



## Steel Production by Type of Process

Oxygen Furnaces (~75%) compared with EAF's (~25%)

For the year ended 2016 oxygen furnaces accounted for 75% of steelmaking processes globally versus EAF's, which made up 25%. China has ~63% of the oxygen furnaces globally, comprising 95% of Chinese production. At 53% of its total output, India was the top EAF manufacturer in 2016, producing 55mn mt. The U.S. produced 52.6mn mt of steel through EAF's, or two-thirds of overall U.S. production, with the remaining one-third using oxygen furnaces.

Figure 34: Crude Steel Production by Process Type

2016 by Country / Geography (Millions of Metric Tonnes)	Oxygen Furnace		Electric Arc Furnace		All Other Types		Total Production	
	% Supply	Tonnes	% Supply	Tonnes	% Supply	Tonnes	% Supply	Tonnes
France	66.1%	9.5	33.9%	4.9	-	-	100%	14.4
Germany	70.1%	29.5	29.9%	12.6	-	-	100%	42.1
Italy	24.3%	5.7	75.7%	17.7	-	-	100%	23.4
Poland	56.8%	5.1	43.2%	3.9	-	-	100%	9.0
Spain	33.9%	4.6	66.1%	9.0	-	-	100%	13.6
United Kingdom	80.6%	6.1	19.4%	1.5	-	-	100%	7.6
Other European Union	71.6%	37.2	28.4%	14.7	-	-	100%	51.9
<b>European Union</b>	<b>60.3%</b>	<b>97.7</b>	<b>39.7%</b>	<b>64.3</b>	-	-	<b>100%</b>	<b>162.0</b>
Turkey	34.1%	11.3	65.9%	21.9	-	-	100%	33.2
Others	44.1%	2.0	55.9%	2.5	-	-	100%	4.5
<b>Other Europe</b>	<b>35.3%</b>	<b>13.3</b>	<b>64.7%</b>	<b>24.4</b>	-	-	<b>100%</b>	<b>37.7</b>
Russia	66.9%	47.4	30.8%	21.8	2%	1.7	100%	70.9
Ukraine	71.7%	17.4	6.8%	1.6	21%	5.2	100%	24.2
Other CIS	56.9%	4.2	43.1%	3.1	-	-	100%	7.3
<b>CIS</b>	<b>67.3%</b>	<b>68.9</b>	<b>26.0%</b>	<b>26.6</b>	<b>7%</b>	<b>6.9</b>	<b>100%</b>	<b>102.3</b>
Canada	55.4%	7.0	44.6%	5.6	-	-	100%	12.6
Mexico	26.2%	4.9	73.8%	13.9	-	-	100%	18.8
United States	33.0%	25.9	67.0%	52.6	-	-	100%	78.5
<b>NAFTA</b>	<b>34.4%</b>	<b>37.8</b>	<b>65.6%</b>	<b>72.1</b>	-	-	<b>100%</b>	<b>109.9</b>
Brazil	77.3%	24.2	21.1%	6.6	1.6%	0.5	100%	31.3
Other Central & South America	7.3%	3.5	92.7%	6.2	-	-	100%	9.7
<b>Central &amp; South America</b>	<b>67.5%</b>	<b>27.6</b>	<b>31.3%</b>	<b>12.9</b>	<b>1.2%</b>	<b>0.5</b>	<b>100%</b>	<b>41.0</b>
Egypt	11.4%	0.6	88.6%	4.4	-	-	100%	5.0
South Africa	62.2%	3.8	37.8%	2.3	-	-	100%	6.1
Other Africa	33.8%	0.6	65.9%	1.3	0.3%	0.0	100%	1.9
<b>Africa</b>	<b>38.5%</b>	<b>5.0</b>	<b>61.4%</b>	<b>8.0</b>	-	<b>0.0</b>	<b>100%</b>	<b>13.0</b>
Iran	12.2%	2.2	87.8%	15.7	-	-	100%	17.9
Other Middle East	-	-	100.0%	13.6	-	-	100%	13.6
<b>Middle East</b>	<b>6.9%</b>	<b>2.2</b>	<b>93.1%</b>	<b>29.3</b>	-	-	<b>100%</b>	<b>31.5</b>
China	94.8%	766.4	5.2%	42.0	-	-	100%	808.4
India	42.7%	40.8	57.3%	54.8	-	-	100%	95.6
Japan	77.8%	81.5	22.2%	23.3	-	-	100%	104.8
South Korea	69.3%	47.5	30.7%	21.1	-	-	100%	68.6
Taiwan, China	64.2%	14.0	35.8%	7.8	-	-	100%	21.8
Other Asia	6.9%	1.8	93.1%	24.1	-	-	100%	25.9
<b>Asia</b>	<b>84.6%</b>	<b>952.0</b>	<b>15.4%</b>	<b>173.1</b>	-	-	<b>100%</b>	<b>1,125.1</b>
Australia & New Zealand	78.2%	4.6	21.8%	1.3	-	-	100%	5.9
<b>Oceania</b>	<b>78.2%</b>	<b>4.6</b>	<b>21.8%</b>	<b>1.3</b>	-	-	<b>100%</b>	<b>5.9</b>
<b>Total</b>	<b>74.3%</b>	<b>1,209.2</b>	<b>25.3%</b>	<b>411.8</b>	<b>0.5%</b>	<b>7.4</b>	<b>100%</b>	<b>1,628.4</b>

Source: Deutsche Bank, the World Steel Association