Iron ore—2017 [ADVANCE RELEASE]

By Christopher A. Tuck

Domestic survey data and tables were prepared by Robin C. Kaiser, statistical assistant.

In 2017, U.S. iron ore production increased by 15% to 47.9 million metric tons (Mt) of usable ore in 2017 from 41.8 Mt in 2016 (table 1). In the United States, the vertically integrated structure of iron and steel companies and long-term price contracts buffered some iron ore producers from swings in global prices; however, low-cost finished steel imports increased competition in the steel industry and reduced demand for domestic iron ore. The United States ranked ninth globally in production of iron ore on the basis of usable ore and eighth by iron content (fig. 1, table 9).

Global iron ore production was 2.43 billion metric tons (Gt), on a usable-ore basis, containing an estimated 1.50 Gt of iron, a 4% increase for each from that of 2016. Global iron ore production, on a usable-ore basis, was led by Australia (883 Mt), Brazil (425 Mt), China (360 Mt), India (202 Mt), and Russia (95.0 Mt), which combined accounted for 81% of global production (table 8). Global pig iron production, the primary end use of iron ore, increased slightly to 1.18 Gt in 2017 (American Iron and Steel Institute, 2018, p. 110–111). Global raw steel production increased by 4% in 2017 to 1.69 Gt (American Iron and Steel Institute, 2018, p. 113–115).

Iron ore is the primary raw material for producing steel, an alloy critical to the economies of all industrialized nations. Two iron oxides—hematite (Fe₂O₃) and magnetite (Fe₃O₄)—are the primary iron ore minerals found in the United States. The principal form of iron ore mined in the United States contains hematite and magnetite in varying proportions, averaging 25% to 30% iron (Fe) content, and occurs in hard, fine-grained, banded iron formations also known as taconite. Magnetite is the main iron oxide recovered during concentration, although hematite tailings have become an economical alternative source of primary iron.

In the United States, low-grade iron ore is concentrated to reach, on average, the 62.5% Fe or greater benchmark required globally for steel production. The concentrates can then be agglomerated using binders to create iron ore pellets, which can be more easily transported and more efficiently melted in blast furnaces. More than 98% of all domestic iron ore production is transformed into molten iron, also known as pig iron, in blast furnaces by removing residual oxygen. The pig iron then may be transferred to basic oxygen furnaces for the removal of residual carbon and conversion to steel.

Small-scale steel mills, also known as minimills, use electric arc furnaces (EAFs) to produce steel from iron metallics and recycled steel scrap. Iron metallics—cold pig iron, direct-reduced iron (DRI), hot-briquetted iron (HBI), and iron nuggets—are intermediate iron products that have become increasingly cost effective as supplements to lower grades of steel scrap when integrated into the EAF process. DRI, also known as sponge iron, is produced through solid-state reduction of iron ore to 90% to 94% Fe (about the same iron content as molten pig iron); however, DRI requires special handling owing to its high susceptibility to oxidation. HBI is a higher density, premium quality form of briquetted DRI with lower susceptibility to oxidation. Iron nuggets, also known as iron nodules, are the least reactive among iron metallics and are a premium grade of pig iron, with an average of 97% to 99% Fe and almost no gangue.

Iron ore also may be used for nonsteel applications including ballast, cement clinker production, coal washing, crushed road base material, fertilizer, dense media separation, iron oxide pigments, ferrite magnets, oil and gas well drilling, radiation shielding, water treatment, and other specialty applications. These applications represent a relatively small portion of iron ore consumption. Some applications require costly beneficiation to create high-grade products. Data for these applications are not included in the U.S. Geological Survey’s (USGS’s) tables for domestic iron ore consumption, exports, imports, production, shipments, or stocks, unless otherwise noted. With the exception of iron oxide pigments and cement clinker, USGS surveys do not include production or consumption of iron ore for different, nonsteel end uses.

This report includes information from surveys of domestic producers, government agency reports, company reports, and public information. Trade data in this report are from the U.S. Census Bureau. Labor statistics were based on data available from the U.S. Department of Labor, Mine Safety and Health Administration. Percentages in the report were calculated using unrounded data and have been rounded to no more than three significant digits.

Legislation and Government Programs

Regulations, legislative initiatives, and monitoring of environmental issues regarding iron ore production continued as previously reported, with no significant changes in 2017. Environmental issues related to the production of iron ore include, but are not limited to, cross-state air pollution, effects of sulfate discharge on wild rice and associated changes to water-quality standards, greenhouse gas emissions, hazardous air pollutants, mercury discharge, regional haze, selenium discharge, sulfur dioxide and nitrogen dioxide emissions, and water conductivity as a measure of dissolved minerals (Cleveland-Cliffs Inc., 2018, p. 9–13).

Production

The USGS developed the U.S. iron ore data shown in tables 1 and 2 through an annual “Iron Ore” survey, which was sent to 13 domestic mines and facilities that produce iron ore and iron metallics for steel production, all of which responded. Company reports, employment data, mine inspection reports, and tax data supplemented the survey data received. Information...
Production of pig iron, the primary phase of steelmaking in which iron ore is consumed before raw steel is produced, was 22.4 Mt in 2017, essentially unchanged from the 22.3 Mt produced in 2016. Raw steel production by basic oxygen furnaces, which accounts for nearly all pig iron consumption, was 25.8 Mt, virtually the same as the 25.9 Mt produced in 2016. Total raw steel production increased to 81.6 Mt, 4% more than the 78.5 Mt produced in 2016. Basic oxygen furnace production accounted for 31.6% of total raw steel production in 2017, compared with 33.0% in 2016 (American Iron and Steel Institute, 2018, p. 70, 75).

Transportation

Domestically, iron ore is transported from mines to rail stations by heavy hauling trucks and by rail to port facilities on the Great Lakes or to processing facilities in North America. From ports, the ore is transported by ship across the Great Lakes and (or) through the St. Lawrence Seaway to the Atlantic Ocean. Bulk iron ore products are primarily transported by freighter across the Great Lakes owing to cost-effective transportation rates. Production, sales, shipments, and stocks of iron ore in Minnesota and Michigan fluctuated seasonally from December through April as a result of the annual closing and reopening of the Soo Locks at Sault Ste. Marie, MI, as well as harsh weather conditions and frozen lake surfaces during winter months. The Soo Locks, one of the four U.S. lock systems on the Great Lakes, was the primary passage for iron ore being transported from iron mines in Minnesota’s Mesabi Range to steel plants in the Midwestern United States. The Poe Lock, one of four locks in the Soo Locks system, is the only lock on the Great Lakes capable of transporting large iron ore freighters. The Locks were estimated to hold the potential to add $1.3 trillion in national economic benefits if modernized, according to a study commissioned by the U.S. Department of the Treasury. The report also identified a second Poe-sized lock that would have an additional $1.7 billion economic benefit. Soo Locks maintain the capacity needed for more than 60% of the United States and Canadian fleets. The Water Resources Development Act of 1968 authorized the construction of a second lock by the U.S. Army Corps of Engineers; however, the project remained unfunded (Lake Carriers Association, 2017).

Prices

In 2017, the average unit value of iron ore in the United States was $78.54 per metric ton, a 7% increase from $73.11 per metric ton in 2016, after several years of decreasing unit values (table 1). The average unit value of exported iron ore was $73.00 per metric ton, a 10% increase from $66.43 in 2016. The average unit value of exports totaling more than 1,000 t to any single country ranged from $62.49 to $115.98 per metric ton (table 5). In 2017, the average unit value of imported iron ore was $95.91 per metric ton, a 20% increase from the revised $79.99 per metric ton in 2016. The average unit value of imports totaling more than 1,000 t from any single country ranged from $71.13 to $157.07 per metric ton (table 6).

The average monthly spot price of imported iron ore fines, 62% Fe, at the Port of Tianjin, China, rose from

Consumption

Steelmaking is responsible for the majority of iron ore consumption. It is estimated that producing 1.0 t of steel requires 1.3 t of iron ore pellets, 0.4 t of coking coal, and 0.3 t of steel scrap, as well as 6.0 million British thermal units of natural gas, using blast furnaces at normal operating conditions. In 2017, U.S. consumption of iron ore, by gross weight, reported by the American Iron and Steel Institute (2018, p. 79), totaled 34.4 Mt, including 28.9 Mt of pellets; 4.35 Mt of sinter, briquettes, nodules, and other products; and 1.16 Mt of direct-shipping ore (table 4).
In 2017, U.S. iron ore exports were 10.6 Mt, a 21% increase from 8.77 Mt in 2016. Pellet exports accounted for 97% (10.3 Mt) of total exports. Steel companies in Canada received the majority, about 73%, of the iron ore exported from the United States, followed by Japan with 22% (tables 1, 5).

Imports in 2017 were 3.70 Mt, a 23% increase from 3.01 Mt in 2016 with the most imports coming from Brazil and Canada, accounting for 55% and 21%, respectively (table 6). Although imported iron ore supplemented domestically produced iron ore, the United States remained a net exporter in 2017 with 10.6 Mt of exports and 3.70 Mt of imports, compared with 8.77 Mt of exports and 3.01 Mt of imports in 2016 (tables 5, 6).

Production.—World iron ore production in 2017 was 2.43 Gt of usable ore containing 1.50 Gt of iron, 4% more than that in 2016. Australia remained the leading iron ore producer (883 Mt) by gross weight, followed by Brazil (425 Mt), China (360 Mt), India (202 Mt), and Russia (95.0 Mt) (fig. 1, table 9).

Consumption.—Raw steel and pig iron production are significant indicators of iron ore consumption; iron metallics are also indicators, although on a smaller scale. World consumption of iron ore was estimated to have increased by 7% in 2017, as indicated by increases in production of raw steel, DRI, and pig iron compared with those in 2016. China was the leading producer of pig iron and raw steel, and the Middle East and North Africa region was the leading producer of DRI (American Iron and Steel Institute, 2018, p. 110–115; Midrex Technologies, Inc., 2018, p. 7).

Trade.—Global imports of iron ore rose to 1.58 Gt in 2017, a 3.3% increase from 1.53 Gt in 2016 (World Steel Association, 2018, p. 104). The trend of year-on-year increases in global trade continued during the past 14 years. Since 2006, China, Germany, Japan, and the Republic of Korea have accounted for more than two-thirds of global imports, with their combined share increasing to 86% in 2017 from 62% in 2002. China’s share of global imports more than tripled during this 16-year period to 74% from 21%. Australia was the leading exporter of iron ore (57%), followed by Brazil (26%) (United Nations Commodity Trade Statistics Database, undated).

World Review

Australia.—Production of usable iron ore in Australia was 883 Mt in 2017, 3.0% more than the 858 Mt produced in 2016. On a tonnage basis, iron ore production in Australia increased by 25 Mt in 2017, 48 Mt in 2016, 70 Mt in 2015, and 130 Mt in 2014. Three iron-ore-mining companies in Australia—BHP Billiton Ltd., Fortescue Metals Group Ltd., and Rio Tinto Ltd.—were among the four leading iron ore producers in the world and accounted for most of the iron ore produced in Australia.

BHP Billiton’s iron ore production in Australia in fiscal year (FY) 2017, which ended June 30, increased by 2% to 231 Mt from 227 Mt in FY 2016. Increased output was a result of strong productivity throughout the company’s supply chain and additional capacity at the Jimblebar Mine in the Pilbara region in Western Australia. BHP Billiton’s annual realized sales price increased to $58 per wet metric ton, up from $44 per wet metric ton in 2016 (BHP Billiton Ltd., 2017, p. 88–89, 245). Fortescue’s iron ore shipments increased slightly in FY 2017 to 170 Mt, from 167 Mt in FY 2016. The company was exploring replacement options for the Firetail Mine, which was expected to be depleted within a few years (Fortescue Metals Group Ltd., 2017, p. 17–20). Rio Tinto’s share of iron ore production at its operations in Australia was virtually unchanged in 2017 at 271 Mt. The Silvergrass Mine commenced operations in 2017, marking the company’s 16th iron ore mine in the Pilbara region of Western Australia. The new mine produces low-phosphorus iron ore intended for product blending. Rio Tinto continued resource development projects to replenish ore reserves following mine depletion and further development operations at Yandi Oxbow, West Angelas Deposit F, and Yandi Billard South (Rio Tinto Ltd., 2017, p. 38, 39).

Brazil.—Production of iron ore in Brazil was estimated to be 425 Mt in 2017 about the same as that in 2016. Vale S.A., the leading iron ore producer in Brazil, increased production in 2017 to 367 Mt from 349 Mt in 2016 and increased its pellet production in 2017 to 50.3 Mt from 46.2 Mt in 2016 (Vale S.A., 2018, p. 34–37). In November 2015, the Fundão tailings dam experienced a catastrophic failure at the 30.5-Mt/yr Samarco Mine in Minas Gerais, jointly owned by BHP Billiton and Vale. Despite earlier plans to reopen the mine, in 2017 the company announced operations would remain suspended, and no information was provided on when it would reopen (BHP Billiton Ltd., 2017, p. 27–29).

China.—Production in China increased by 4% in 2017 to an estimated 360 Mt from 348 Mt in 2016 (table 9). Increasing demand from steel producers in China for high-grade iron ore blends, primarily originating in Australia and Brazil, were driven by stricter emissions requirements from the Government of China for steel producers. Production of steel in China reached nearly 900 Mt, as reported by Rio Tinto, supported by strong demand in construction, infrastructure, and manufacturing. Despite higher production levels, exports of steel decreased to approximately 75 Mt in 2017, a decrease from more than 100 Mt in 2015 and 2016 (BHP Billiton Ltd., 2017, p. 88–89; Rio Tinto Ltd., 2017, p. 38–39).

India.—Iron ore production in India increased by 9% in 2017 to 202 Mt from 185 Mt in 2016. National Mineral Development Corp. Ltd. (NMDC), a state-owned iron ore mining company in India, produced 35.6 Mt of iron ore in FY 2017–18 (from April 1, 2017, through March 31, 2018).
Production capacity was 43 Mt/yr. NMDC planned to increase production capacity to 50 Mt/yr by FY 2018–19 and 67 Mt/yr by FY 2021–22 by mining additional deposits, including Bailadila Iron Ore Deposit 13 in Chhattisgarh and Sasangada in Jharkhand (National Mineral Development Corp. Ltd., 2018, p. 8–9, 36–38).

Outlook

Global consumption of iron ore was estimated to have increased by 7% in 2017 and is expected to increase slightly throughout the next decade, with steel consumption increasing by 1.6% in 2018, owing to stable economic growth rates in Asia, stable infrastructure spending in Europe and North America, and increased competition with scrap as a raw material in steelmaking. Concerns regarding an increase in national protectionism, deceleration in the economy of China and increased debt, and uncertainties with the European Union elections remain long-term risks for the iron and steel industry. Global steel demand is expected to remain steady owing to slower growth in China as global steel demand follows cyclical market trends (World Steel Association, 2017).

Rebounds in the global price of seaborne iron ore drive increased production at large-scale mines. Clean air and emissions reduction policies in China continue to drive global demand for higher grade ore, reducing the profitability of small-scale and low-grade mines and continuing the trend of idling those mines. More than 200 Mt/yr of iron ore production capacity is expected to be brought into production by the end of 2020.

References Cited


Index Mundi, [undated], Iron ore monthly price: Index Mundi. (Accessed May 1, 2019, at http://www.indexmundi.com/commodities/?commodity=iron-ore.)


<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>SALIENT IRON ORE STATISTICS¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Thousand metric tons, gross weight, and thousand dollars, unless otherwise specified)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>52,800</td>
<td>56,100</td>
<td>46,100</td>
<td>41,800</td>
<td>47,900</td>
</tr>
<tr>
<td>Iron content</td>
<td>33,300</td>
<td>35,400</td>
<td>28,800</td>
<td>26,400</td>
<td>30,300</td>
</tr>
<tr>
<td>Shipments</td>
<td>53,400</td>
<td>55,000</td>
<td>43,500</td>
<td>46,600</td>
<td>46,900</td>
</tr>
<tr>
<td>Value:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minnesota:²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of mining dollars per metric ton</td>
<td>12.31 ¹</td>
<td>12.36 ²</td>
<td>10.59 ⁴</td>
<td>10.35 ⁴</td>
<td>9.65 ⁴</td>
</tr>
<tr>
<td>Cost of beneficiation do.</td>
<td>29.63 ³</td>
<td>31.29 ⁴</td>
<td>26.99 ⁴</td>
<td>25.48 ⁴</td>
<td>26.68 ⁴</td>
</tr>
<tr>
<td>Average value of production do.</td>
<td>77.46 ³</td>
<td>80.13 ⁴</td>
<td>68.47 ⁴</td>
<td>62.99 ⁴</td>
<td>70.03 ⁴</td>
</tr>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reported value at mines³</td>
<td>4,610,000</td>
<td>4,730,000</td>
<td>3,750,000</td>
<td>3,050,000</td>
<td>3,760,000</td>
</tr>
<tr>
<td>Average value at mines dollars per metric ton</td>
<td>87.42</td>
<td>84.43</td>
<td>81.19</td>
<td>73.11</td>
<td>78.54</td>
</tr>
<tr>
<td>Exports:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>11,000</td>
<td>12,400 ³</td>
<td>8,030</td>
<td>8,770</td>
<td>10,600</td>
</tr>
<tr>
<td>Value</td>
<td>1,480,000</td>
<td>1,350,000 ³</td>
<td>652,000</td>
<td>582,000 ³</td>
<td>775,000</td>
</tr>
<tr>
<td>Imports for consumption:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>3,250</td>
<td>5,140 ³</td>
<td>4,550</td>
<td>3,010</td>
<td>3,700</td>
</tr>
<tr>
<td>Value</td>
<td>426,000</td>
<td>676,000</td>
<td>455,000</td>
<td>241,000</td>
<td>355,000</td>
</tr>
<tr>
<td>Consumption:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparent⁴</td>
<td>47,100</td>
<td>46,700</td>
<td>39,300</td>
<td>39,200</td>
<td>39,500</td>
</tr>
<tr>
<td>Reported</td>
<td>44,200</td>
<td>44,400</td>
<td>38,500</td>
<td>34,500</td>
<td>34,400</td>
</tr>
<tr>
<td>Stocks, December 31</td>
<td>2,350</td>
<td>4,460</td>
<td>7,860</td>
<td>4,660</td>
<td>6,120</td>
</tr>
<tr>
<td>World, production</td>
<td>2,190,000 ³</td>
<td>2,330,000 ³</td>
<td>2,310,000 ³</td>
<td>2,340,000 ³</td>
<td>2,430,000 ³</td>
</tr>
</tbody>
</table>

Iron metallics:⁴,⁵

| United States: | | | | | |
| Production | 469 | 1,950 | 1,450 | 2,070 | 3,250 |
| Exports: | | | | | |
| Quantity | (6) ¹ | 1 ² | 20 ² | 178 ³ | 640 ³ |
| Value | 29 ¹ | 132 ² | 548 ² | 21,600 ³ | 155,000 ³ |
| Imports for consumption: | | | | | |
| Quantity | 2,240 ³ | 2,390 ³ | 1,860 ³ | 1,790 | 3,280 ³ |
| Value | 775,000 ³ | 854,000 ³ | 483,000 ³ | 355,000 ³ | 769,000 ³ |
| World, production | 74,900 | 74,600 | 72,600 | 72,800 ³ | 87,100 ³ |

¹Revised. do. Ditto.
²As reported in Minnesota Department of Revenue’s annual Mining Tax Guide.
³Value for iron ore as reported by mines, which may refer to price or value of shipments or production as sold on the open market or within the industry.
⁴Defined as production plus imports minus exports plus adjustments for industry stock changes.
⁵Data for iron metallics may include cold pig iron, direct-reduced iron, hot-briquetted iron, iron nuggets, and solid sponge iron.
⁶Less than ½ unit.

¹Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits, except average value and cost; may not add to totals shown.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>SALIENT IRON ORE STATISTICS¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Thousand metric tons, gross weight, and thousand dollars, unless otherwise specified)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>52,800</td>
<td>56,100</td>
<td>46,100</td>
<td>41,800</td>
<td>47,900</td>
</tr>
<tr>
<td>Iron content</td>
<td>33,300</td>
<td>35,400</td>
<td>28,800</td>
<td>26,400</td>
<td>30,300</td>
</tr>
<tr>
<td>Shipments</td>
<td>53,400</td>
<td>55,000</td>
<td>43,500</td>
<td>46,600</td>
<td>46,900</td>
</tr>
<tr>
<td>Value:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minnesota:²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of mining dollars per metric ton</td>
<td>12.31 ¹</td>
<td>12.36 ²</td>
<td>10.59 ⁴</td>
<td>10.35 ⁴</td>
<td>9.65 ⁴</td>
</tr>
<tr>
<td>Cost of beneficiation do.</td>
<td>29.63 ³</td>
<td>31.29 ⁴</td>
<td>26.99 ⁴</td>
<td>25.48 ⁴</td>
<td>26.68 ⁴</td>
</tr>
<tr>
<td>Average value of production do.</td>
<td>77.46 ³</td>
<td>80.13 ⁴</td>
<td>68.47 ⁴</td>
<td>62.99 ⁴</td>
<td>70.03 ⁴</td>
</tr>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reported value at mines³</td>
<td>4,610,000</td>
<td>4,730,000</td>
<td>3,750,000</td>
<td>3,050,000</td>
<td>3,760,000</td>
</tr>
<tr>
<td>Average value at mines dollars per metric ton</td>
<td>87.42</td>
<td>84.43</td>
<td>81.19</td>
<td>73.11</td>
<td>78.54</td>
</tr>
<tr>
<td>Exports:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>11,000</td>
<td>12,400 ³</td>
<td>8,030</td>
<td>8,770</td>
<td>10,600</td>
</tr>
<tr>
<td>Value</td>
<td>1,480,000</td>
<td>1,350,000 ³</td>
<td>652,000</td>
<td>582,000 ³</td>
<td>775,000</td>
</tr>
<tr>
<td>Imports for consumption:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>3,250</td>
<td>5,140 ³</td>
<td>4,550</td>
<td>3,010</td>
<td>3,700</td>
</tr>
<tr>
<td>Value</td>
<td>426,000</td>
<td>676,000</td>
<td>455,000</td>
<td>241,000</td>
<td>355,000</td>
</tr>
<tr>
<td>Consumption:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparent⁴</td>
<td>47,100</td>
<td>46,700</td>
<td>39,300</td>
<td>39,200</td>
<td>39,500</td>
</tr>
<tr>
<td>Reported</td>
<td>44,200</td>
<td>44,400</td>
<td>38,500</td>
<td>34,500</td>
<td>34,400</td>
</tr>
<tr>
<td>Stocks, December 31</td>
<td>2,350</td>
<td>4,460</td>
<td>7,860</td>
<td>4,660</td>
<td>6,120</td>
</tr>
<tr>
<td>World, production</td>
<td>2,190,000 ³</td>
<td>2,330,000 ³</td>
<td>2,310,000 ³</td>
<td>2,340,000 ³</td>
<td>2,430,000 ³</td>
</tr>
</tbody>
</table>

Iron metallics:⁴,⁵

| United States: | | | | | |
| Production | 469 | 1,950 | 1,450 | 2,070 | 3,250 |
| Exports: | | | | | |
| Quantity | (6) ¹ | 1 ² | 20 ² | 178 ³ | 640 ³ |
| Value | 29 ¹ | 132 ² | 548 ² | 21,600 ³ | 155,000 ³ |
| Imports for consumption: | | | | | |
| Quantity | 2,240 ³ | 2,390 ³ | 1,860 ³ | 1,790 | 3,280 ³ |
| Value | 775,000 ³ | 854,000 ³ | 483,000 ³ | 355,000 ³ | 769,000 ³ |
| World, production | 74,900 | 74,600 | 72,600 | 72,800 ³ | 87,100 ³ |

¹Revised. do. Ditto.
²As reported in Minnesota Department of Revenue’s annual Mining Tax Guide.
³Value for iron ore as reported by mines, which may refer to price or value of shipments or production as sold on the open market or within the industry.
⁴Defined as production plus imports minus exports plus adjustments for industry stock changes.
⁵Data for iron metallics may include cold pig iron, direct-reduced iron, hot-briquetted iron, iron nuggets, and solid sponge iron.
⁶Less than ½ unit.

¹Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits, except average value and cost; may not add to totals shown.
TABLE 2
EMPLOYMENT AND PRODUCTION STATISTICS FOR IRON OPERATIONS IN THE UNITED STATES IN 2017, BY STATE¹

(Thousand metric tons, unless otherwise specified)

<table>
<thead>
<tr>
<th>District and State</th>
<th>Number of active operations</th>
<th>Number of employees²</th>
<th>Crude ore</th>
<th>Pellets</th>
<th>Iron ore, other³, ⁴</th>
<th>Iron metallics</th>
<th>Total</th>
<th>Shipments</th>
<th>Average iron content⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana⁵</td>
<td>1</td>
<td>NA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>259</td>
<td>259</td>
<td>259</td>
<td>XX</td>
</tr>
<tr>
<td>Louisiana⁵</td>
<td>1</td>
<td>NA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1,890</td>
<td>1,890</td>
<td>1,890</td>
<td>XX</td>
</tr>
<tr>
<td>Michigan⁵</td>
<td>1</td>
<td>853</td>
<td>21,800</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>7,800</td>
<td>7,800</td>
<td>60.9</td>
</tr>
<tr>
<td>Minnesota</td>
<td>6</td>
<td>3,780</td>
<td>134,000</td>
<td>39,800</td>
<td>274</td>
<td>--</td>
<td>40,100</td>
<td>39,100</td>
<td>63.8</td>
</tr>
<tr>
<td>Texas⁶</td>
<td>1</td>
<td>NA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1,100</td>
<td>1,100</td>
<td>--</td>
<td>XX</td>
</tr>
<tr>
<td>Total or average</td>
<td>11</td>
<td>4,630</td>
<td>155,000</td>
<td>47,600</td>
<td>274</td>
<td>3,250</td>
<td>51,100</td>
<td>49,100</td>
<td>63.3</td>
</tr>
</tbody>
</table>

¹Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits; may not add to totals shown.
²Includes all forms of usable iron ore, except pellets, including but not limited to concentrates, direct-shipping ore, fines, flux, and pellet chips.
³Data reported in or calculated from publicly available company annual reports or other publications.
⁴Data for iron metallics (cold pig iron, direct-reduced iron, hot-briquetted iron, iron nuggets, and sponge iron) not included.

NA Not available. XX Not applicable. -- Zero.
TABLE 3
IRON OPERATIONS IN THE UNITED STATES IN 2017¹

(Million metric tons, unless otherwise specified)

<table>
<thead>
<tr>
<th>State and operation</th>
<th>County or Parish</th>
<th>Operator</th>
<th>Primary product</th>
<th>Status</th>
<th>Capacity²</th>
<th>Production²</th>
<th>Reserves³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana, Iron Dynamics, Inc.</td>
<td>DeKalb</td>
<td>Steel Dynamics, Inc.</td>
<td>Hot-briquetted iron</td>
<td>Active</td>
<td>0.3</td>
<td>0.3</td>
<td>(4)</td>
</tr>
<tr>
<td>Louisiana, Nucor Steel Louisiana LLC</td>
<td>St. James</td>
<td>Nucor Corp.</td>
<td>Direct-reduced iron</td>
<td>do.</td>
<td>2.5</td>
<td>NA</td>
<td>(4)</td>
</tr>
<tr>
<td>Michigan, Tilden Mine</td>
<td>Marquette</td>
<td>Cleveland-Cliffs Inc.</td>
<td>Iron ore pellets</td>
<td>do.</td>
<td>8.1</td>
<td>7.8</td>
<td>360</td>
</tr>
<tr>
<td>Minnesota:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hibbing Taconite Mine</td>
<td>St. Louis</td>
<td>do.</td>
<td>do.</td>
<td>do.</td>
<td>8.1</td>
<td>7.8</td>
<td>180</td>
</tr>
<tr>
<td>Keetac Mine</td>
<td>Itasca</td>
<td>United States Steel Corp.</td>
<td>do.</td>
<td>Idled through Feb. 2017</td>
<td>5.4</td>
<td>4.6</td>
<td>350</td>
</tr>
<tr>
<td>Minntac Mine</td>
<td>do.</td>
<td>do.</td>
<td>do.</td>
<td>do.</td>
<td>14.5</td>
<td>14.5</td>
<td>440</td>
</tr>
<tr>
<td>Minorca Mine</td>
<td>do.</td>
<td>ArcelorMittal S.A.</td>
<td>do.</td>
<td>do.</td>
<td>2.9</td>
<td>2.9</td>
<td>110</td>
</tr>
<tr>
<td>Northshore Mining</td>
<td>Lake and St. Louis</td>
<td>Cleveland-Cliffs Inc.</td>
<td>do.</td>
<td>do.</td>
<td>6.1</td>
<td>5.4</td>
<td>810</td>
</tr>
<tr>
<td>United Taconite Mine</td>
<td>St. Louis</td>
<td>do.</td>
<td>do.</td>
<td>do.</td>
<td>5.5</td>
<td>4.9</td>
<td>840</td>
</tr>
<tr>
<td>Texas, voestalpine Texas LLC</td>
<td>San Patricio</td>
<td>voestalpine Group</td>
<td>Hot-briquetted iron</td>
<td>do.</td>
<td>2.0</td>
<td>NA</td>
<td>(4)</td>
</tr>
<tr>
<td>Texas, voestalpine Texas LLC</td>
<td>San Patricio</td>
<td>voestalpine Group</td>
<td>Hot-briquetted iron</td>
<td>do.</td>
<td>2.0</td>
<td>NA</td>
<td>(4)</td>
</tr>
</tbody>
</table>

¹Table includes data available through August 7, 2019.
²As reported or calculated from data in company annual reports, oral communications, published online data, or U.S. Securities and Exchange Commission filings.
³Proven and probable reserves or equivalent, including those on owned and leased property, as reported in the company’s annual public filing.
⁴Operator does not mine iron ore at this site and has no reserves.
TABLE 4
CONSUMPTION OF IRON ORE AT U.S. IRON AND STEEL PLANTS, BY TYPE OF PRODUCT

(Thousand metric tons)

<table>
<thead>
<tr>
<th>Type of product</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pellets</td>
<td>29,000</td>
<td>28,900</td>
</tr>
<tr>
<td>Sinter2</td>
<td>4,230</td>
<td>4,190</td>
</tr>
<tr>
<td>Total</td>
<td>33,200</td>
<td>33,100</td>
</tr>
<tr>
<td>Direct-shipping ore</td>
<td>1,160</td>
<td>1,160</td>
</tr>
<tr>
<td>Sinter2</td>
<td>159</td>
<td>159</td>
</tr>
<tr>
<td>Total</td>
<td>1,320</td>
<td>1,320</td>
</tr>
<tr>
<td>Grand total</td>
<td>34,500</td>
<td>34,400</td>
</tr>
</tbody>
</table>

1Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits; may not add to totals shown.
2Includes briquettes, nodules, and other forms.

Source: American Iron and Steel Institute.

TABLE 5
U.S. EXPORTS OF IRON ORE, BY COUNTRY OR LOCALITY AND TYPE OF PRODUCT

<table>
<thead>
<tr>
<th>Country or locality and type of product</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Value</td>
</tr>
<tr>
<td></td>
<td>(thousands)</td>
<td>(dollars per metric ton)</td>
</tr>
<tr>
<td>2016 Quantity</td>
<td>Unit value3</td>
<td>2017 Quantity</td>
</tr>
<tr>
<td>Australia</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Austria</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Belgium</td>
<td>82</td>
<td>$4,150</td>
</tr>
<tr>
<td>Brazil</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Canada</td>
<td>7,060</td>
<td>484,000</td>
</tr>
<tr>
<td>China</td>
<td>960</td>
<td>45,700</td>
</tr>
<tr>
<td>Germany</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Japan</td>
<td>309</td>
<td>16,000</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>Mexico</td>
<td>352</td>
<td>31,500</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>1,140</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,770</td>
<td>582,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of product</th>
<th>2016 Quantity</th>
<th>2017 Quantity</th>
<th>Unit value3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse ores</td>
<td>1</td>
<td>192</td>
<td>(6)</td>
</tr>
<tr>
<td>Concentrates</td>
<td>77</td>
<td>9,900</td>
<td>128.56</td>
</tr>
<tr>
<td>Fine ores</td>
<td>119</td>
<td>7,680</td>
<td>64.56</td>
</tr>
<tr>
<td>Other agglomerates</td>
<td>213</td>
<td>16,300</td>
<td>76.39</td>
</tr>
<tr>
<td>Pellets</td>
<td>8,360</td>
<td>548,000</td>
<td>65.62</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,770</td>
<td>582,000</td>
<td>66.43</td>
</tr>
</tbody>
</table>

1Revised. -- Zero.
2Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits, except “Unit value”; may not add to totals shown.
3Includes agglomerates, excludes roasted iron pyrites.
4Weighted average calculated from unrounded data by dividing total value by total tonnage.
5All countries and (or) localities receiving less than 1,000 metric tons of exports from the United States in 2017 included in “Other.”
6Less than ½ unit.
7Value thought to be erroneous based on individual country value(s) in excess of normal value range; included in “Total.”

Source: U.S. Census Bureau.
### TABLE 6
U.S. IMPORTS OF IRON ORE, BY COUNTRY OR LOCALITY AND TYPE OF PRODUCT*

<table>
<thead>
<tr>
<th>Country or locality and type of product</th>
<th>2016</th>
<th></th>
<th></th>
<th></th>
<th>2017</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity (thousand metric tons)</td>
<td>Value (thousands)</td>
<td>Unit value$^3$ (dollars per metric ton)</td>
<td>Quantity (thousand metric tons)</td>
<td>Value (thousands)</td>
<td>Unit value$^3$ (dollars per metric ton)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Country or locality:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>87</td>
<td>$8,600</td>
<td>98.60</td>
<td>29</td>
<td>$4,560</td>
<td>157.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>(5)</td>
<td>12</td>
<td>147.86</td>
<td>24</td>
<td>2,740</td>
<td>114.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>1,760</td>
<td>130,000</td>
<td>74.10</td>
<td>2,040</td>
<td>194,000</td>
<td>95.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>557</td>
<td>38,800</td>
<td>69.56</td>
<td>790</td>
<td>75,100</td>
<td>95.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>62</td>
<td>3,410</td>
<td>55.34</td>
<td>283</td>
<td>21,800</td>
<td>77.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>66</td>
<td>19,800</td>
<td>(6)</td>
<td>31</td>
<td>11,400</td>
<td>(6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>(5)</td>
<td>13</td>
<td>(6)</td>
<td>65</td>
<td>5,670</td>
<td>87.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>82</td>
<td>6,070</td>
<td>73.65</td>
<td>80</td>
<td>5,690</td>
<td>71.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>350</td>
<td>27,700</td>
<td>79.21</td>
<td>363</td>
<td>34,300</td>
<td>94.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>50</td>
<td>6,290</td>
<td>(5)</td>
<td>97</td>
<td>(6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,010</td>
<td>241,000</td>
<td>79.99</td>
<td>3,700</td>
<td>355,000</td>
<td>95.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of product:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coarse ores</td>
<td>22</td>
<td>2,080</td>
<td>94.21</td>
<td>38</td>
<td>2,040</td>
<td>53.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentrates</td>
<td>719</td>
<td>32,400</td>
<td>45.02</td>
<td>1,110</td>
<td>68,100</td>
<td>61.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine ores</td>
<td>265</td>
<td>38,500</td>
<td>145.46</td>
<td>219</td>
<td>30,800</td>
<td>140.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other agglomerates</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pellets</td>
<td>2,010</td>
<td>168,000</td>
<td>83.73</td>
<td>2,330</td>
<td>254,000</td>
<td>108.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,010</td>
<td>241,000</td>
<td>79.99</td>
<td>3,700</td>
<td>355,000</td>
<td>95.91</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Revised. -- Zero.

1Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits, except “Unit value”; may not add to totals shown.

2Includes agglomerates, excludes roasted iron pyrites.

3Weighted average calculated from unrounded data by dividing total value by total tonnage.

4All countries and (or) localities with less than 1,000 metric tons of exports in 2017 included in “Other.”

5Less than ½ unit.

6Value thought to be erroneous based on individual country value(s) in excess of normal value range; included in “Total.”

Source: U.S. Census Bureau.
<table>
<thead>
<tr>
<th>Customs district</th>
<th>2016 Quantity</th>
<th>2016 Value</th>
<th>2017 Quantity</th>
<th>2017 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore, MD</td>
<td>(3)</td>
<td>$95</td>
<td>14</td>
<td>$1,210</td>
</tr>
<tr>
<td>Charleston, SC</td>
<td>(3)</td>
<td>13</td>
<td>(3)</td>
<td>15</td>
</tr>
<tr>
<td>Chicago, IL</td>
<td>686</td>
<td>30,800</td>
<td>757</td>
<td>40,500</td>
</tr>
<tr>
<td>Columbia-Snake, OR</td>
<td>37</td>
<td>4,480</td>
<td>53</td>
<td>7,300</td>
</tr>
<tr>
<td>Detroit, MI</td>
<td>1</td>
<td>32</td>
<td>(3)</td>
<td>18</td>
</tr>
<tr>
<td>Great Falls, MT</td>
<td>--</td>
<td>--</td>
<td>(3)</td>
<td>7</td>
</tr>
<tr>
<td>Houston-Galveston, TX</td>
<td>104</td>
<td>7,430</td>
<td>201</td>
<td>14,900</td>
</tr>
<tr>
<td>Los Angeles, CA</td>
<td>9</td>
<td>989</td>
<td>11</td>
<td>1,290</td>
</tr>
<tr>
<td>Miami, FL</td>
<td>(3)</td>
<td>7</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Minneapolis, MN</td>
<td>1</td>
<td>67</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>New Orleans, LA</td>
<td>2,150</td>
<td>195,000</td>
<td>2,630</td>
<td>288,000</td>
</tr>
<tr>
<td>New York City, NY</td>
<td>(3)</td>
<td>12</td>
<td>(3)</td>
<td>12</td>
</tr>
<tr>
<td>Norfolk, VA</td>
<td>(3)</td>
<td>12</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ogdensburg, NY</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>329</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>(3)</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>St. Albans, VT</td>
<td>--</td>
<td>--</td>
<td>19</td>
<td>633</td>
</tr>
<tr>
<td>Tampa, FL</td>
<td>23</td>
<td>2,230</td>
<td>14</td>
<td>1,460</td>
</tr>
<tr>
<td>Total</td>
<td>3,010</td>
<td>241,000</td>
<td>3,700</td>
<td>355,000</td>
</tr>
</tbody>
</table>

-- Zero.

1 Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits; may not add to totals shown.
2 Includes agglomerates, excludes roasted iron pyrites.
3 Less than ½ unit.

Source: U.S. Census Bureau.
### TABLE 8
SALIENT IRON STATISTICS FOR SELECTED COUNTRIES OR LOCALITIES1

(Million metric tons, gross weight)

<table>
<thead>
<tr>
<th>Country or locality</th>
<th>2016 Production Ore Metallics Consumption2 Exports2 Imports2</th>
<th>2017 Production Ore Metallics Consumption2 Exports2 Imports2</th>
<th>Reserves, yearend 2017 Crude ore Iron content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>858 -- 6 r 853 1</td>
<td>883 -- 51 828 (4)</td>
<td>50,000 24,000</td>
</tr>
<tr>
<td>Brazil</td>
<td>421 r 43 r 374 (4) r 425 s -- 50 375 s --</td>
<td>429 s -- 17 43 7 6,000 2,300</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>47 1 15 r 41 r 7</td>
<td>49 2 17 43 7 e 6,000 2,300</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>348 -- 1,370 r 1 1,020</td>
<td>360 r -- 1,390 5 1,030 e 20,000 6,900</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>-- 1 46 r (4) 40</td>
<td>-- 1 46 (4) 40 e NA NA</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>185 18 199 r 22 4</td>
<td>202 22 219 28 5 5,400 3,200</td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td>39 r 16 68 r --</td>
<td>40 21 78 -- 2,700 1,500</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>-- -- 134 r (4) r 130</td>
<td>-- -- 125 (4) 121 40 24</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>36 r -- 24 r 8 (4)</td>
<td>39 e -- 30 9 -- 2,500 900</td>
<td></td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>(4) r 76 r (4) r 72 r</td>
<td>(4) -- 75 -- 75 e NA NA</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>101 6 100 r 19 r 7 r</td>
<td>95 7 98 18 e 8 25,000 14,000</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>66 1 -- 65 (4)</td>
<td>81 1 12 67 (4) 1,200 770</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>27 -- 23 (4)</td>
<td>27 -- 23 s (4) 1,300 600</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>63 -- 63 r --</td>
<td>60 -- 56 -- 6,500 2,300</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>42 2 40 r 9 r 3 r (4)</td>
<td>48 3 46 11 4 2,900 760</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>106 r 29 248 r 89 r 179 r</td>
<td>120 51 326 66 180 e 18,000 9,500</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,340 r 73 2,430 r 1,500 r 1,470 r 2,430 r 87 2,610 r 1,450 e 1,390 e 170,000 84,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Estimated. Revised. NA Not available. -- Zero.
2Table includes data available through August 7, 2019. Data are rounded to no more than three significant digits; may not add to totals shown.
3Calculation based on the production of direct-reduced iron reported by Midrex Technologies, Inc. and pig iron reported by the American Iron and Steel Institute.
4Data are from the United Nations Statistics Division database.
5Less than ½ unit.
<table>
<thead>
<tr>
<th>Country or locality</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Algeria:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>1,067</td>
<td>911</td>
<td>944</td>
<td>610</td>
<td>600</td>
</tr>
<tr>
<td>Fe content</td>
<td>565</td>
<td>483</td>
<td>500</td>
<td>323</td>
<td>318</td>
</tr>
<tr>
<td><strong>Australia:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>609,730</td>
<td>739,682</td>
<td>809,882</td>
<td>858,026</td>
<td>883,357</td>
</tr>
<tr>
<td>Fe content</td>
<td>377,760</td>
<td>457,409</td>
<td>500,994</td>
<td>531,075</td>
<td>547,027</td>
</tr>
<tr>
<td><strong>Austria:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2,323</td>
<td>2,437</td>
<td>2,783</td>
<td>2,777</td>
<td>2,800</td>
</tr>
<tr>
<td>Fe content</td>
<td>743</td>
<td>780</td>
<td>891</td>
<td>889</td>
<td>890</td>
</tr>
<tr>
<td><strong>Azerbaijan:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>141</td>
<td>91</td>
<td>128</td>
<td>26</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>68</td>
<td>44</td>
<td>61</td>
<td>12</td>
<td>--</td>
</tr>
<tr>
<td><strong>Bhutan:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>21</td>
<td>19</td>
<td>43</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Fe content</td>
<td>13</td>
<td>12</td>
<td>27</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td><strong>Bosnia and Herzegovina:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2,122</td>
<td>2,128</td>
<td>2,123</td>
<td>1,752</td>
<td>1,622</td>
</tr>
<tr>
<td>Fe content</td>
<td>1,330</td>
<td>1,330</td>
<td>1,330</td>
<td>1,090</td>
<td>1,010</td>
</tr>
<tr>
<td><strong>Brazil:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>386,270</td>
<td>411,183</td>
<td>430,836</td>
<td>421,358</td>
<td>425,000</td>
</tr>
<tr>
<td>Fe content</td>
<td>245,668</td>
<td>261,500</td>
<td>275,590</td>
<td>268,000</td>
<td>269,000</td>
</tr>
<tr>
<td><strong>Canada:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>42,063</td>
<td>43,173</td>
<td>46,220</td>
<td>46,731</td>
<td>49,009</td>
</tr>
<tr>
<td>Fe content</td>
<td>25,200</td>
<td>25,900</td>
<td>27,700</td>
<td>28,100</td>
<td>29,400</td>
</tr>
<tr>
<td><strong>Chile:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>17,109</td>
<td>18,866</td>
<td>15,448</td>
<td>14,619</td>
<td>15,426</td>
</tr>
<tr>
<td>Fe content</td>
<td>9,088</td>
<td>10,149</td>
<td>9,148</td>
<td>9,009</td>
<td>9,549</td>
</tr>
<tr>
<td><strong>China:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>417,287</td>
<td>410,123</td>
<td>374,838</td>
<td>347,594</td>
<td>360,000</td>
</tr>
<tr>
<td>Fe content</td>
<td>258,718</td>
<td>254,276</td>
<td>232,400</td>
<td>215,509</td>
<td>223,000</td>
</tr>
<tr>
<td><strong>Colombia:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>710</td>
<td>676</td>
<td>902</td>
<td>716</td>
<td>715</td>
</tr>
<tr>
<td>Fe content</td>
<td>426</td>
<td>406</td>
<td>541</td>
<td>429</td>
<td>429</td>
</tr>
<tr>
<td><strong>Egypt:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>1,422</td>
<td>1,697</td>
<td>1,500</td>
<td>509</td>
<td>500</td>
</tr>
<tr>
<td>Fe content</td>
<td>889</td>
<td>1,050</td>
<td>938</td>
<td>318</td>
<td>310</td>
</tr>
<tr>
<td><strong>Germany:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>413</td>
<td>456</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>43</td>
<td>73</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Greece:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2,221</td>
<td>2,317</td>
<td>2,340</td>
<td>2,209</td>
<td>2,284</td>
</tr>
<tr>
<td>Fe content</td>
<td>550</td>
<td>574</td>
<td>580</td>
<td>547</td>
<td>566</td>
</tr>
<tr>
<td><strong>India:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>140,416</td>
<td>138,000</td>
<td>142,399</td>
<td>184,501</td>
<td>201,815</td>
</tr>
<tr>
<td>Fe content</td>
<td>87,060</td>
<td>85,560</td>
<td>88,287</td>
<td>114,000</td>
<td>125,000</td>
</tr>
<tr>
<td><strong>Indonesia:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>22,353</td>
<td>5,951</td>
<td>500</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>14,000</td>
<td>3,720</td>
<td>260</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Iran:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>48,693</td>
<td>48,451</td>
<td>39,370</td>
<td>39,400</td>
<td>40,100</td>
</tr>
<tr>
<td>Fe content</td>
<td>25,300</td>
<td>25,700</td>
<td>25,800</td>
<td>25,800</td>
<td>26,300</td>
</tr>
<tr>
<td><strong>Kazakhstan:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>51,689</td>
<td>51,541</td>
<td>37,270</td>
<td>35,794</td>
<td>39,085</td>
</tr>
<tr>
<td>Fe content</td>
<td>14,724</td>
<td>14,946</td>
<td>11,566</td>
<td>10,101</td>
<td>10,855</td>
</tr>
<tr>
<td><strong>Korea, North:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>5,486</td>
<td>5,471</td>
<td>4,906</td>
<td>5,249</td>
<td>5,250</td>
</tr>
<tr>
<td>Fe content</td>
<td>3,401</td>
<td>3,392</td>
<td>3,042</td>
<td>3,254</td>
<td>3,250</td>
</tr>
<tr>
<td><strong>Korea, Republic of:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>663</td>
<td>693</td>
<td>445</td>
<td>445</td>
<td>310</td>
</tr>
<tr>
<td>Fe content</td>
<td>414</td>
<td>433</td>
<td>278</td>
<td>278</td>
<td>194</td>
</tr>
</tbody>
</table>

See footnotes at end of table.
<table>
<thead>
<tr>
<th>Country or locality</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laos:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>905</td>
<td>1,149</td>
<td>235</td>
<td>115</td>
<td>110</td>
</tr>
<tr>
<td>Fe content</td>
<td>561</td>
<td>712</td>
<td>146</td>
<td>71</td>
<td>70</td>
</tr>
<tr>
<td>Liberia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>4,698</td>
<td>5,744</td>
<td>4,530</td>
<td>1,405</td>
<td>1,930</td>
</tr>
<tr>
<td>Fe content</td>
<td>2,936</td>
<td>3,590</td>
<td>2,830</td>
<td>878</td>
<td>1,210</td>
</tr>
<tr>
<td>Malaysia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>12,134</td>
<td>9,615</td>
<td>1,625</td>
<td>1,914</td>
<td>3,920</td>
</tr>
<tr>
<td>Fe content</td>
<td>7,580</td>
<td>6,010</td>
<td>1,020</td>
<td>1,150</td>
<td>2,450</td>
</tr>
<tr>
<td>Mauritania:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>11,975</td>
<td>13,306</td>
<td>11,607</td>
<td>13,268</td>
<td>13,300</td>
</tr>
<tr>
<td>Fe content</td>
<td>7,480</td>
<td>8,320</td>
<td>7,250</td>
<td>8,290</td>
<td>9,310</td>
</tr>
<tr>
<td>Mexico:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>18,840</td>
<td>16,628</td>
<td>13,462</td>
<td>12,090</td>
<td>12,100</td>
</tr>
<tr>
<td>Fe content</td>
<td>11,780</td>
<td>10,400</td>
<td>8,414</td>
<td>7,560</td>
<td>7,560</td>
</tr>
<tr>
<td>Mongolia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>6,794</td>
<td>7,558</td>
<td>6,061</td>
<td>4,936</td>
<td>7,695</td>
</tr>
<tr>
<td>Fe content</td>
<td>4,076</td>
<td>4,535</td>
<td>3,637</td>
<td>2,960</td>
<td>4,620</td>
</tr>
<tr>
<td>Morocco:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>301</td>
<td>23</td>
<td>18</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Fe content</td>
<td>163</td>
<td>12</td>
<td>10</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Nepal:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Fe content</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>(4)</td>
<td>(4)</td>
</tr>
<tr>
<td>New Zealand:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>3,157</td>
<td>3,245</td>
<td>3,194</td>
<td>3,496</td>
<td>3,490</td>
</tr>
<tr>
<td>Fe content</td>
<td>1,800</td>
<td>1,850</td>
<td>1,820</td>
<td>1,993</td>
<td>1,990</td>
</tr>
<tr>
<td>Nigeria:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fe content</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Norway:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>3,409</td>
<td>3,854</td>
<td>3,519</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>2,114</td>
<td>2,390</td>
<td>2,182</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Pakistan:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>253</td>
<td>255</td>
<td>439</td>
<td>471</td>
<td>547</td>
</tr>
<tr>
<td>Fe content</td>
<td>81</td>
<td>82</td>
<td>140</td>
<td>151</td>
<td>175</td>
</tr>
<tr>
<td>Peru:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>10,126</td>
<td>10,731</td>
<td>10,908</td>
<td>11,418</td>
<td>13,121</td>
</tr>
<tr>
<td>Fe content</td>
<td>6,788</td>
<td>7,193</td>
<td>7,231</td>
<td>7,663</td>
<td>8,806</td>
</tr>
<tr>
<td>Philippines:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>1,057</td>
<td>154</td>
<td>107</td>
<td>17</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>674</td>
<td>98</td>
<td>68</td>
<td>11</td>
<td>--</td>
</tr>
<tr>
<td>Russia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>102,157</td>
<td>102,019</td>
<td>101,049</td>
<td>101,097</td>
<td>94,967</td>
</tr>
<tr>
<td>Fe content</td>
<td>60,300</td>
<td>60,200</td>
<td>59,619</td>
<td>59,647</td>
<td>61,246</td>
</tr>
<tr>
<td>Sierra Leone:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>20,300</td>
<td>19,429</td>
<td>2,624</td>
<td>4,720</td>
<td>4,720</td>
</tr>
<tr>
<td>Fe content</td>
<td>11,900</td>
<td>11,300</td>
<td>1,500</td>
<td>2,700</td>
<td>2,700</td>
</tr>
<tr>
<td>South Africa:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>71,645</td>
<td>80,759</td>
<td>72,806</td>
<td>66,456</td>
<td>81,068</td>
</tr>
<tr>
<td>Fe content</td>
<td>45,700</td>
<td>51,500</td>
<td>46,424</td>
<td>42,000</td>
<td>51,600</td>
</tr>
<tr>
<td>Swaziland:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>1,259</td>
<td>603</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>550</td>
<td>264</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Sweden:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>25,300</td>
<td>25,700</td>
<td>24,500</td>
<td>26,900</td>
<td>27,200</td>
</tr>
<tr>
<td>Fe content</td>
<td>15,700</td>
<td>15,900</td>
<td>15,200</td>
<td>16,700</td>
<td>16,900</td>
</tr>
</tbody>
</table>

See footnotes at end of table.
<table>
<thead>
<tr>
<th>Country or locality</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>390</td>
<td>348</td>
<td>16</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fe content</td>
<td>242</td>
<td>216</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Togo:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>80</td>
<td>89</td>
<td>72</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Fe content</td>
<td>24</td>
<td>27</td>
<td>22</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Tunisia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>244</td>
<td>307</td>
<td>300</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Fe content</td>
<td>127</td>
<td>160</td>
<td>156</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Turkey:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>8,492</td>
<td>6,982</td>
<td>6,010</td>
<td>6,050</td>
<td>6,700</td>
</tr>
<tr>
<td>Fe content</td>
<td>5,138</td>
<td>4,224</td>
<td>3,636</td>
<td>4,320</td>
<td>4,050</td>
</tr>
<tr>
<td>Uganda:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2</td>
<td>42</td>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fe content</td>
<td>2</td>
<td>27</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ukraine:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>70,400</td>
<td>68,300</td>
<td>66,900</td>
<td>62,876</td>
<td>60,498</td>
</tr>
<tr>
<td>Fe content</td>
<td>44,000</td>
<td>42,700</td>
<td>41,800</td>
<td>39,300</td>
<td>37,800</td>
</tr>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>52,800</td>
<td>56,100</td>
<td>46,100</td>
<td>41,800</td>
<td>47,900</td>
</tr>
<tr>
<td>Fe content</td>
<td>33,300</td>
<td>35,400</td>
<td>28,800</td>
<td>26,400</td>
<td>30,300</td>
</tr>
<tr>
<td>Uruguay:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>10</td>
<td>15</td>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Fe content</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Venezuela:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>11,198</td>
<td>11,256</td>
<td>11,716</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Fe content</td>
<td>7,000</td>
<td>7,000</td>
<td>7,300</td>
<td>7,500</td>
<td>7,500</td>
</tr>
<tr>
<td>Vietnam:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>4,708</td>
<td>5,130</td>
<td>5,086</td>
<td>5,770</td>
<td>9,570</td>
</tr>
<tr>
<td>Fe content</td>
<td>2,495</td>
<td>2,719</td>
<td>2,691</td>
<td>3,056</td>
<td>5,074</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross weight</td>
<td>2,190,000</td>
<td>2,330,000</td>
<td>2,310,000</td>
<td>2,340,000</td>
<td>2,430,000</td>
</tr>
<tr>
<td>Fe content</td>
<td>1,340,000</td>
<td>1,420,000</td>
<td>1,420,000</td>
<td>1,440,000</td>
<td>1,500,000</td>
</tr>
</tbody>
</table>

1Estimated. 2Revised. -- Zero.
1Table includes data available through October 18, 2018. All data are reported unless otherwise noted.
Totals, U.S. data, and estimated data are rounded to no more than three significant digits; may not add to
2Production includes alternative iron ore source as follows: Greece (nickeliferous iron ore) and New
Zeland (titaniferous magnetite sands).
3Production is based on fiscal year, with a starting date of July 16 of the year shown.
4Less than ½ unit.
5Production is based on fiscal year, with a starting date of April 1 of the year shown.
Figure 1. Global production of usable iron ore (gross weight) in 2017.