

ISSF
INTERNATIONAL
STAINLESS STEEL



Stainless Steel
in Figures
2012

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Secretary General's Message

A century after stainless steel was first discovered and commercialised, and 17 years after the International Stainless Steel Forum (ISSF) was founded, our statistics database is now comprehensive enough to produce this first edition of *Stainless Steel in Figures*.

The booklet provides interested stakeholders with some facts and figures about stainless steel and the development of the global market for this remarkable material.

The brochure is divided into three main sections:

1. History and competition
2. Actual performance
3. Potential

The information included shows how stainless steel has developed in a global context.

ISSF hopes that *Stainless Steel in Figures* will provide industry's stakeholders the in-depth information they need to support their day-to-day business.

We plan to publish *Stainless Steel in Figures* on a regular basis. Your comments and suggestions on this first edition are very welcome and will help us to ensure the booklet becomes a relevant tool for the world stainless steel industry.

Pascal Payet-Gaspard

Secretary General,
International Stainless Steel Forum (ISSF)
Brussels, May 2012



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Section 1: History and Competition

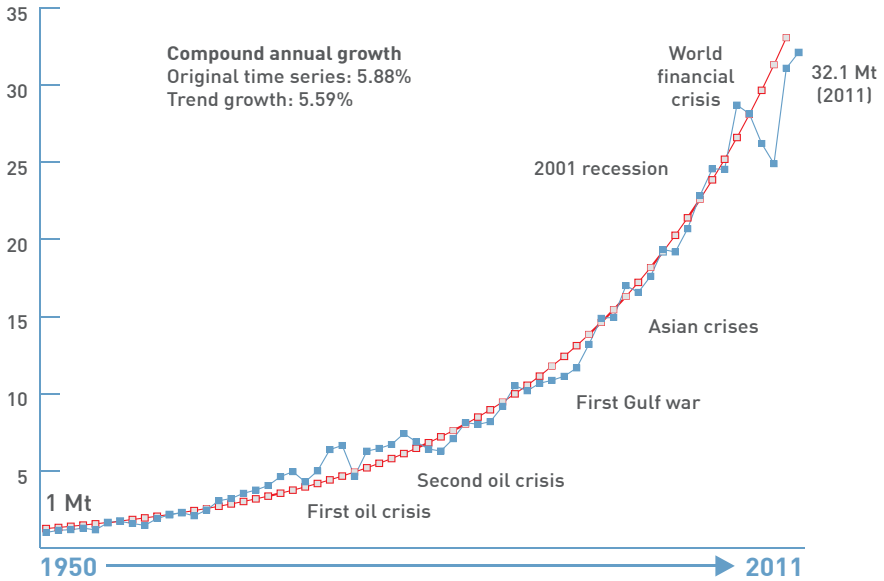


Figure 1: Compound annual growth rate of world stainless crude steel production (in Mt): 1950 – 2011p

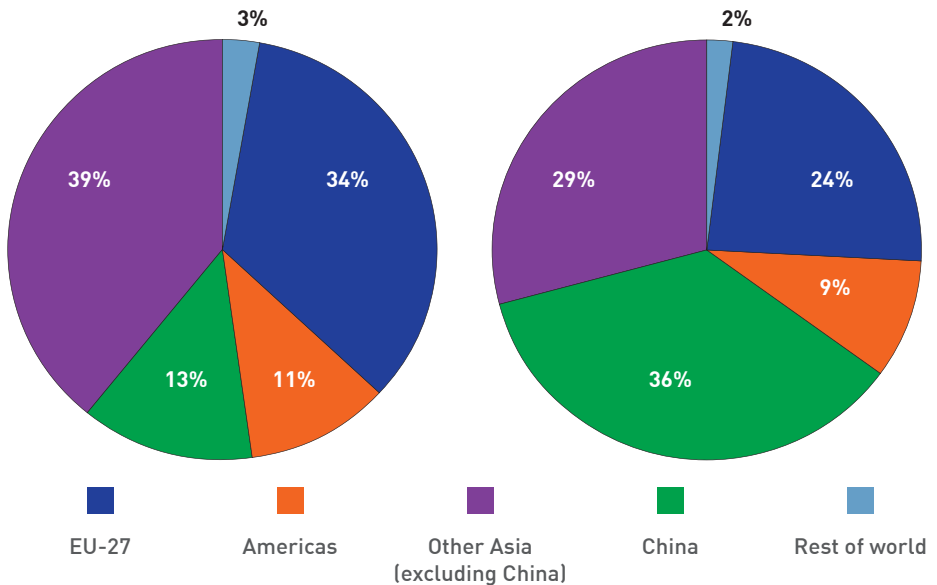


Figure 2: Regional share of stainless steel production: 2005 (left) and 2010 (right)

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Section 1: History and Competition

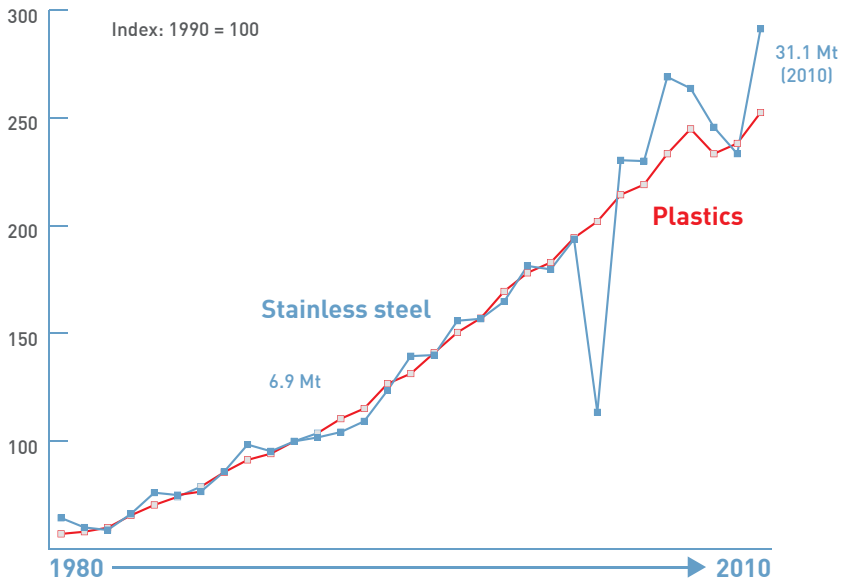


Figure 3: Stainless steel production versus plastics production: 1980 – 2010. The production evolution of both materials is similar, though stainless steel is more volatile.

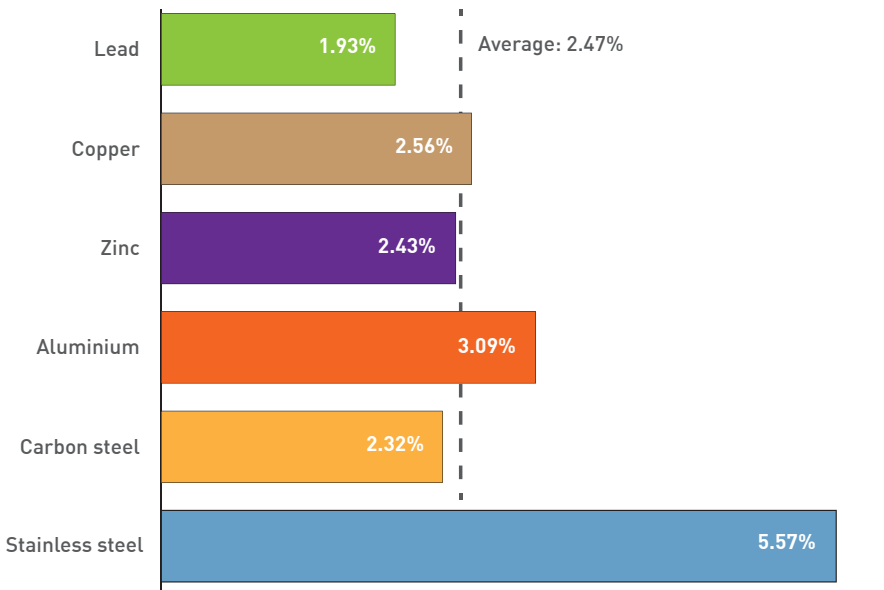


Figure 4: Compound annual growth rate of major metals (%/year): 1980 - 2010



Section 2: Actual Performance

Country/Region	2005	2006	2007	2008	2009	2010	2011p
Belgium	1,032	1,522	1,521	1,471	1,045	1,306	1,241
Finland	1,124	1,303	975	957	726	998	1,003
France	658	529	308	297	202	276	300
Germany	1,592	1,724	1,505	1,574	1,320	1,509	1,502
Italy	1,606	1,832	1,558	1,471	1,216	1,587	1,602
Spain	1,127	1,257	1,105	998	693	844	807
Sweden	639	684	645	574	445	546	586
UK	408	375	351	340	224	279	330
Other EU	130	152	148	158	114	152	183
European Union	8,316	9,379	8,115	7,838	5,986	7,497	7,554
USA	2,238	2,460	2,171	1,925	1,617	2,201	2,074
Brazil	450	491	433	390	324	409	413
Americas	2,688	2,951	2,604	2,315	1,942	2,609	2,486
Japan	3,983	4,073	3,882	3,567	2,607	3,427	3,247
South Korea	2,292	2,278	1,942	1,660	1,677	2,048	2,157
Taiwan, China	1,514	1,724	1,515	1,297	1,468	1,514	1,203
China	3,160	5,299	7,206	6,943	8,805	11,256	12,592
India	1,804	2,006	1,966	1,832	1,721	2,022	2,163
Asia	12,753	15,380	16,510	15,299	16,277	20,267	21,361
South Africa	564	727	651	528	546	480	443
Russia	101	131	143	135	86	122	125
Ukraine	124	138	124	104	67	118	147
World	24,546	28,706	28,146	26,218	24,904	31,094	32,116

Table 1: Stainless crude steel production (ingot/slab equivalent) in '000 metric tonnes: 2005 – 2011p

p = provisional



Section 2: Actual Performance

		Western Europe/ Africa	Central & Eastern Europe	The Americas	Asia (excluding China)	China	World
Quarter 1	2010	2,082	73	728	2,235	2,607	7,726
	2011p	2,216	85	779	2,238	3,076	8,395
	% change	6.4	16.8	6.9	0.2	18.0	8.7
Quarter 2	2010	2,223	89	671	2,278	2,862	8,123
	2011p	2,080	114	598	2,135	3,129	8,054
	% change	-6.4	26.9	-10.9	-6.3	9.3	-0.8
First half	2010	4,305	163	1,399	4,513	5,469	15,849
	2011p	4,295	199	1,377	4,373	6,206	16,449
	% change	-0.2	22.3	-1.6	-3.1	135	3.8
Quarter 3	2010	1,715	89	641	2,205	2,844	7,495
	2011p	1,683	104	553	2,220	3,170	7,730
	% change	-1.9	16.8	-13.8	0.7	11.5	3.1
Quarter 4	2010	1,858	88	568	2,293	2,943	7,750
	2011p	1,898	84	557	2,177	3,215	7,931
	% change	2.1	-4.1	-2.0	-5.1	9.3	2.3
Second half	2010	3,573	177	1,210	4,498	5,787	15,245
	2011p	3,580	188	1,110	4,397	6,386	15,661
	% change	0.2	6.4	-8.3	-2.2	10.3	2.7

Table 2: Stainless crude steel production by quarter in '000 metric tonnes: 2010 versus 2011p

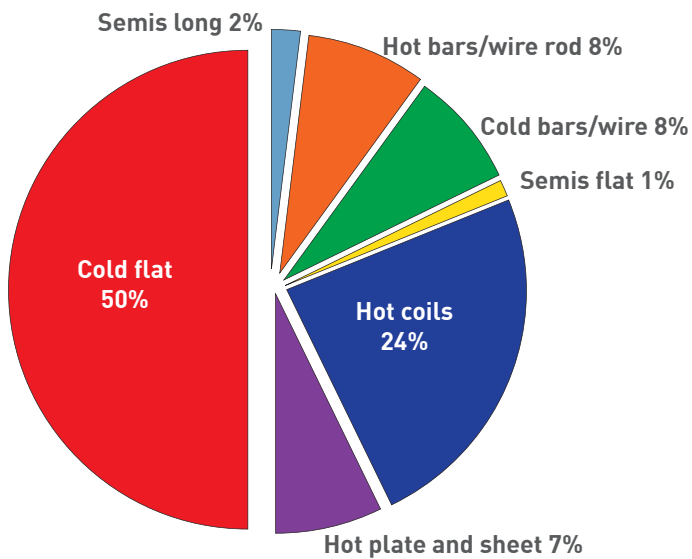


Figure 5: Stainless steel foreign trade 2010 (82% of all stainless exports are flat rolled products.)



Section 2: Actual Performance

Origin	Destination								
	NAFTA	Latin America	Western Europe	Eastern Europe	Middle East	Africa	Asia	Others	Total
NAFTA	316.1	11.6	39.9	3.1	1.4	0.8	136.6	0.7	510.2
Latin America	29.3	47.6	56.6	10.4	5.2	12.6	79.0	0.2	240.9
Western Europe	757.4	88.5	6,855.1	204.1	74.9	84.4	949.2	46.3	9,060.0
Eastern Europe	6.7	0.3	157.2	53.6	1.6	0.1	8.0	0.2	227.6
Middle East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Africa	28.9	5.5	141.0	0.5	18.6	10.6	175.6	4.8	385.4
Asia	267.1	21.4	288.1	23.8	74.9	25.1	4,510.4	83.5	5,294.4
Others	0.2	0.1	0.4	-	0.0	0.0	10.2	1.6	12.6
Total	1,405.7	175.0	7,538.2	295.5	176.6	133.6	5,869.0	137.3	15,731.0

Table 3: Foreign trade exports of stainless steel in 2005 (above) and 2010 (below). (1,000 metric tonnes.) Includes feedstock material for further processing.

Origin	Destination								
	NAFTA	Latin America	Western Europe	Eastern Europe	Middle East	Africa	Asia	Others	Total
NAFTA	335.8	51.8	148.3	1.3	2.3	1.4	103.2	0.7	644.9
Latin America	19.9	47.2	17.7	0.9	1.4	2.0	17.6	0.1	106.8
Western Europe	620.2	87.5	5,189.1	567.2	67.7	64.9	567.5	29.9	7,193.9
Eastern Europe	8.3	0.6	184.9	99.9	0.6	1.3	7.0	0.0	302.6
Middle East*	3.4	-	13.4	0.5	52.1	0.9	8.3	0.6	79.2
Africa	45.1	26.8	118.2	3.8	20.3	9.3	91.3	0.7	315.6
Asia	342.5	119.5	774.5	157.0	191.4	68.6	3,971.8	87.5	5,712.7
Others	0.2	0.6	8.5	0.9	0.2	0.1	4.9	1.0	16.4
Total	1,375.6	334.0	6,454.6	831.5	336.0	148.4	4,771.6	120.5	14,372.1

Note: *Imports from that region

Origin	Destination								Total
	NAFTA	Latin America	Western Europe	Eastern Europe	Middle East	Africa	Asia	Others	
NAFTA	155.5	1.5	183.5	0.0	0.2	5.0	564.8	0.1	910.7
Latin America	-	-	4.5	-	-	-	3.9	-	8.4
Western Europe	0.7	2.9	1,536.3	41.2	3.6	1.2	325.5	0.3	1,911.7
Eastern Europe	0.3	0.0	424.6	6.9	0.1	-	55.3	0.0	487.2
Middle East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Africa	-	-	6.6	-	0.9	0.0	15.1	0.0	22.7
Asia	0.6	0.0	5.7	-	0.1	0.0	561.7	-	568.1
Others	0.2	-	3.3	-	-	-	57.9	0.1	61.4
Total	157.3	4.4	2,164.4	48.1	5.0	6.3	1,584.2	0.5	3,970.2

Table 4: Foreign trade exports for stainless steel scrap in 2005 (above) and 2010 (below). (1,000 metric tonnes.)

Origin	Destination								Total
	NAFTA	Latin America	Western Europe	Eastern Europe	Middle East	Africa	Asia	Others	
NAFTA	185.1	1.1	127.8	0.0	0.6	0.7	852.9	1.1	1,169.3
Latin America	0.6	0.0	27.3	-	-	-	9.5	-	37.4
Western Europe	1.0	0.4	2,064.5	70.5	3.9	0.6	499.8	0.4	2,641.1
Eastern Europe	-	-	292.4	61.7	0.0	0.5	16.9	0.0	371.5
Middle East*	0.4	-	45.5	0.0	0.5	2.3	21.6	1.5	71.7
Africa	-	-	48.6	-	0.2	0.6	20.1	-	69.5
Asia	5.1	0.1	59.5	-	1.4	0.4	651.6	-	718.1
Others	0.0	-	35.2	0.1	0.1	-	83.6	0.1	119.0
Total	192.1	1.6	2,700.7	132.3	6.7	5.0	2,156.1	3.1	5,197.6

Note: *Imports from that region



Section 2: Actual Performance

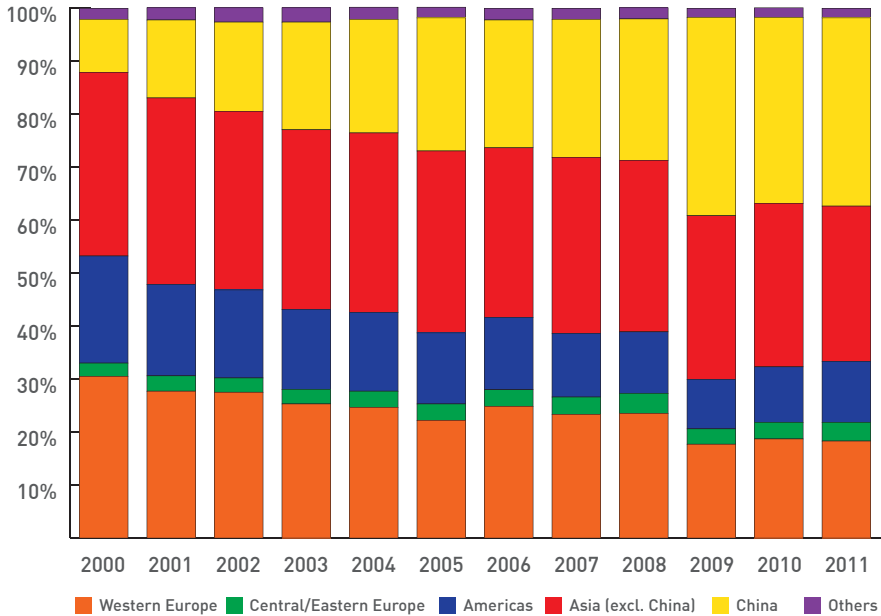


Figure 6: Apparent demand for stainless steel by region: 2000 - 2011p

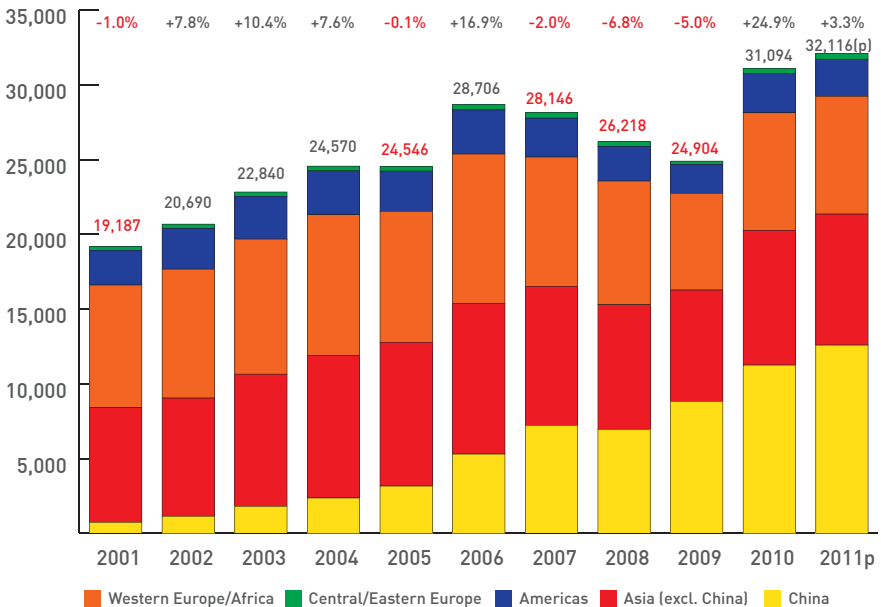


Figure 7: Stainless crude steel production by region: 2001 - 2011p (in '000 metric tonnes)

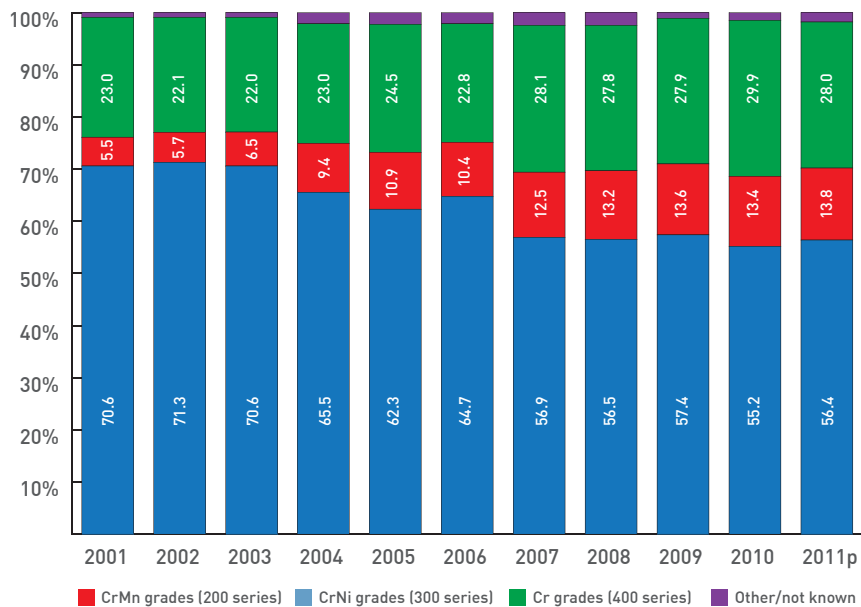


Figure 8: Stainless crude steel production by grade category: 2001 - 2011p

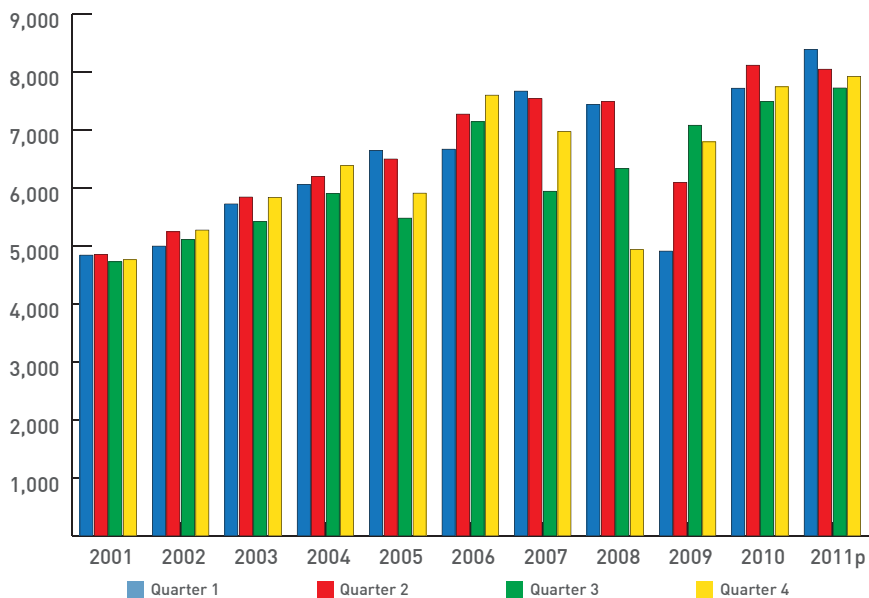


Figure 9: Global stainless crude steel production by quarter (in '000 metric tonnes)

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Section 3: Potential

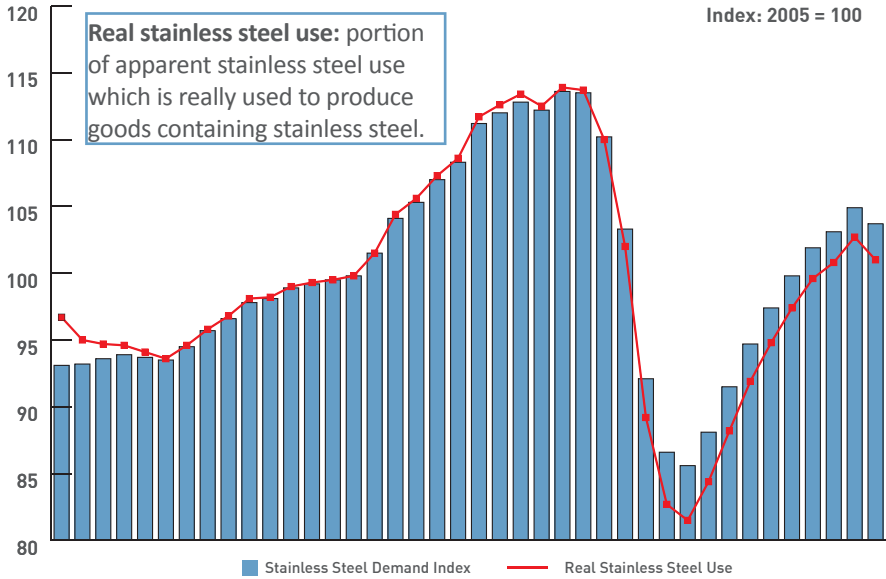


Figure 10: Stainless steel demand versus real stainless steel use - Europe (Q1 2002 to Q4 2011p)

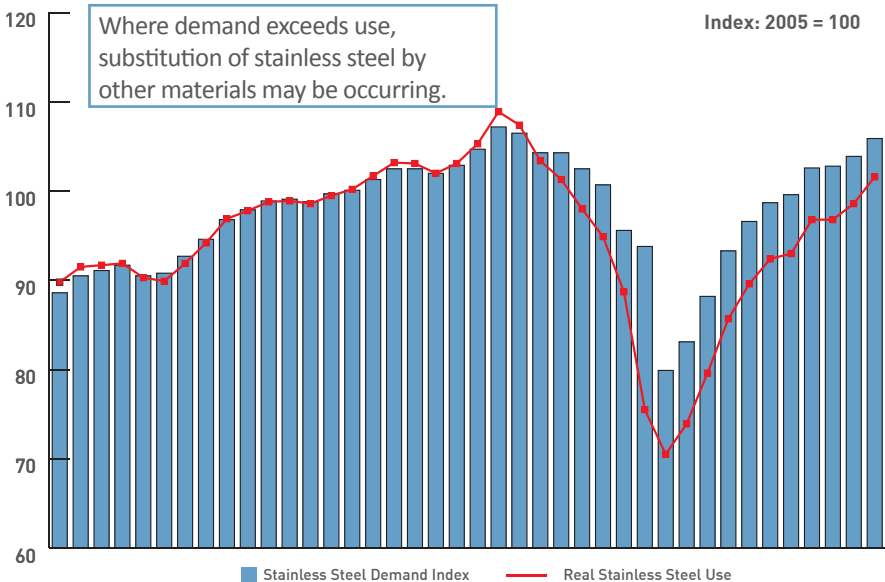


Figure 11: Stainless steel demand versus real stainless steel use - The Americas (Q1 2002 to Q4 2011p)

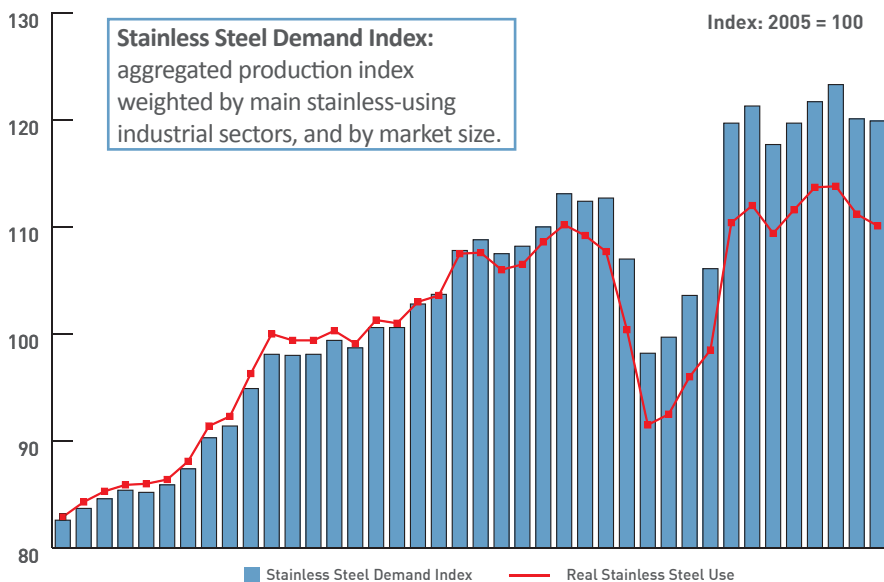


Figure 12: Stainless steel demand versus real stainless steel use - Asia, excluding China (Q1 2002 to Q4 2011p)

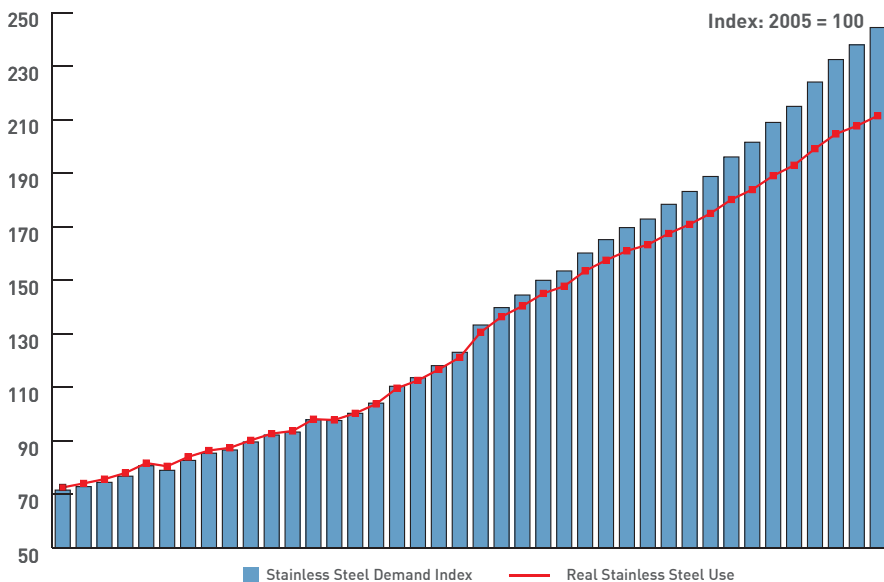


Figure 13: Stainless steel demand versus real stainless steel use - China (Q1 2002 to Q4 2011p)

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Section 3: Potential

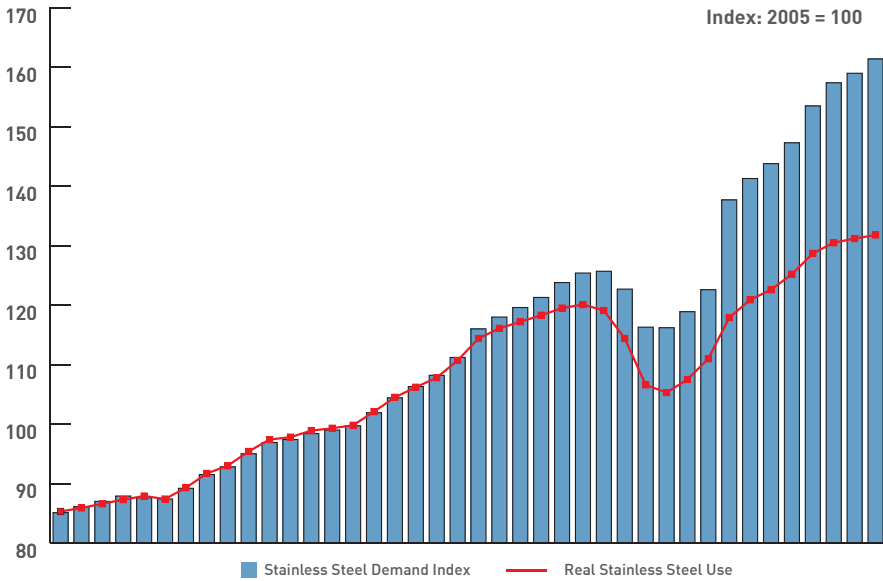


Figure 14: Stainless steel demand versus real stainless steel use - World (Q1 2002 to Q4 2011p)

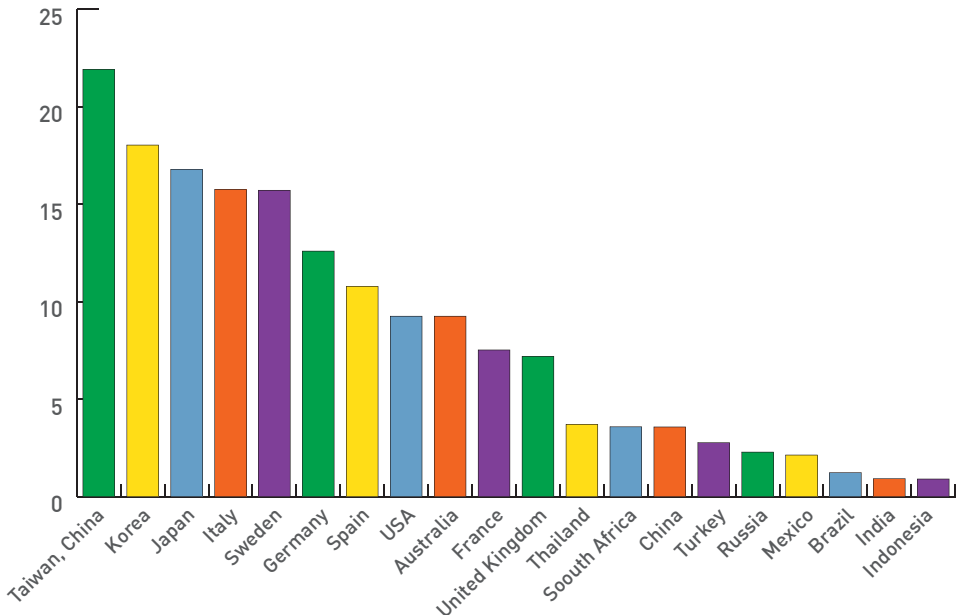


Figure 15: Per-capita direct and indirect use of stainless steel for selected countries - 2005 (kilograms/capita). Source: IME, Yale.

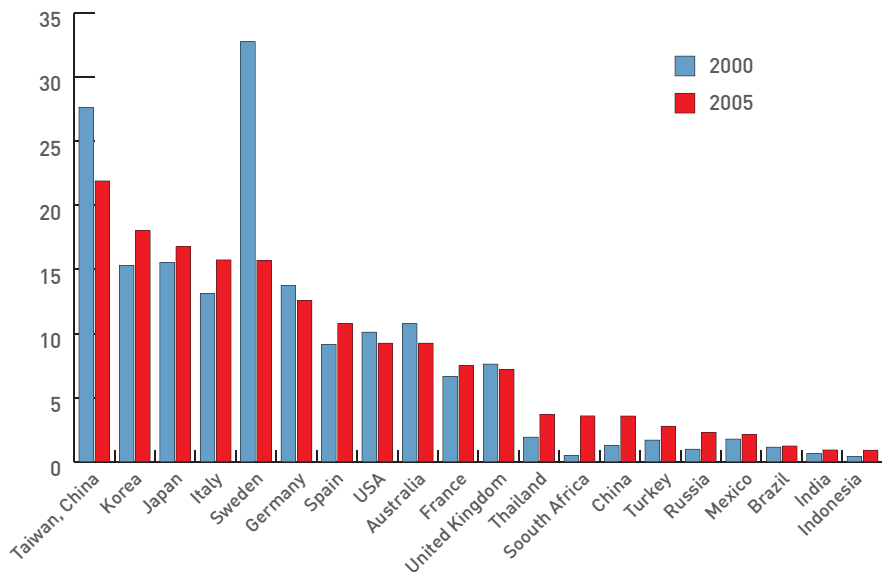


Figure 16: Comparison of per-capita direct and indirect use of stainless steel - selected countries - 2000 v 2005 (kilograms/capita). Source: IMF, Yale.

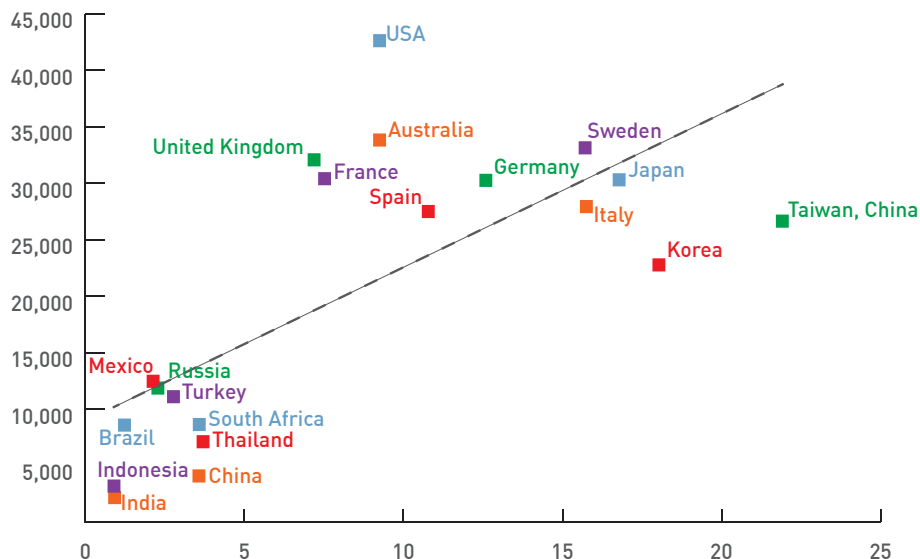


Figure 17: GDP PPP per capita versus stainless steel use per capita in 2005. Source: IMF, Yale.

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Section 3: Potential

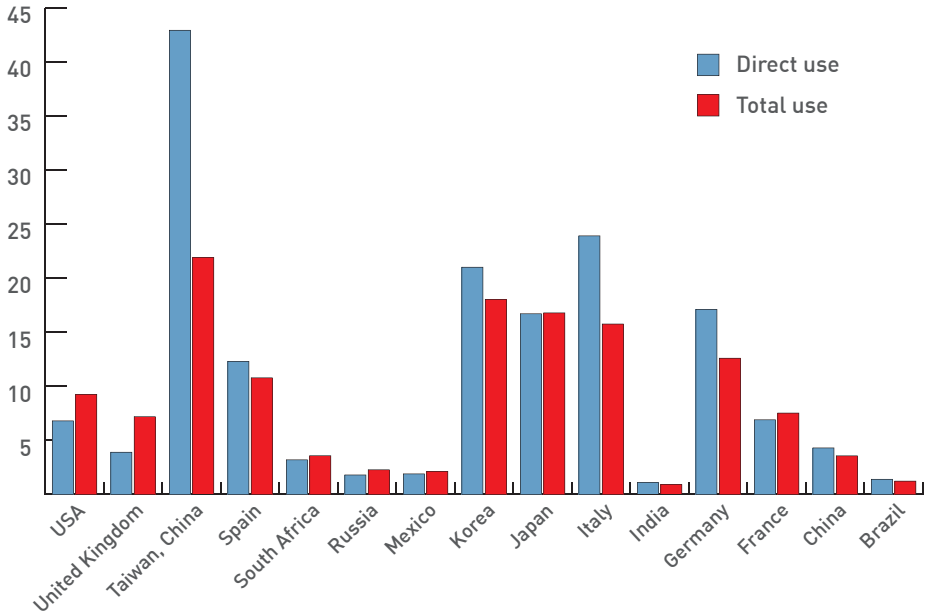


Figure 18: Comparison of direct stainless steel use (mill products) versus total stainless steel use (plus trade balance of stainless containing goods) in 2005. Source: IMF, Yale, Vale Inco.

Data Sources

Unless otherwise indicated, all data in this booklet has been provided by the International Stainless Steel Forum (ISSF).

Data has also been provided by:

- 1 International Monetary Fund (IMF)
- 2 Yale University: School of Forestry and Environmental Studies (Reck et al.)
- 3 Vale Inco

Further Information

For more information about the activities of ISSF, or the statistics in this booklet, please contact:

Secretary General, ISSF

Rue Colonel Bourg 120
B-1140 Brussels, Belgium

T: +32 (0)2 702 89 16

F: +32 (0)2 702 89 12

E: info@issf.org

Website

More information about the work of ISSF can be found at worldstainless.org.

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