FERROUS SCRAP

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(Please note that this document is only available in pdf)
Contents

What is BIR?

Founded in 1948, BIR is a non-profit-making, non governmental organisation financed by annual membership dues paid by its 42 affiliated national sectoral federations and by some 700 member companies which are active in the collection, processing, transportation and recycling of materials which are diverted from the waste stream.

Ferrous metals, non-ferrous metals, paper and textiles were the four founder commodity divisions of BIR. Since then, BIR has set up a very successful Stainless Steel and Special Alloys Committee, a Plastics Committee and a Tyres Committee. Horizontally the Environment Committee monitors the implications of environmental legislation for the recycling industry throughout the world and helps its members to implement them.
Steel Industry Supply with Steel Scrap

<table>
<thead>
<tr>
<th>Year 2007 (in million tonnes)</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Production</td>
<td>1344</td>
</tr>
<tr>
<td>Steel Scrap Consumption</td>
<td>540</td>
</tr>
<tr>
<td>(absolute)</td>
<td></td>
</tr>
<tr>
<td>Steel Scrap Consumption</td>
<td>40.1%</td>
</tr>
<tr>
<td>(percentage)</td>
<td></td>
</tr>
</tbody>
</table>

Thereof covering by:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Steelworks own arisings</td>
<td>200*</td>
</tr>
<tr>
<td>Deliveries by steel recycling industry</td>
<td>340*</td>
</tr>
</tbody>
</table>

*(Purchase of steel scrap by steelworks)*

Sources: BDSV/IISI
Steel Production and Steel Scrap Consumption worldwide (million tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>Steel Production</th>
<th>Steel Scrap Consumption</th>
<th>Steel Scrap Purchases by Steelworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>965</td>
<td>411</td>
<td>277</td>
</tr>
<tr>
<td>2004</td>
<td>1069</td>
<td>455</td>
<td>300</td>
</tr>
<tr>
<td>2005</td>
<td>1129</td>
<td>462</td>
<td>305</td>
</tr>
<tr>
<td>2006</td>
<td>1240</td>
<td>500</td>
<td>320</td>
</tr>
<tr>
<td>2007</td>
<td>1344</td>
<td>640</td>
<td>600</td>
</tr>
</tbody>
</table>

Sources: BDSV / IISI

Steel Scrap Consumption / percentage

EU 27: 57%
Turkey: 80%
USA: 60%

* estimated
Steel Scrap Consumption

Steel Scrap is not only used in the EAF process, but also in the blast furnace process (up to 20%)

Top BOS Producers
oxygen steel (mt)
China: 365
Japan: 86
Russia: 44
USA: 42

Top EAF Producers
electric steel (mt)
USA: 56
China: 54
Japan: 30
S-Korea: 22

Reminder: Steel Scrap is also the most important raw material for foundries. In developed countries approx. 20% of all scrap arisings are consumed in foundries

EU Scrap Trade Balance
(million tonnes)

Exports Third Countries ex EU 2007
Total 10.566 (+4.8%)
Biggest Buyers
Turkey 5.927 (+22.6%)
Egypt 0.897 (-33.6%)
India 0.633 (+52.2%)
China 0.520 (+10.9%)
Switzerland 0.443 (-4.5%)
Pakistan 0.412 (+94.3%)

Imports Third Countries into EU 2007
Total 5.142 (-29.5%)
Biggest Suppliers
Russia 1.650 (-47.7%)
USA 0.713 (+38.8%)
Switzerland 0.587 (-2.0%)
Norway 0.278 (+0.4%)

Source: Statistic Bureau, Germany
Steel Scrap Trade

WORLD SCRAP EXPORTERS: WORLD SCRAP IMPORTERS

Steel Scrap Export EU 2007 (million tonnes)

Biggest Buyers

Total exports 10.6

Turkey: 5.93
Egypt: 0.90
India: 0.63
China: 0.52
Switzerland: 0.44
Pakistan: 0.41

Source: German Statistics Bureau/WV Stahl
Steel Scrap Export USA 2007 (million tonnes)

Biggest Buyers

Total exports 16.64

Turkey: 3.3
China: 2.5
Taiwan: 1.7
Canada: 1.4
South Korea: 1.4
Malaysia: 1.2

Steel Scrap Export Russia 2007 (million tonnes)

Biggest Buyers

Total exports 7.9

Turkey: 3.3
Spain: 1.2
South Korea: 0.89
Sweden: 0.35
Egypt: 0.28
Taiwan: 0.27

Source: German Statistics Bureau/WV Stahl
Steel Scrap Export Japan 2007 (million tonnes)

Biggest Buyers

Total exports 6.45

South Korea: 3.4
China: 2.3
Vietnam: 0.96
Taiwan: 0.5

World External Trade Steel Scrap totals (million tonnes)

Source: German Statistics Bureau/WV Stahl

Source: Iron and Steel Statistics Bureau (ISSB), ISRI
Steel Scrap Prices

EU-Export Price: HMS1, Composite Price Fob Rotterdam (USD/t) – since 2006 HMS 1/2 (80:20)
USA: HMS1, delivered steel work, Composite Price (Pittsburgh, Chicago) (USD/t)

Steel Scrap Structure in industrialised Countries

old / new scrap rate
60 / 40 rate

old scrap
new scrap
Resource saving and CO$_2$-reduction

1 ton of steel scrap saves:
1 ton of CO$_2$ and 650 kg of iron ore

Worldwide:
540 Mio. tons of steel scrap save
540 Mio. tons of CO$_2$ and 350 Mio. tons iron ore per year!!

Trade barriers for steel scrap

- Waste legislation in EU-27
  - Consequence: waste shipment regulation for worldwide transports

- REACH-legislation in EU27
  - Consequence: risk of rising export rates as waste out of EU-27

- Export tariffs in Russia (15%) and Ukraine
Trade barriers for steel scrap

„…Steel scrap trade does not occur on a level playingfield …“ (Alan Price, president of the new American Scrap Coalition)

According to new American Scrap Coalition recently 20 countries released export tariffs!!!

Conclusion

Amount of Steel consumption will increase with GNP, but amounts of steel scrap will not increase with the same rates

!! Availability of steel scrap is a great challenge in the future !!

► We need less bureaucracy and worldwide free trading !!