feed has to be produced by beneficiation of low grade Itabirites/BHQ. The opex of such projects will be high on cost curve.
6. In the Short to Medium term (3-5 years), there are no green field projects, likely to be commissioned except Minas Rio, to produce DR Grade Pellet feed. The existing supplies are mostly captive.

7. In Asia, Suppliers have agreed to pellet premium of $38/dmt, US$ 10 increase over 2013. In Europe, there have been reports of pellet premiums as high as $40-$42/t.

8. DR pellets premium is expected to remain strong in the short and medium term due to robust demand and increasing cost of Pelletizing. Market may also see higher value in use for good quality DR Pellets.

9. It must be recognized that BF Pellets have around (65% Fe and 4 to 6% SiO2+Al2O3. MB and Platts are already publishing a value in use for every 1% SiO2+Al2O3, below this level.

10. The DR Pellet consumers therefore, shall be required to pay a value in use adjustment for lower SiO2+ Al2O3 and a higher pellet premium for Fe% above 65%, in line with current market trends.
Pellet Demand in India

1. India is the largest producer of DRI in the World, covering 24% in 2013.
2. Nearly 50% of India’s DRI production is through Coal based DR Plants.
3. India requires 30-35 Million Tons of Oxide feed.
4. Presently the Oxide demand is met from domestic Lump ore and Pellets.
5. The availability of good quality Lump Ore World wide is reducing, and in future most of the DR Plants will operate with 100% Pellets.
6. The production of DR requires high grade Oxide feed for higher productivity and meltshop operations.
7. Due to lack of beneficiation facilities, most of the pellet production in India is below 66% Fe.
8. Bahrain Steel with it’s high grade DR Pellets is well positioned to supply Pellets to India.
9. BS Pellets have been successfully used in India in all gas based plants and several Coal based plants including Corex.
END