

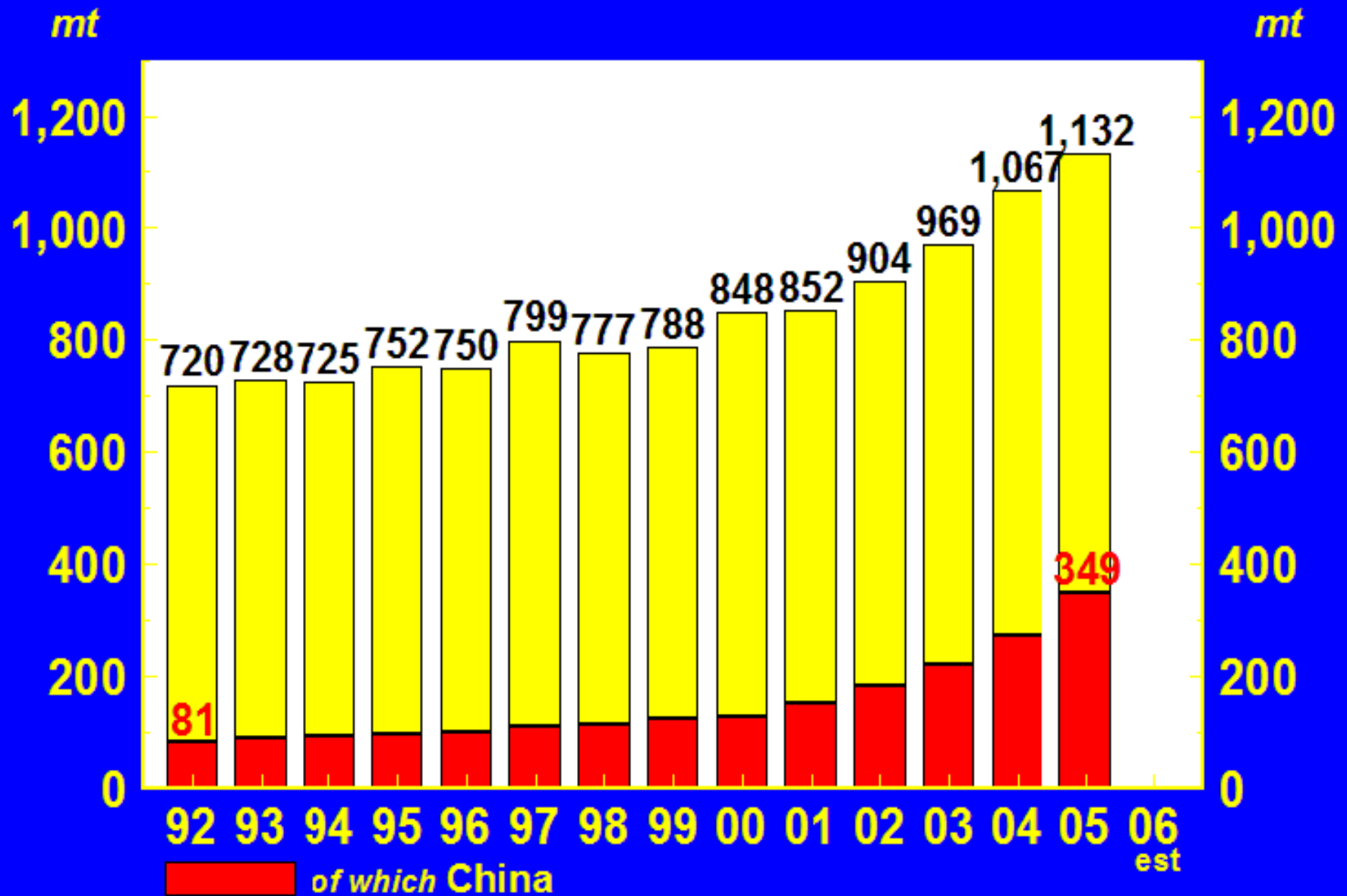


**Iron and Steel  
Statistics Bureau**

**INTERNATIONAL PIG IRON ASSOCIATION**

**21 September 2006 - Budapest**

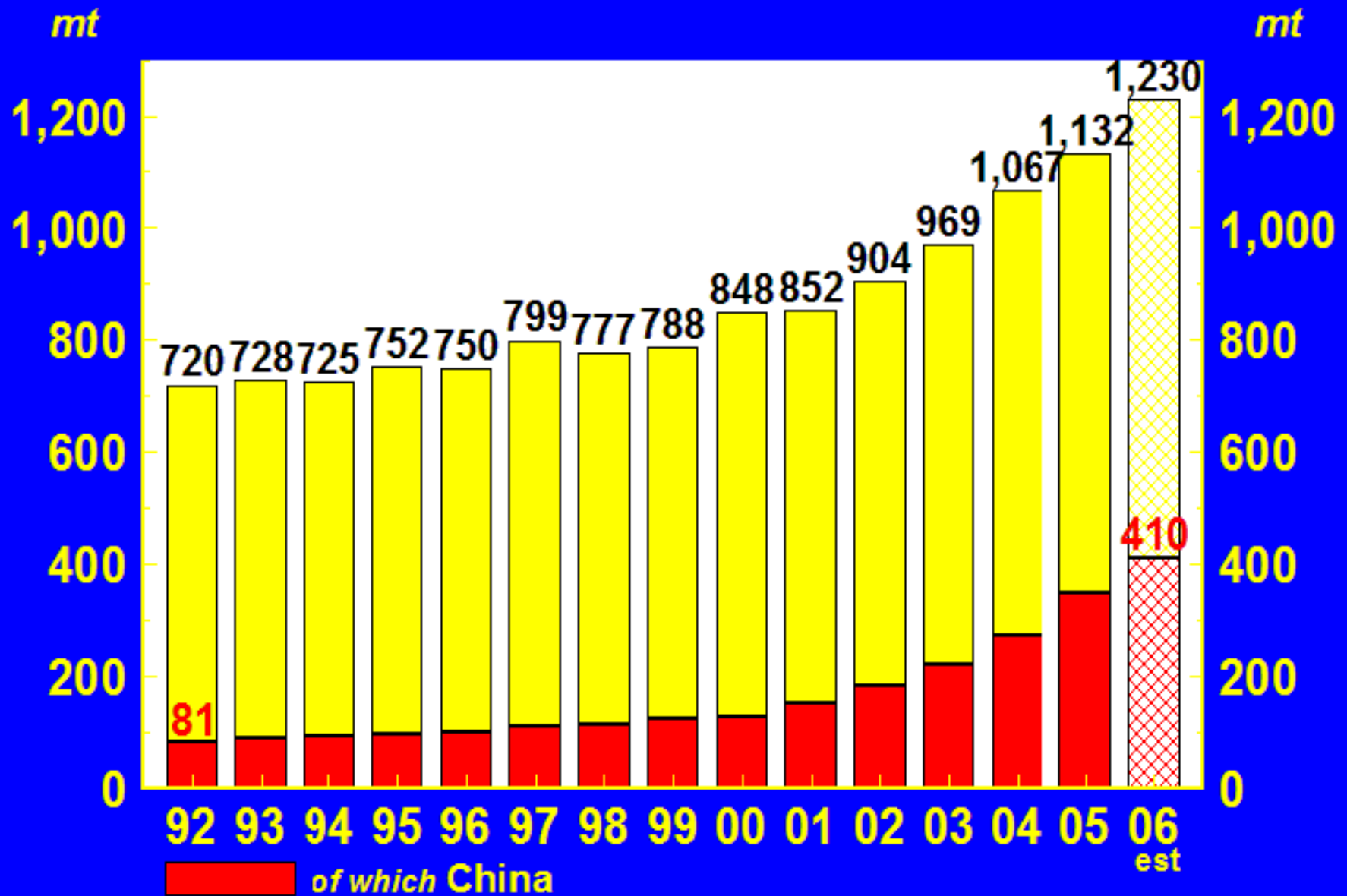
# WORLD CRUDE STEEL PRODUCTION 1992 - 2006



Source: International Iron and Steel Institute

Iron and Steel Statistics Bureau

# WORLD CRUDE STEEL PRODUCTION 1992 - 2006



Source: International Iron and Steel Institute

Iron and Steel Statistics Bureau

# GLOBAL CRUDE STEEL :

## Jan - July 2006 % Change on Jan - July 2005



N AMERICA	+6.9
USA	+9.5
CANADA	+2.5
MEXICO	-3.8

S AMERICA	-2.7
BRAZIL	-6.6

EU25	+5.0
EU15	+3.8
POLAND	+17.0
CZECH REP	+14.8
SLOVAKIA	+13.2
HUNGARY	+10.5
NETHS	+8.6
BELGIUM	+7.7
SLOVENIA	+7.2
FRANCE	+5.8
ITALY	+5.8
UK	+5.6
FINLAND	+2.3
GERMANY	+1.3
SPAIN	+0.2
AUSTRIA	-3.0
SWEDEN	-8.2

CIS (6)	+6.4
TURKEY	+11.9
ROMANIA	-2.3

ASIA	+13.1
JAPAN	+1.0
S KOREA	+0.8
CHINA	+18.9
INDIA	+15.7

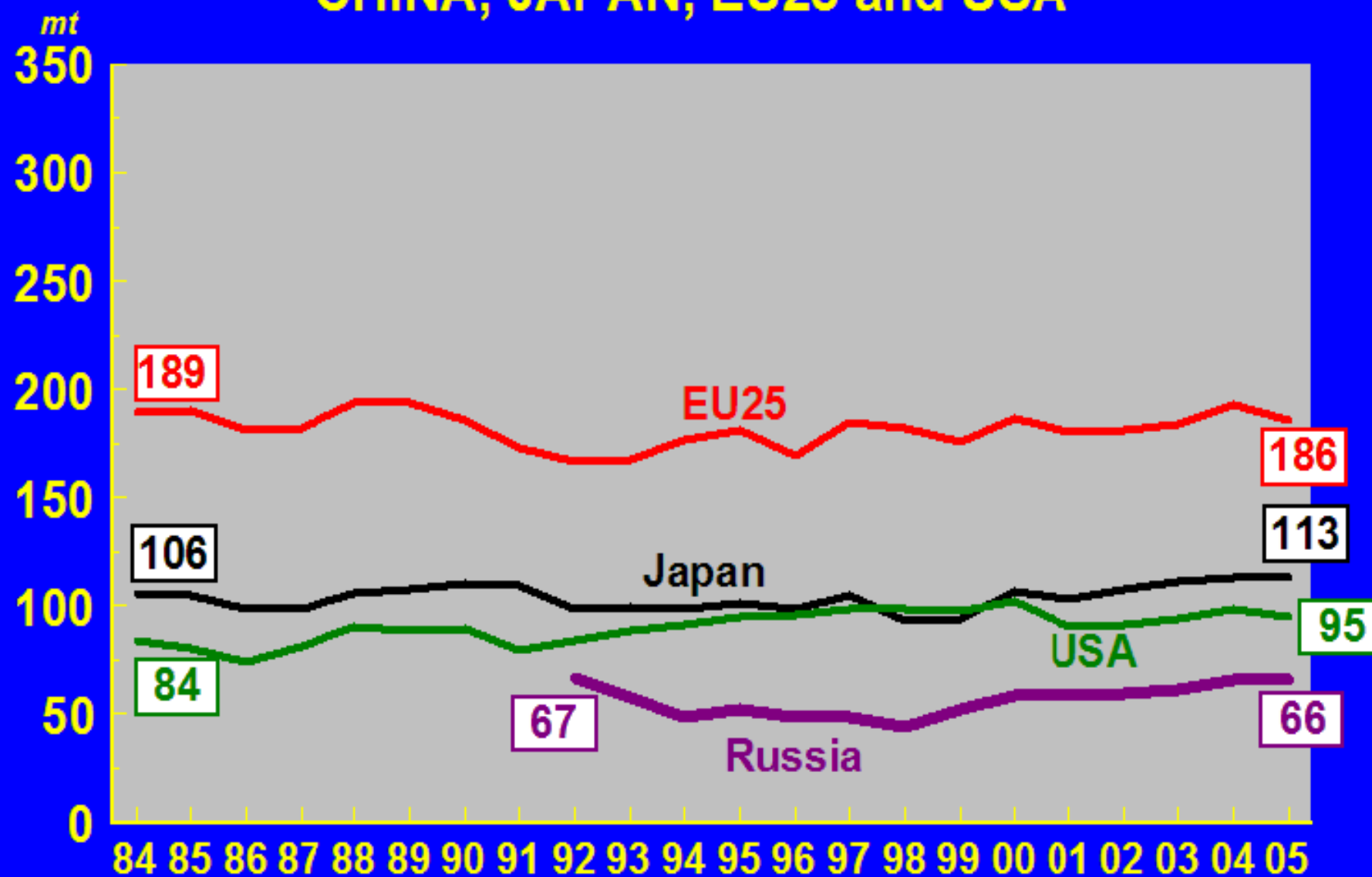
**Global Production**

**+9.0%**

(+4.6% without China)

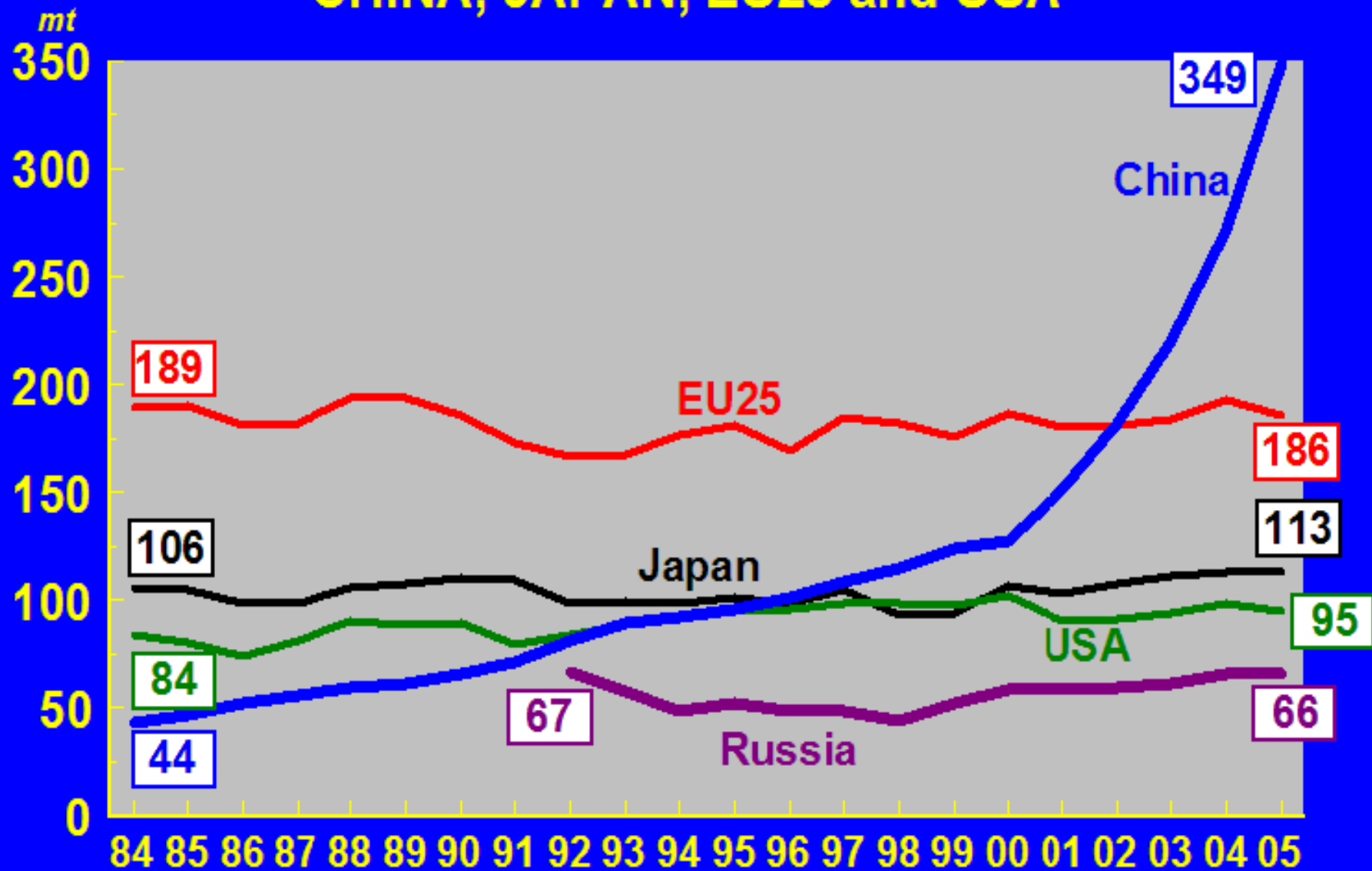
# CRUDE STEEL PRODUCTION : 1984 - 2005

## CHINA, JAPAN, EU25 and USA

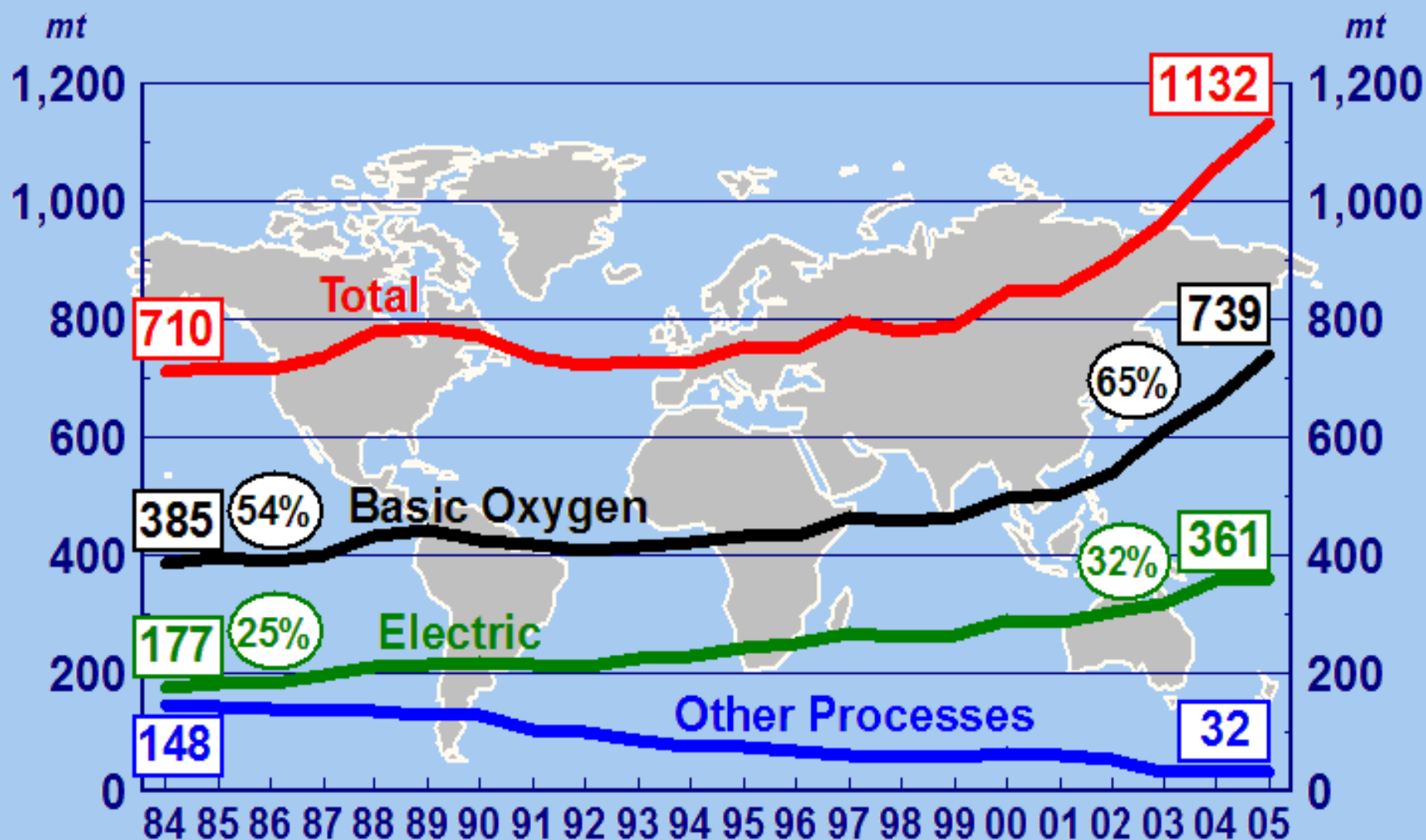


# CRUDE STEEL PRODUCTION : 1984 - 2005

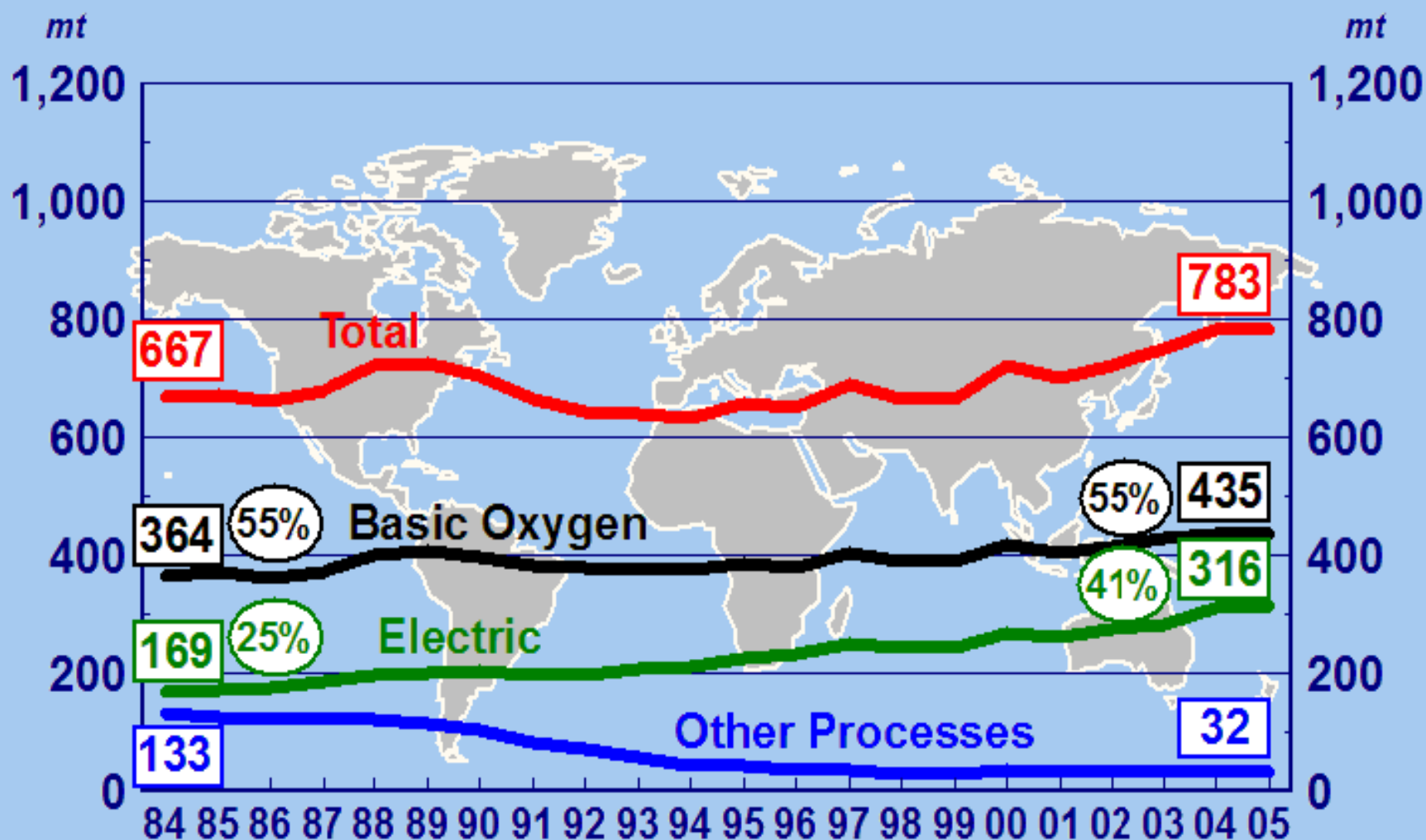
## CHINA, JAPAN, EU25 and USA



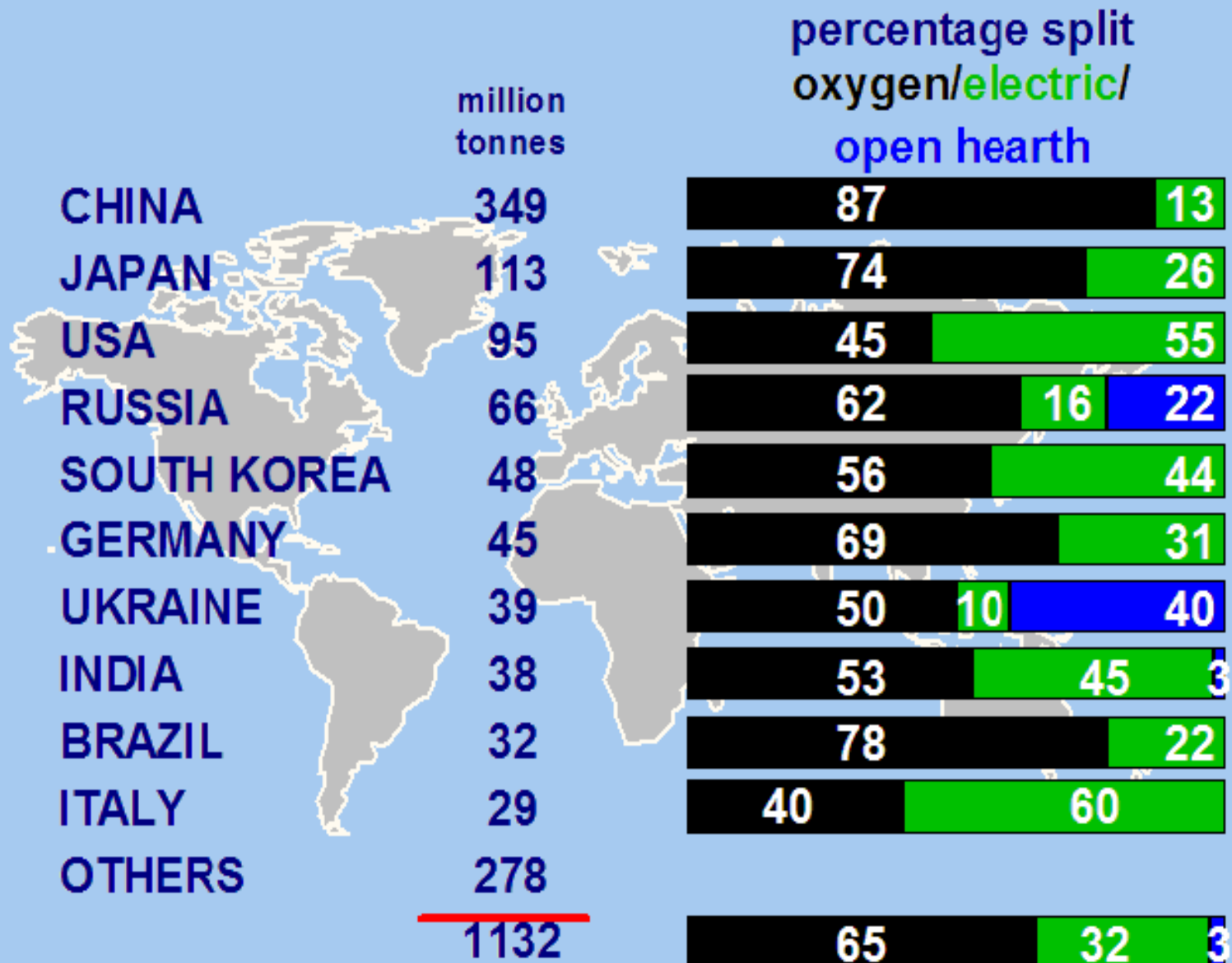
# GLOBAL CRUDE STEEL PRODUCTION by PROCESS 1984 - 2005



# GLOBAL CRUDE STEEL PRODUCTION by PROCESS excluding CHINA : 1984 - 2005



# WORLD TOP 10 STEEL PRODUCERS : 2005



# WORLD TOP 10 STEEL PRODUCERS by PROCESS : 2005

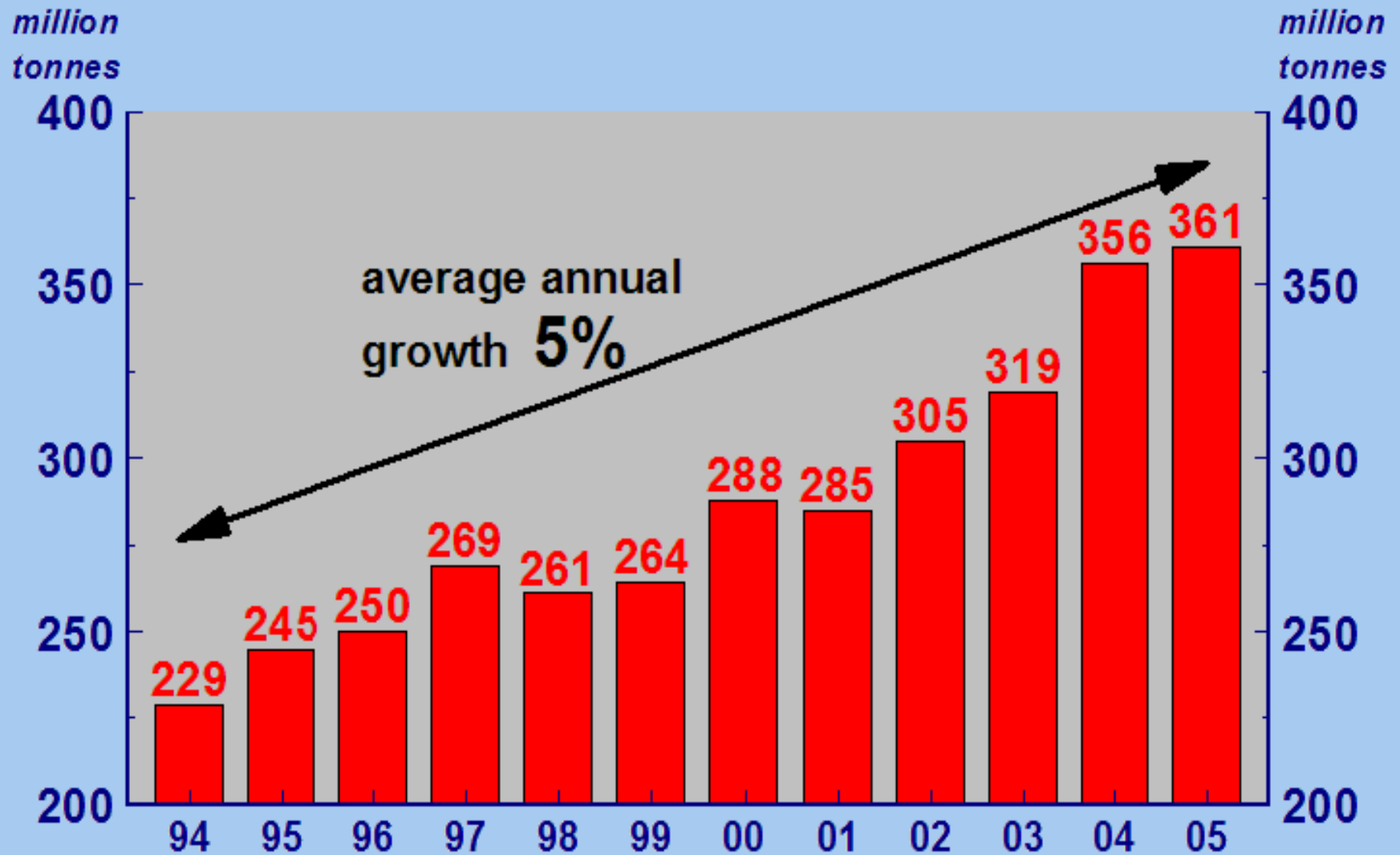
## TOP BOS PRODUCERS

<i>oxygen steel</i>	<i>mt</i>
CHINA	304
JAPAN	84
USA	41
RUSSIA	41
GERMANY	31
S KOREA	27
BRAZIL	25
INDIA	20
UKRAINE	19
FRANCE	12

## TOP EAF PRODUCERS

<i>electric steel</i>	<i>mt</i>
USA	52
CHINA	45
JAPAN	29
S KOREA	21
ITALY	17
INDIA	17
TURKEY	15
GERMANY	14
SPAIN	13
MEXICO	12

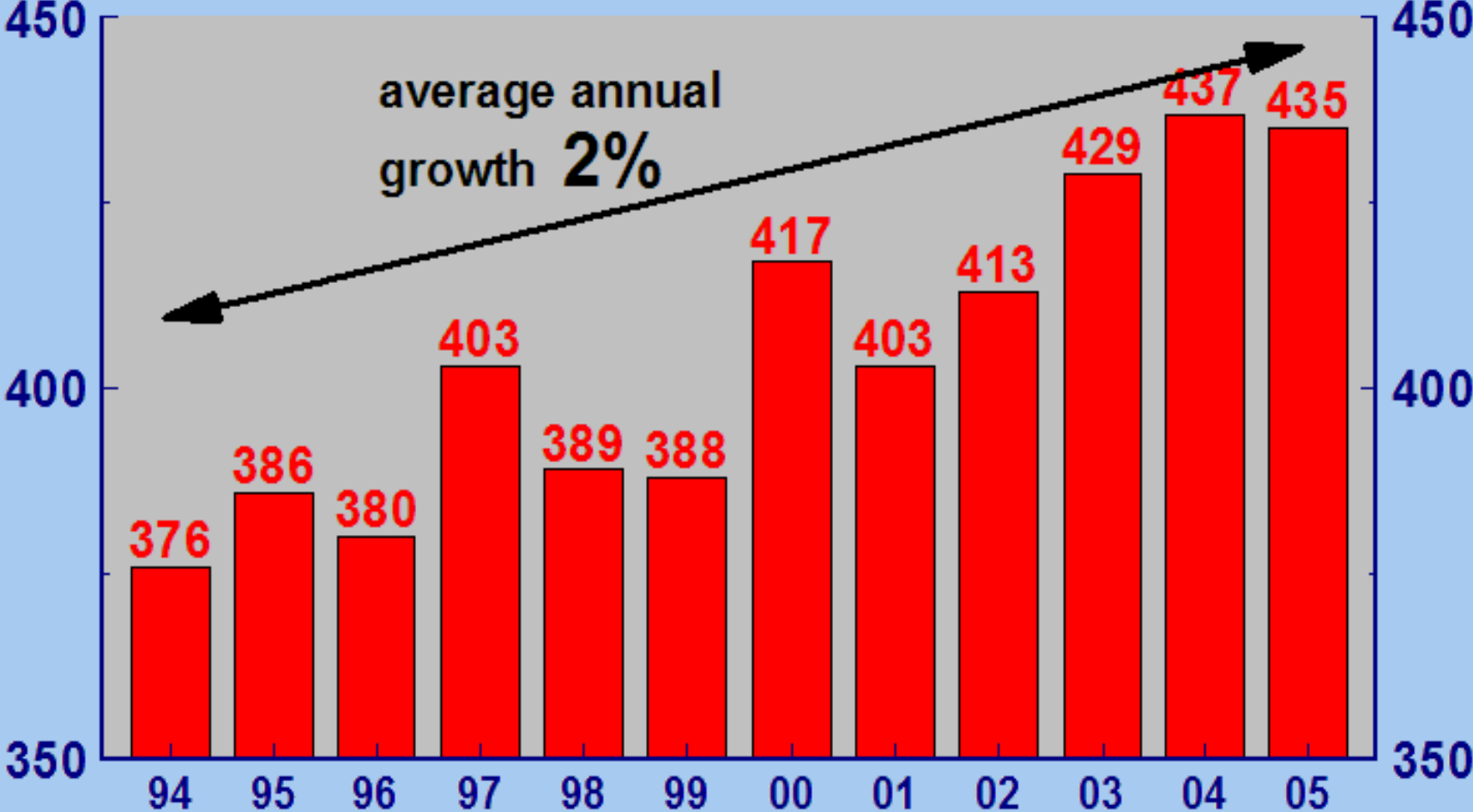
# WORLD EAF PRODUCTION



# WORLD BOF PRODUCTION excluding CHINA

million  
tonnes

million  
tonnes

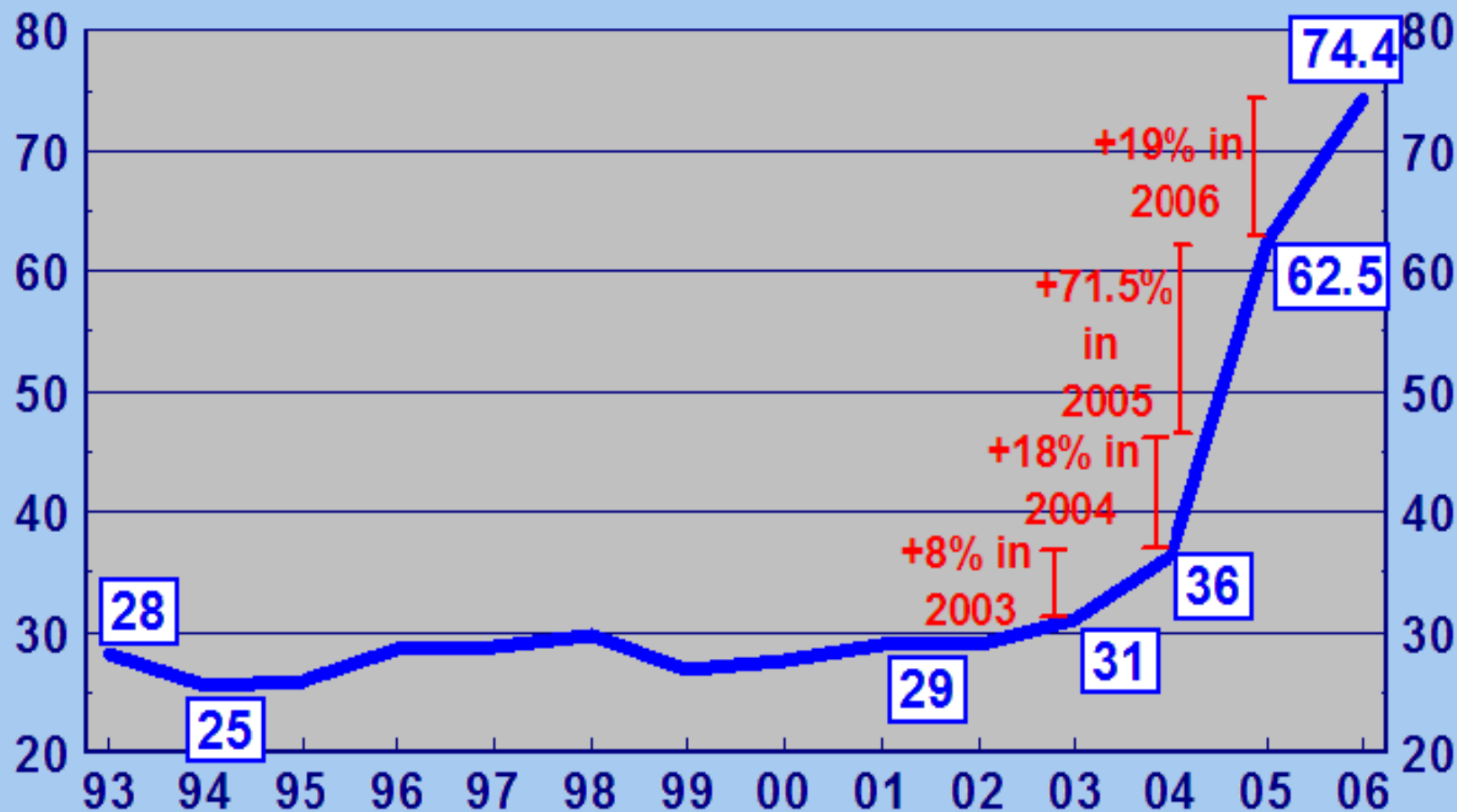


# INDICATIVE IRON ORE PRICES

## 1993 - 2006

US cents/  
dry metric  
tonne unit

US cents/  
dry metric  
tonne unit



based on CVRD standard sinter feed FOB Tubarao

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# SCRAP PRICES

## HMS 1/2 80:20 - EAST ASIA IMPORT

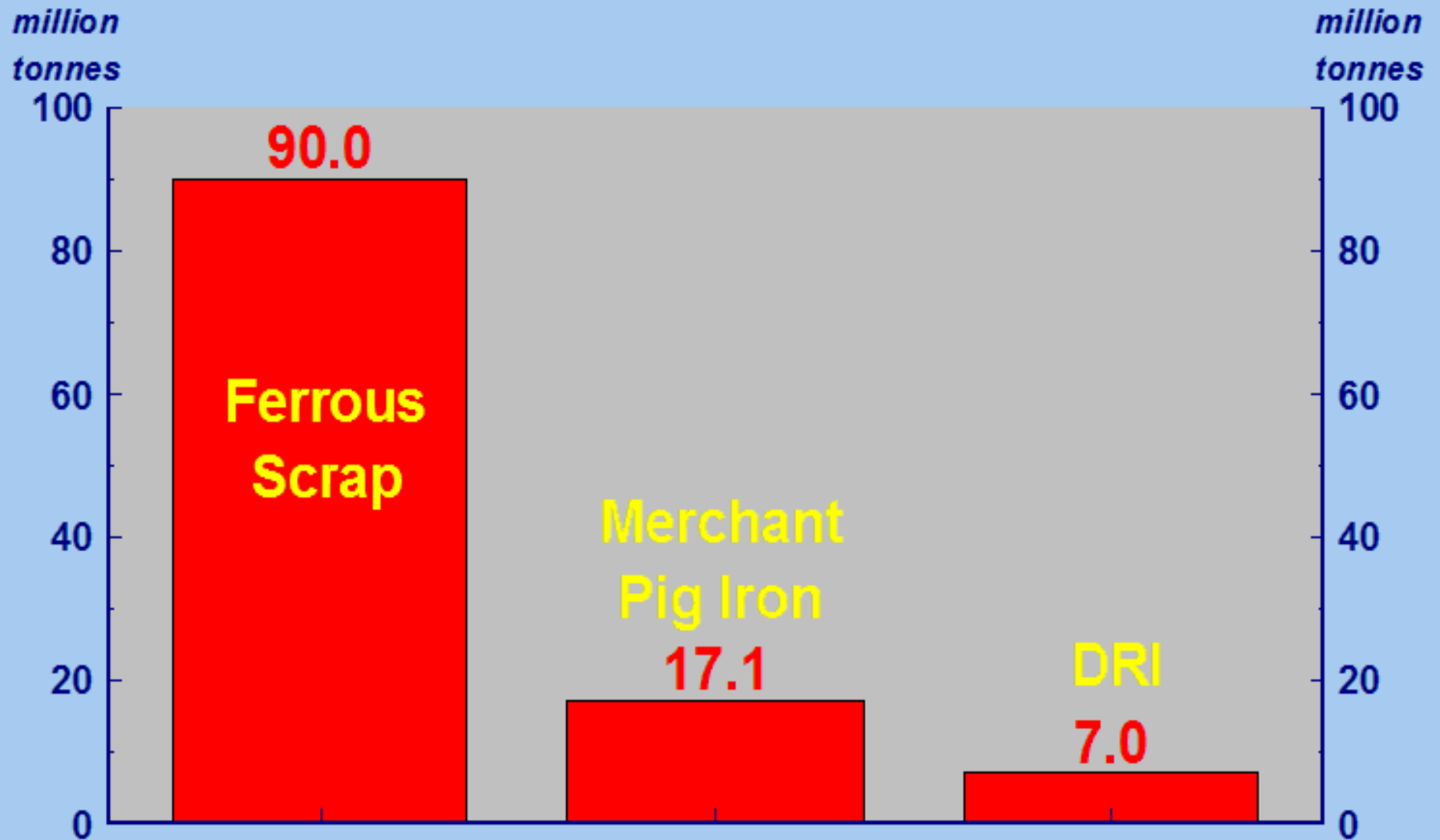
\$ per tonne



Source : Steel Business Briefing

Iron and Steel Statistics Bureau

# WORLD TRADE in SCRAP and SCRAP SUBSTITUTES : 2005

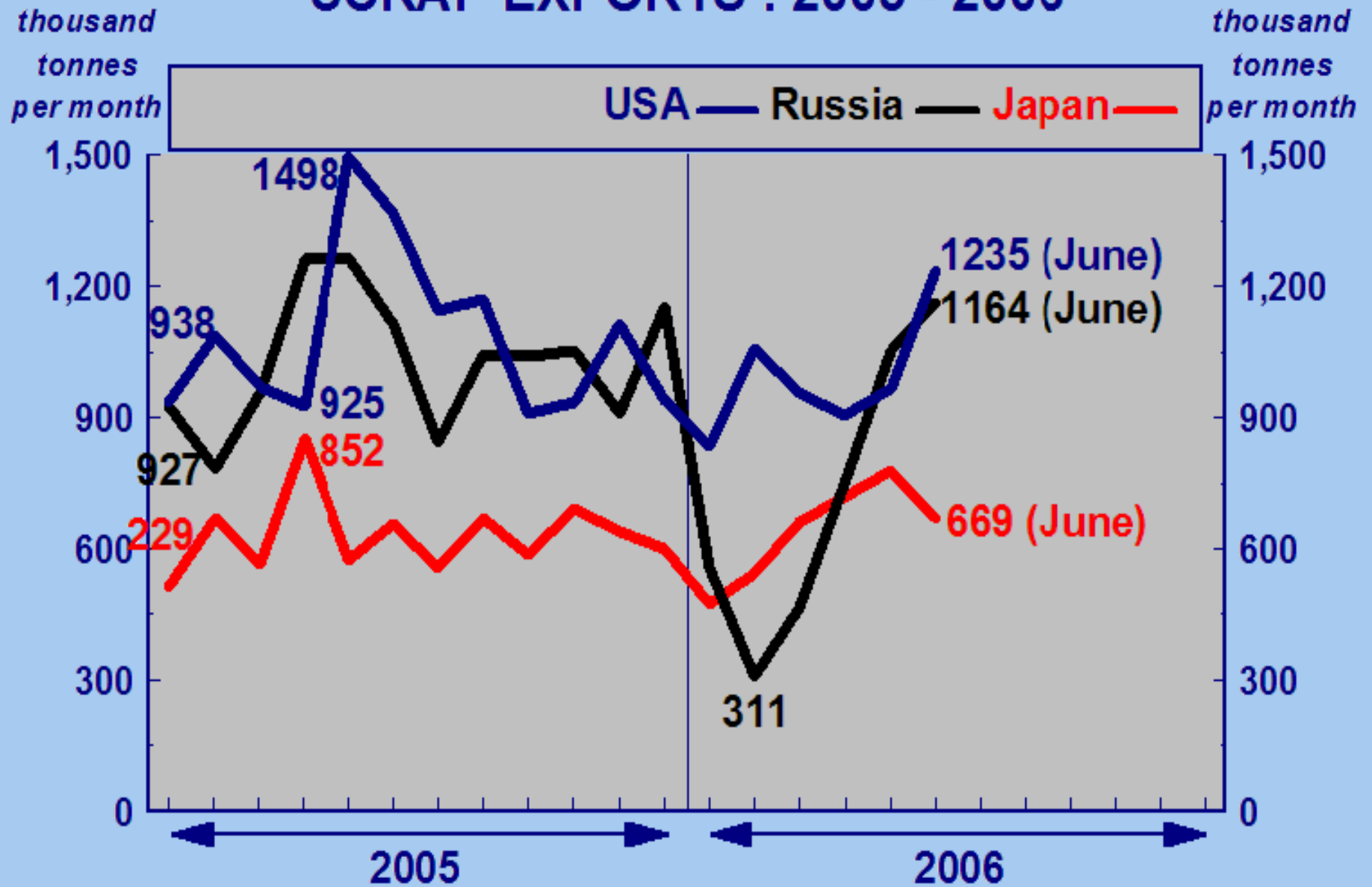


## FERROUS SCRAP TOP EXPORTING / IMPORTING COUNTRIES

*million tonnes*

EXPORT			IMPORT		
Country	2004	2005	Country	2004	2005
USA	11.9	13.0	Turkey	12.8	13.2
Russia	12.8	12.4	China	10.2	10.1
Japan	6.8	7.6	Spain	6.4	7.0
Germany	7.0	6.7	S Korea	7.5	6.8
UK	6.8	6.1	Italy	5.6	5.4
France	5.6	5.0	Germany	5.4	5.0

# SCRAP EXPORTS : 2005 - 2006



## TOP DRI PRODUCERS

	2004	2005	% change
INDIA	9.37	11.10	+18%
VENEZUELA	7.83	8.95	+14%
IRAN	6.41	6.85	+7%
MEXICO	6.54	5.98	-9%
SAUDI ARABIA	3.41	3.63	+6%
RUSSIA	3.14	3.34	+6%
EGYPT	3.02	2.90	-4%
WORLD TOTAL	54.60	55.85	+2.3%

Source : Midrex

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# DRI/HBI

## TOP EXPORTING/IMPORTING COUNTRIES

### 2005

#### EXPORTS *million tonnes*

Venezuela	4.0
Russia	1.3
Trinidad	1.0
Canada	0.5
Malaysia	0.1
Other	0.1

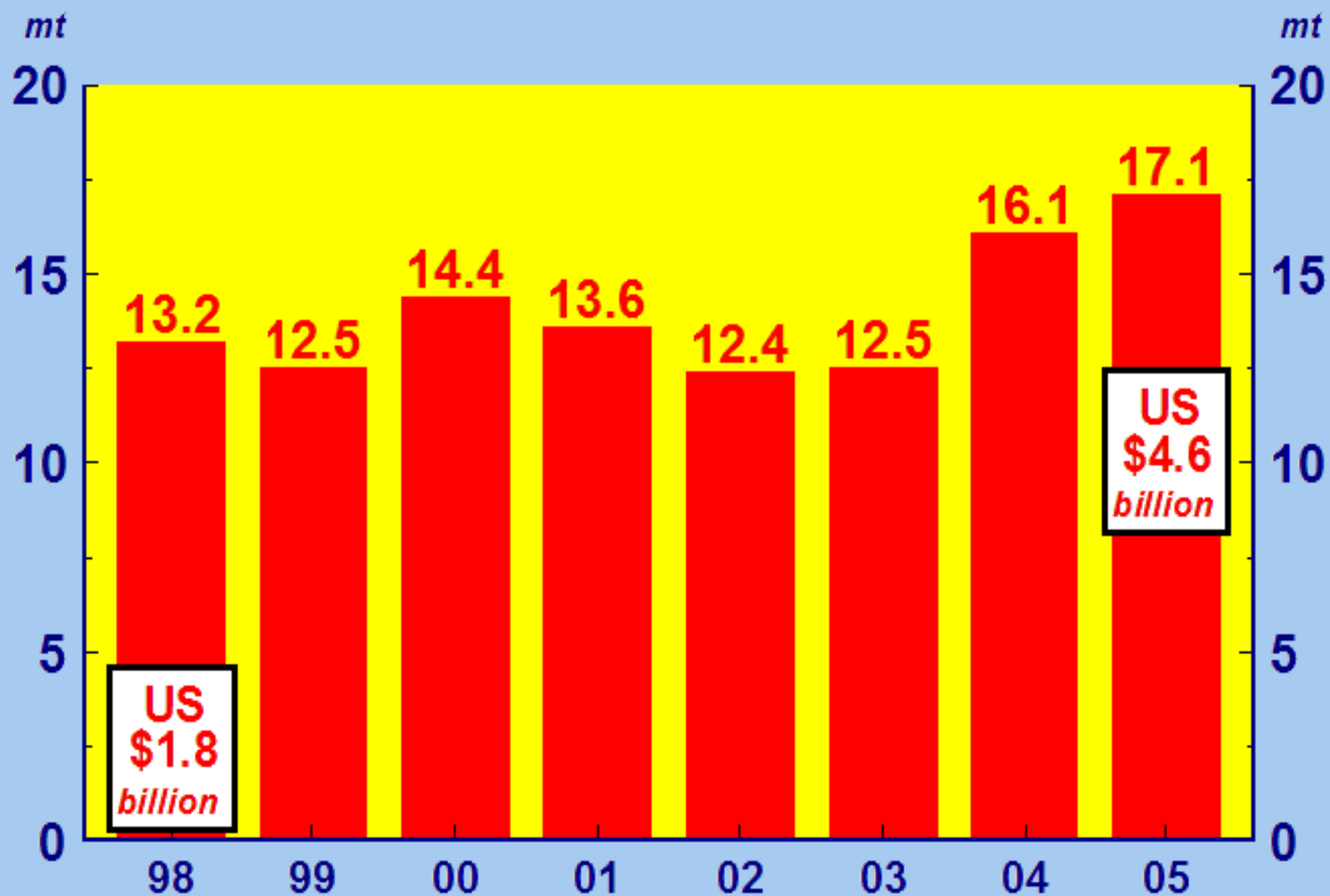
<b>TOTAL</b>	<b>7.0</b>
--------------	------------

#### IMPORTS *million tonnes*

<b>TOTAL</b>	<b>7.0</b>
--------------	------------

USA	2.5
China	0.7
S Korea	0.7
S Africa	0.5
Ukraine	0.5
Spain	0.4
Italy	0.4
Other	1.3

## WORLD TRADE in MERCHANT PIG IRON



includes haematite, phosphoric and alloy pig iron

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# MERCHANT PIG IRON

## TOP EXPORTING/IMPORTING COUNTRIES

### 2005

#### EXPORTS *million tonnes*

Brazil	7.1
Russia	4.9
China	2.2
Ukraine	0.9
S Africa	0.7
India	0.3
Other	1.0

<b>TOTAL</b>	<b>17.1</b>
--------------	-------------

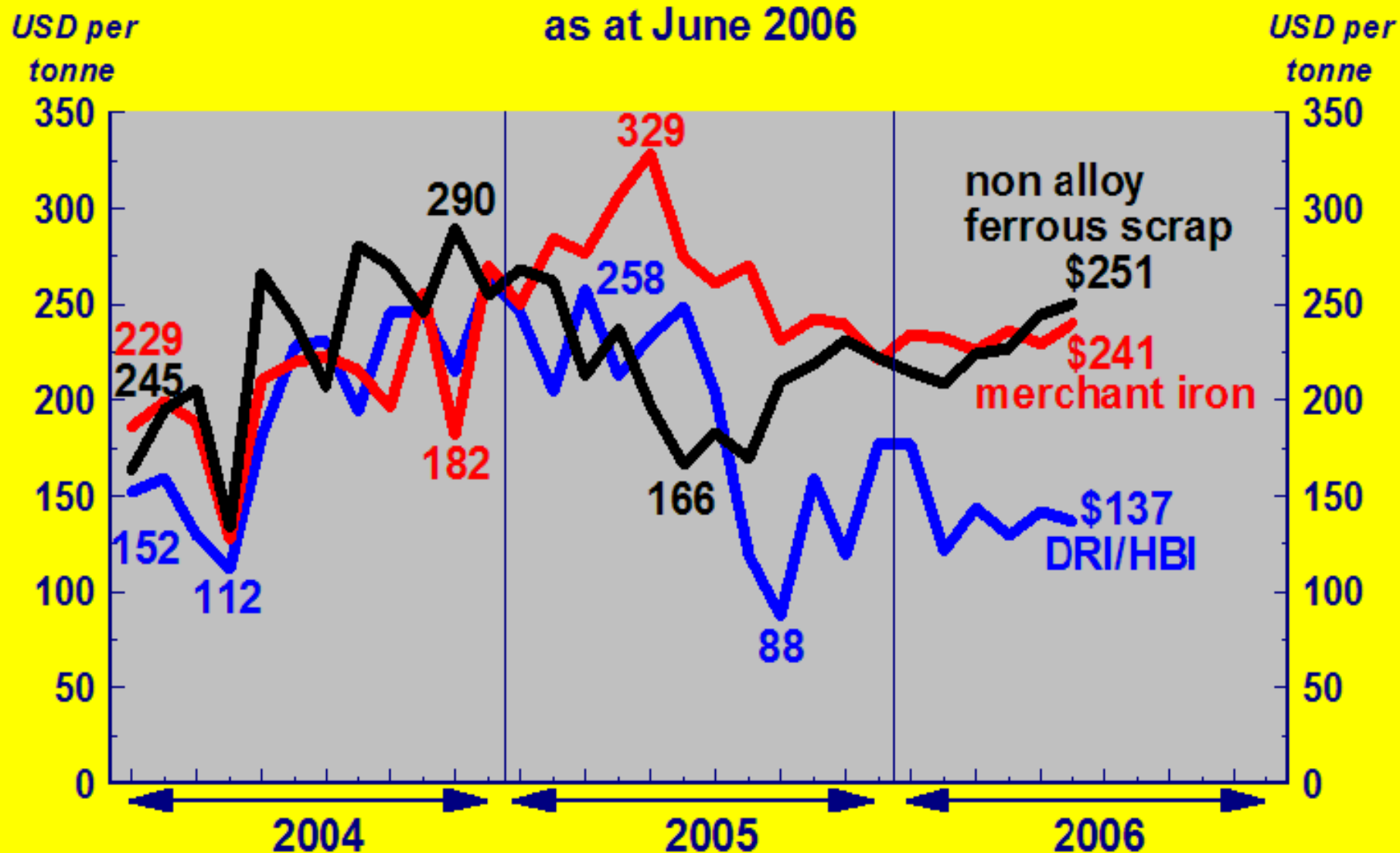
#### IMPORTS *million tonnes*

<b>TOTAL</b>	<b>17.1</b>
--------------	-------------

USA	6.0
Italy	1.7
S Korea	1.5
Japan	1.0
Thailand	1.0
Taiwan	0.9
Spain	0.8
Malaysia	0.6
Other	3.6

# USA IMPORT PRICES : 2004 - 2006

Ferrous Scrap,<sup>(a)</sup> Merchant Pig Iron<sup>(b)</sup> and DRI/HBI<sup>(c)</sup>  
as at June 2006



(a) non alloy steel scrap (7204 30/41/49/50)

(b) haematite pig iron (7201 10)

(c) 7203 10/90

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# APPARENT STEEL DEMAND : 2005 - 2007

(in million metric tons of finished steel products)

*million tonnes*

	2005	2006	2007	Annual Growth (%)	
				05/06	06/07
China	315.0	356.0	399.0	+13.0	+12.1
Other Asia-Pacific	239.9	249.2	254.4	+3.9	+2.1
EU25	160.4	166.6	169.0	+3.9	+1.5
CIS & Other Europe	72.7	76.0	78.5	+4.5	+3.3
NAFTA	135.8	142.6	145.0	+5.0	+1.7
Central/South America	32.5	35.0	38.0	+7.6	+8.7
Africa	22.4	24.1	25.4	+7.5	+5.4
Middle East	34.7	37.6	40.7	+8.4	+8.3
<b>WORLD</b>	<b>1013.4</b>	<b>1087.0</b>	<b>1150.0</b>	<b>+7.3</b>	<b>+5.8</b>

Source : IISI : April 2006

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## GLOBAL CRUDE STEEL THE CAPACITY TIME BOMB

**B**

**BRAZIL** - extra 62 million by 2008 (OECD)

**R**

**RUSSIA** - extra 27 million in next 10 years (OECD)

**I**

**INDIA** - extra 72 million by 2020 to 110 million (national plan)

**C**

**CHINA** - extra 119 million by 2008 to 490 million (CISA)

**'s**

**Estimated extra global capacity by 2008 : 270mt**

# WORLD CRUDE STEEL PRODUCTION 2005

*million tonnes*

	<b>EAF</b>	<b>BOF</b>	<b>Open Hearth</b>	<b>TOTAL</b>
<b>China</b>	<b>45</b>	<b>304</b>	<b>-</b>	<b>349</b>
<b>Rest of World</b>	<b>316</b>	<b>435</b>	<b>32</b>	<b>783</b>
<b>TOTAL</b>	<b>361</b>	<b>739</b>	<b>32</b>	<b>1132</b>

# 2010

	<b>EAF</b>	<b>BOF</b>	<b>Open Hearth</b>	<b>TOTAL</b>
<b>China</b>	<b>77</b>	<b>436</b>	<b>-</b>	<b>513</b>
<b>Rest of World</b>	<b>415</b>	<b>492</b>	<b>-</b>	<b>907</b>
<b>TOTAL</b>	<b>492</b>	<b>928</b>	<b>-</b>	<b>1420</b>

## SIGNPOSTS for SCRAP CONSUMPTION

**RUSSIA** EAF production grows as Open Hearths are replaced. By 2007 EAF could reach 20.5 million tonnes (28% of total 73.5 million tonnes steelmake). Scrap for domestic use grows 25/30% leaving less for export.

**USA** EAF production grows from 53% to 60% of total steel production by 2010.

**CHINA** EAF production increases.  
Domestic scrap recovery grows and imports fall.

**INDIA** EAF production grows from 35% to 50% of total steel production by 2020 (*eg. to 55 million tonnes*) but using mostly sponge iron.

# WORLD CRUDE STEEL PRODUCTION 2005

*million tonnes*

	<b>EAF</b>	<b>BOF</b>	<b>Open Hearth</b>	<b>TOTAL</b>
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<b>TOTAL</b>	<b>492</b>	<b>928</b>	<b>-</b>	<b>1420</b>

# EAF STEEL - WORLD METALLICS BALANCE

*million tonnes*

	<b>2005</b>
<b>EAF PRODUCTION</b>	
China	45
Rest of World	316
<b>TOTAL</b>	<b>361</b>

<b>EAF METALLICS CONSUMPTION</b>	<b>397</b>
<b>DRI / HBI</b>	<b>56</b>
<b>Pig Iron (incl hot)</b>	<b>30</b>
<b>Scrap own arisings</b>	<b>36</b>
<b>    merchant scrap</b>	<b>275</b>

# EAF STEEL - WORLD METALLICS BALANCE

*million tonnes*

	2005	2010
<b>EAF PRODUCTION</b>		
China	45	77
Rest of World	316	415
<b>TOTAL</b>	<b>361</b>	<b>492</b>

<b>EAF METALLICS CONSUMPTION</b>	<b>397</b>	<b>541</b>
<b>DRI / HBI</b>	<b>56</b>	<b>85</b>
<b>Pig Iron (incl hot)</b>	<b>30</b>	<b>40</b>
<b>Scrap own arisings</b>	<b>36</b>	<b>49</b>
<b>merchant scrap</b>	<b>275</b>	<b>367</b>



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