



MANGANESE

A Worldwide Industry Overview

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A Look at the World Mn Market Today

- Issues facing the industry today
- Mn Alloy (production and consumption)
- Mn Ore (production and consumption)

2005 Issues

- Steel Production decreases?
- US, European, and Chinese consumer inventories
- Chinese governmental decision on export taxes
- Ukraine re-privatization
- New capacities (ore and alloy)
- Rising costs (ore, coke, transport)

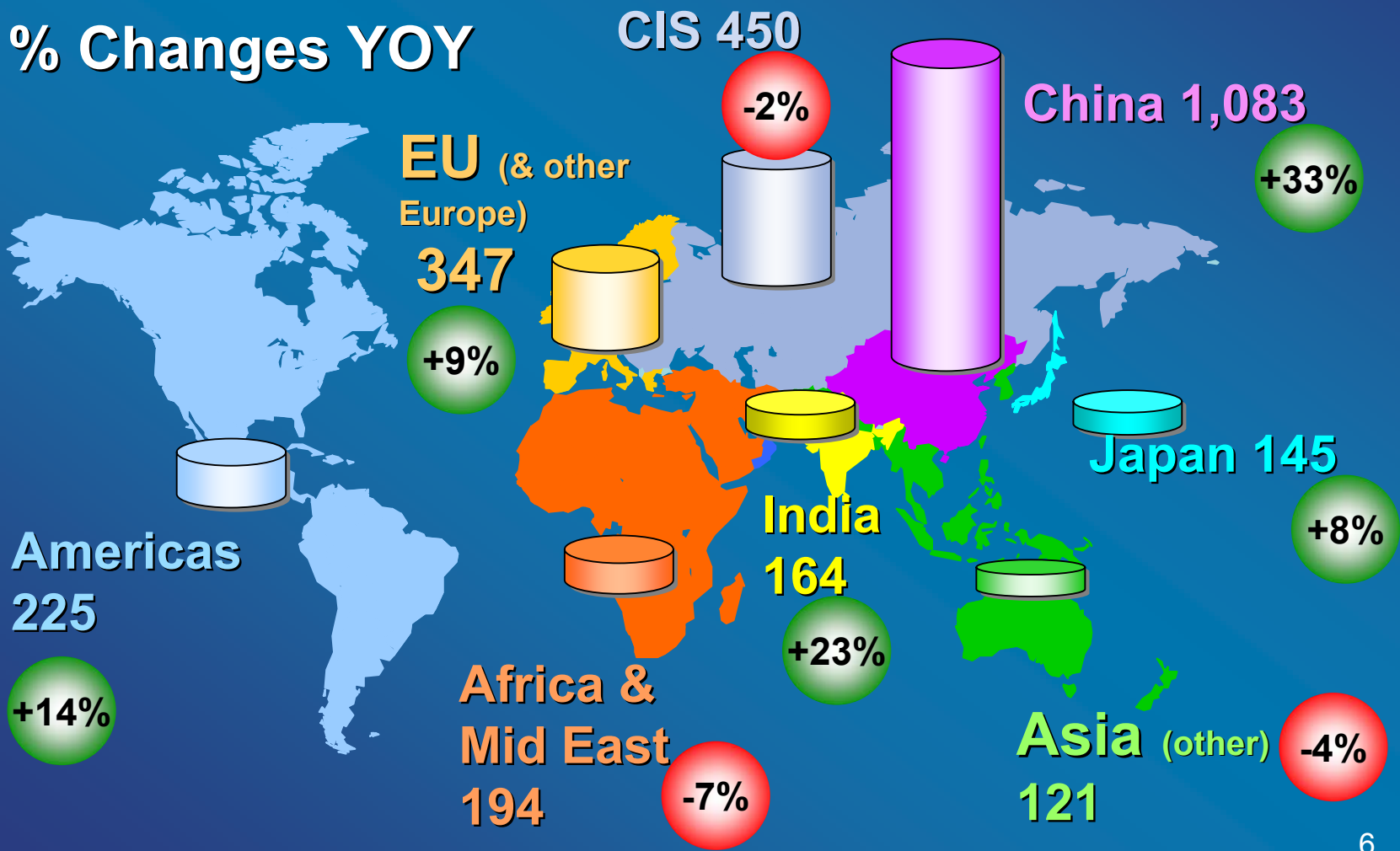


Manganese Alloys

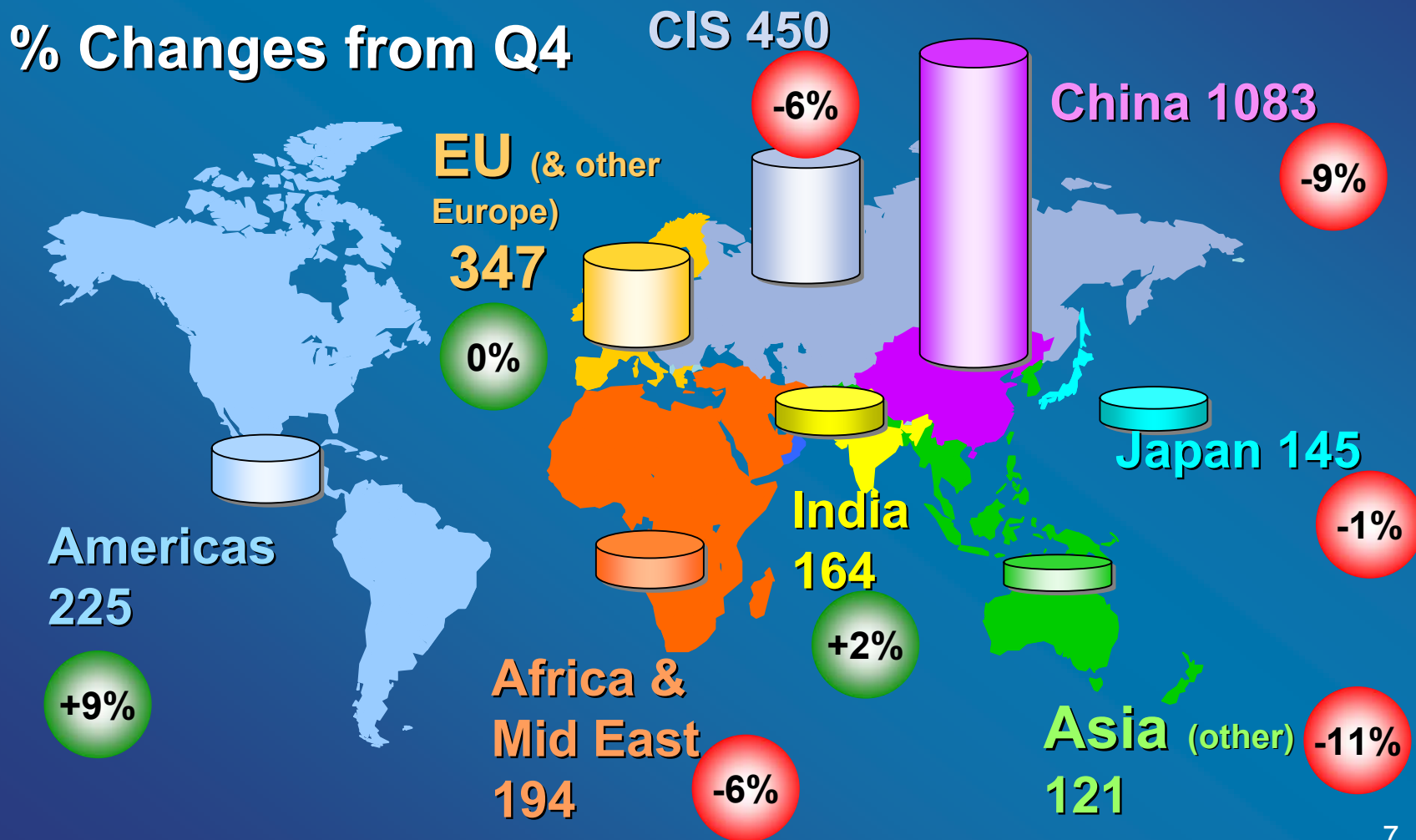
Mn Alloy Production – What happened in Q1 05?

- 2.7 million mt Mn alloys (+15% yoy, -5% from Q4)
- China production down 10% from Q4: seasonal electricity pricing, and holding out given low alloy prices. Q2 down even more.
- Americas up 14% and 9% to 0.8 Million mt
- Europe up 9% (flat from Q4) to 1.0 million mt

Changes in Mn alloy Q1 05 Production (000 mt)



Changes in Mn alloy Q1 05 Production (000 mt)



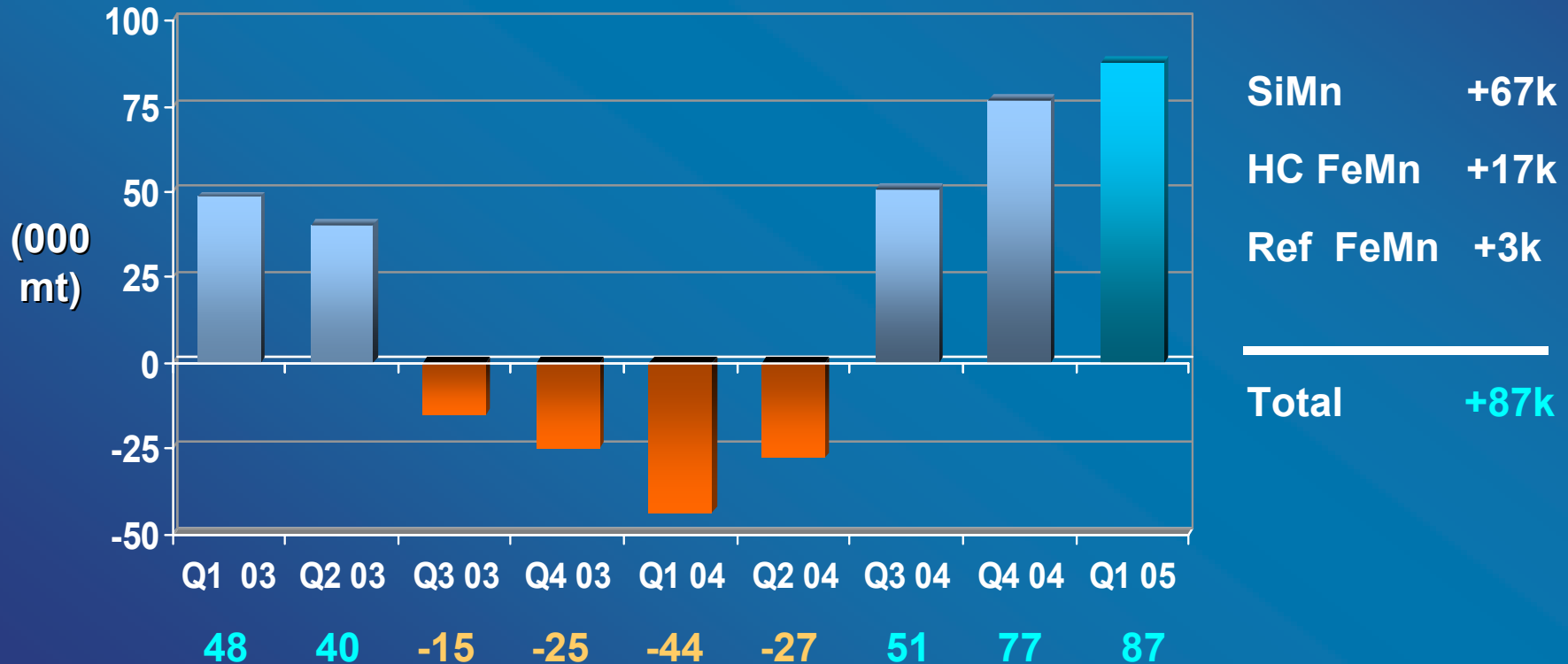
Changes in Alloy Production Q1 05

- HC FeMn up 11% year on year to 920K mt
- Refined FeMn up 17% yoy to 260K mt
- SiMn up 15% yoy to 1,550K mt



What's happening with Mn alloys?

The world Mn alloy supply & demand balance



Reasons for the surplus?

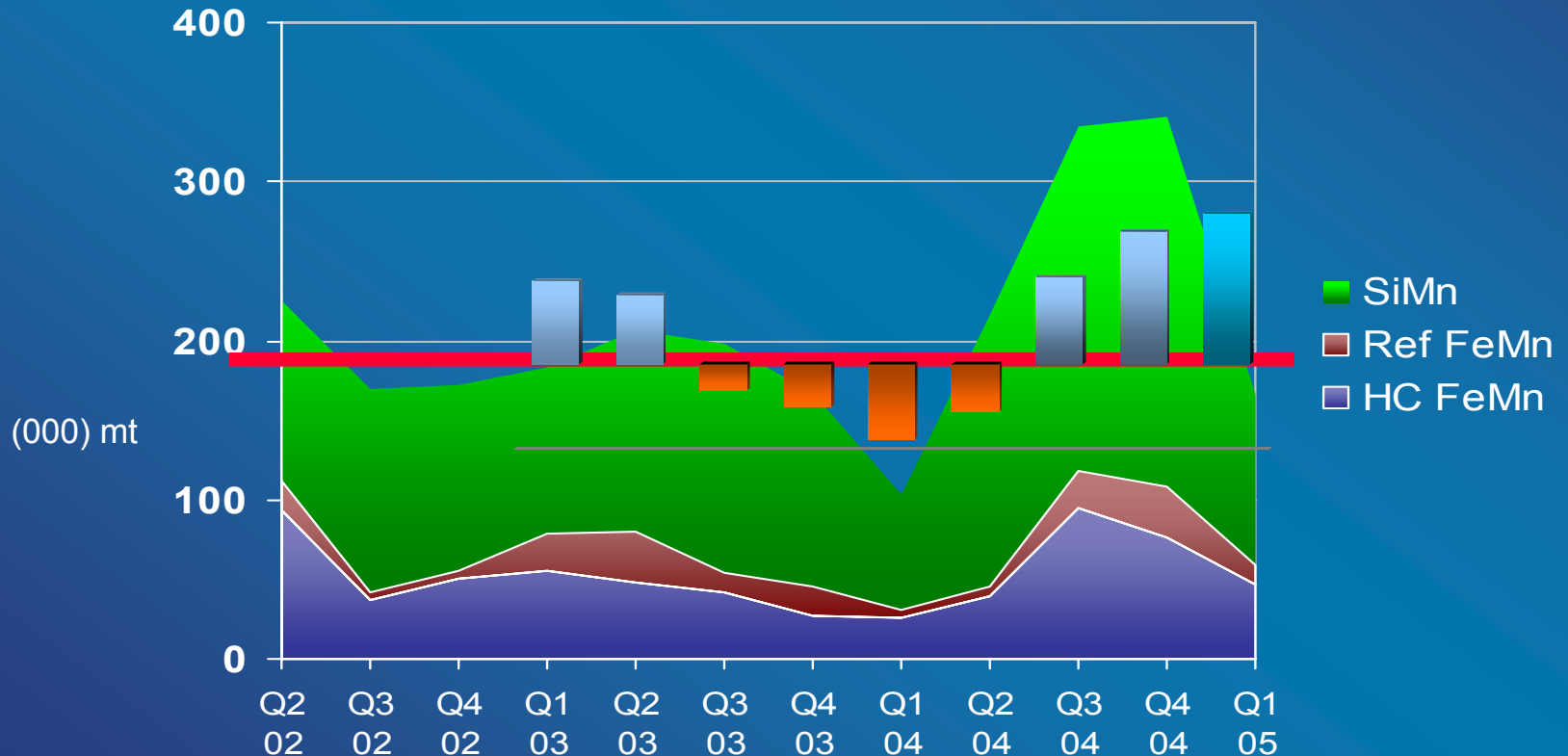
- New production capacity in 2004 (especially SiMn)
- Consumer inventories still up after Q3 and Q4, especially in the US and Europe
- Steel production decreases (with exception of China) throughout Q1

SiMn Consumer Inventory Changes (000 mt)



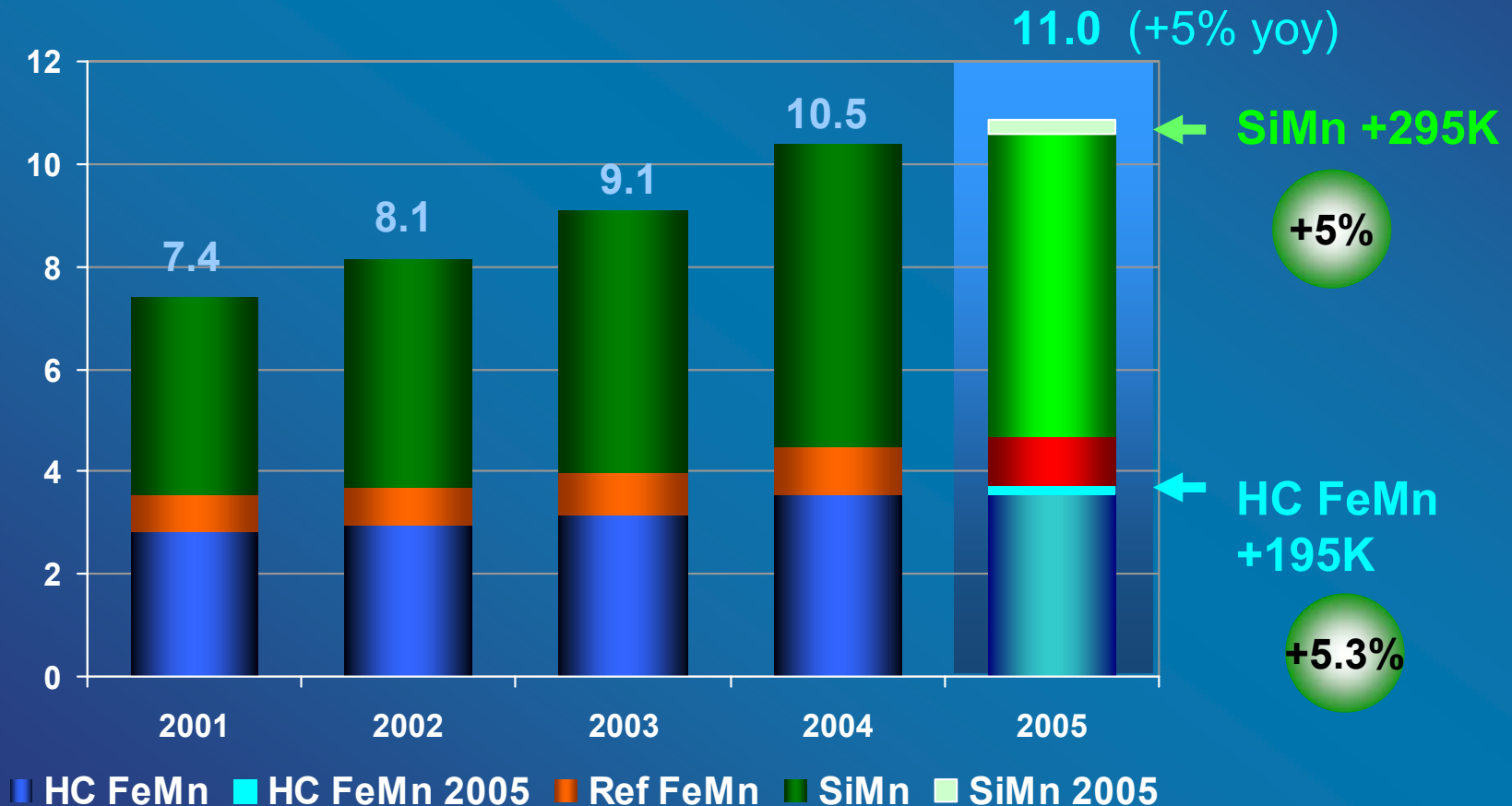
The Weight of Chinese exports

China Exports and the World Supply and Demand



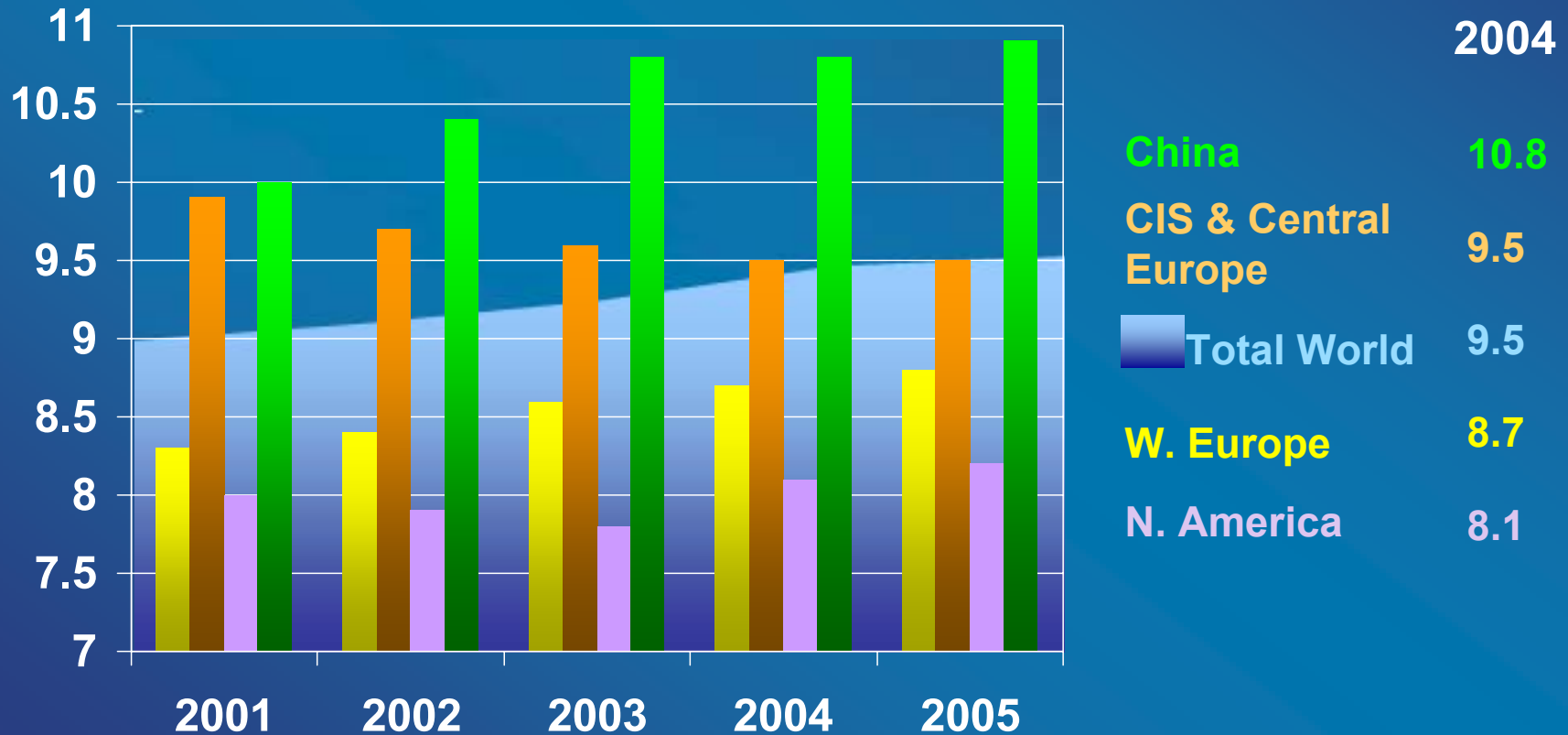


Announced Mn Alloy Capacity Expansions Worldwide in 2005 (million mt)





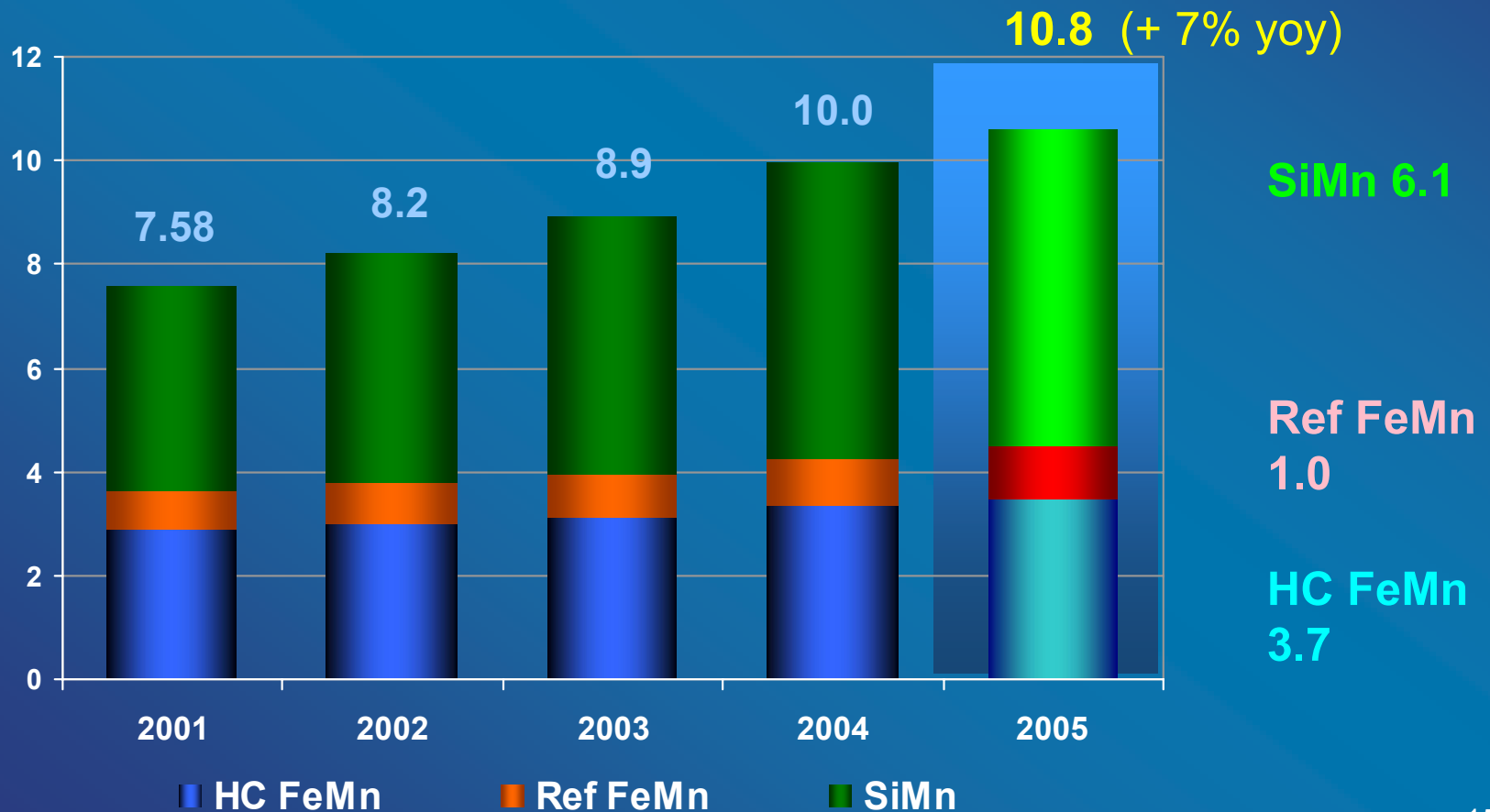
Trends in Mn Alloy Unit Consumption by region (kg/mt steel)



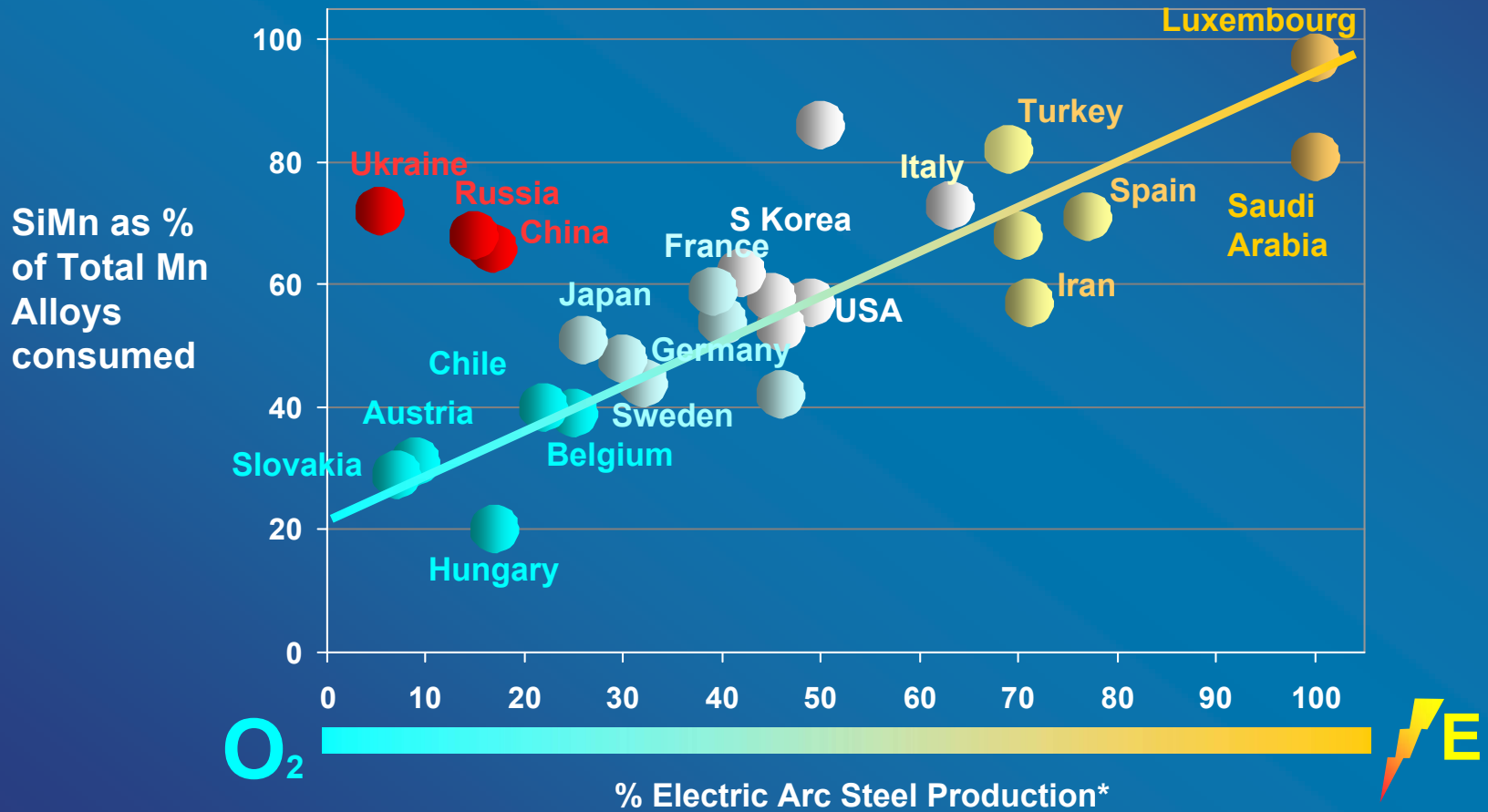


Mn Alloy Real Consumption

History and Forecast (million mt)



Alloy Consumption and Steel Production

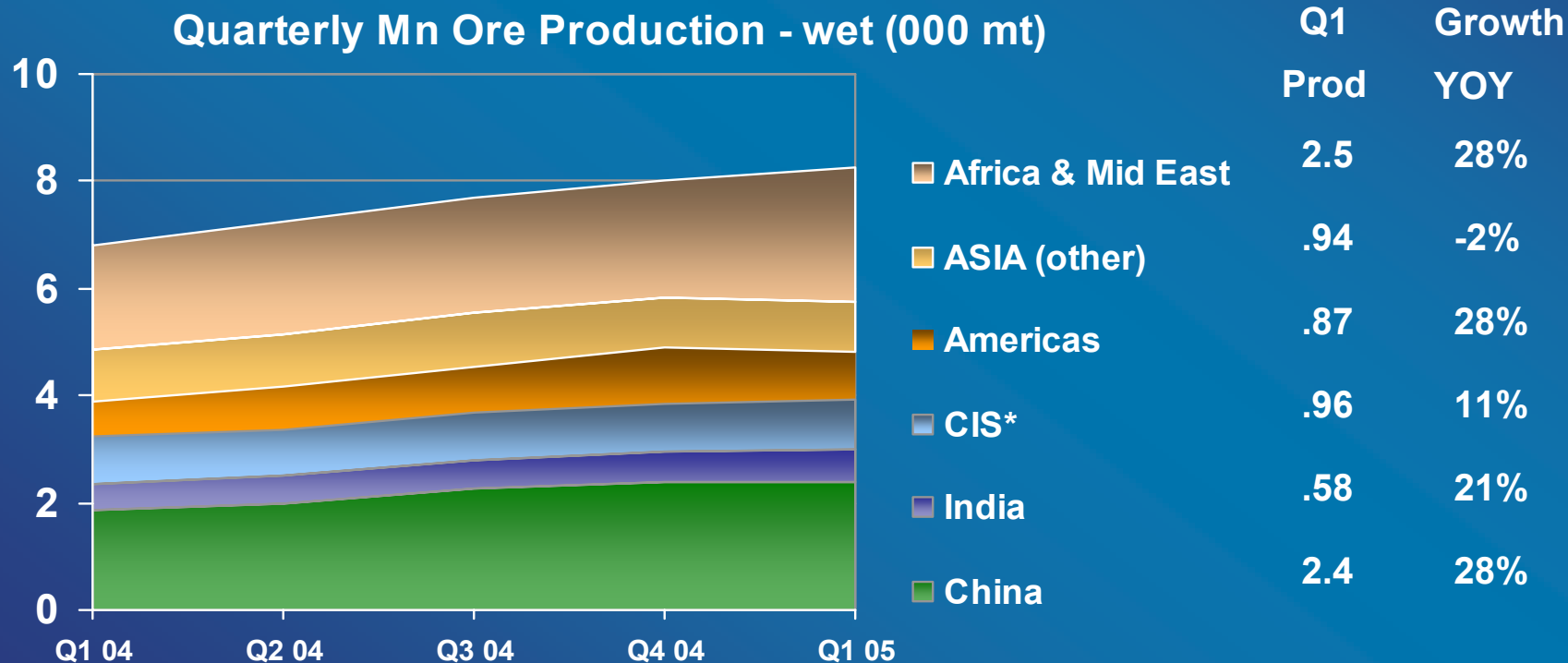




Manganese Ore

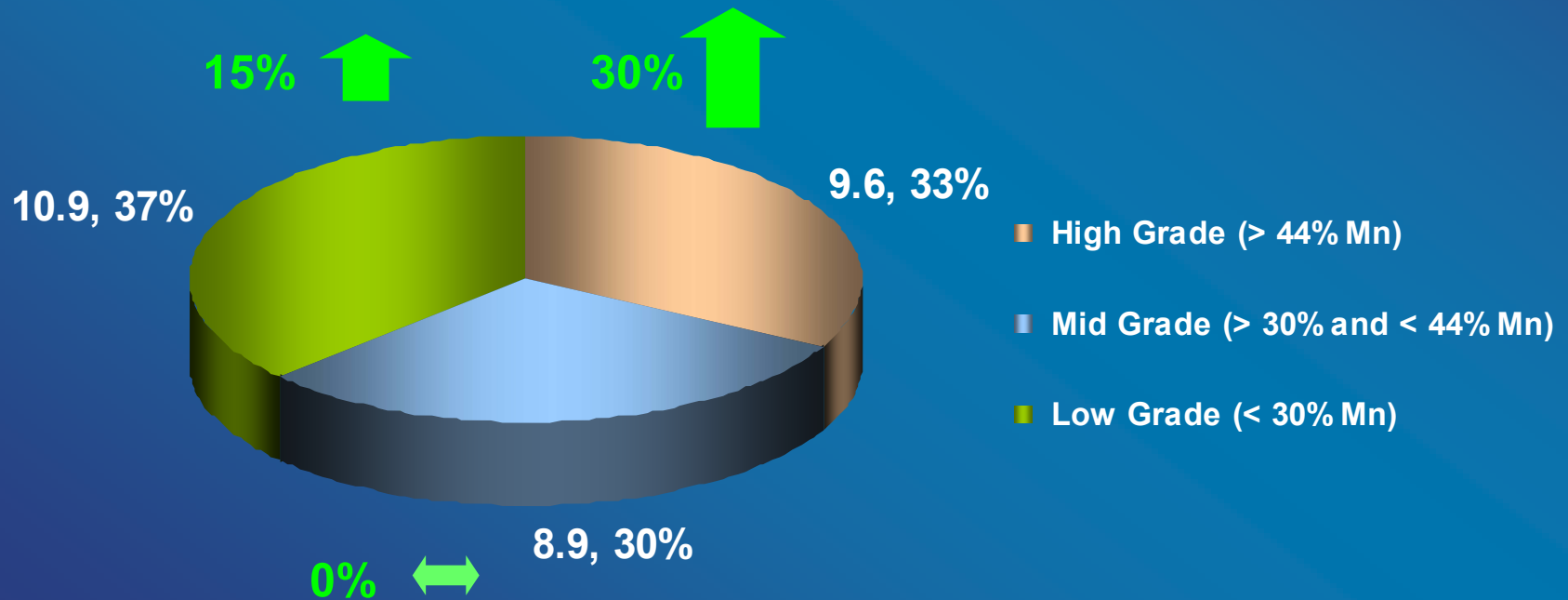
Mn Ore Production

Q1 2005 World production = **8.25** million metric tons
21% growth, year on year



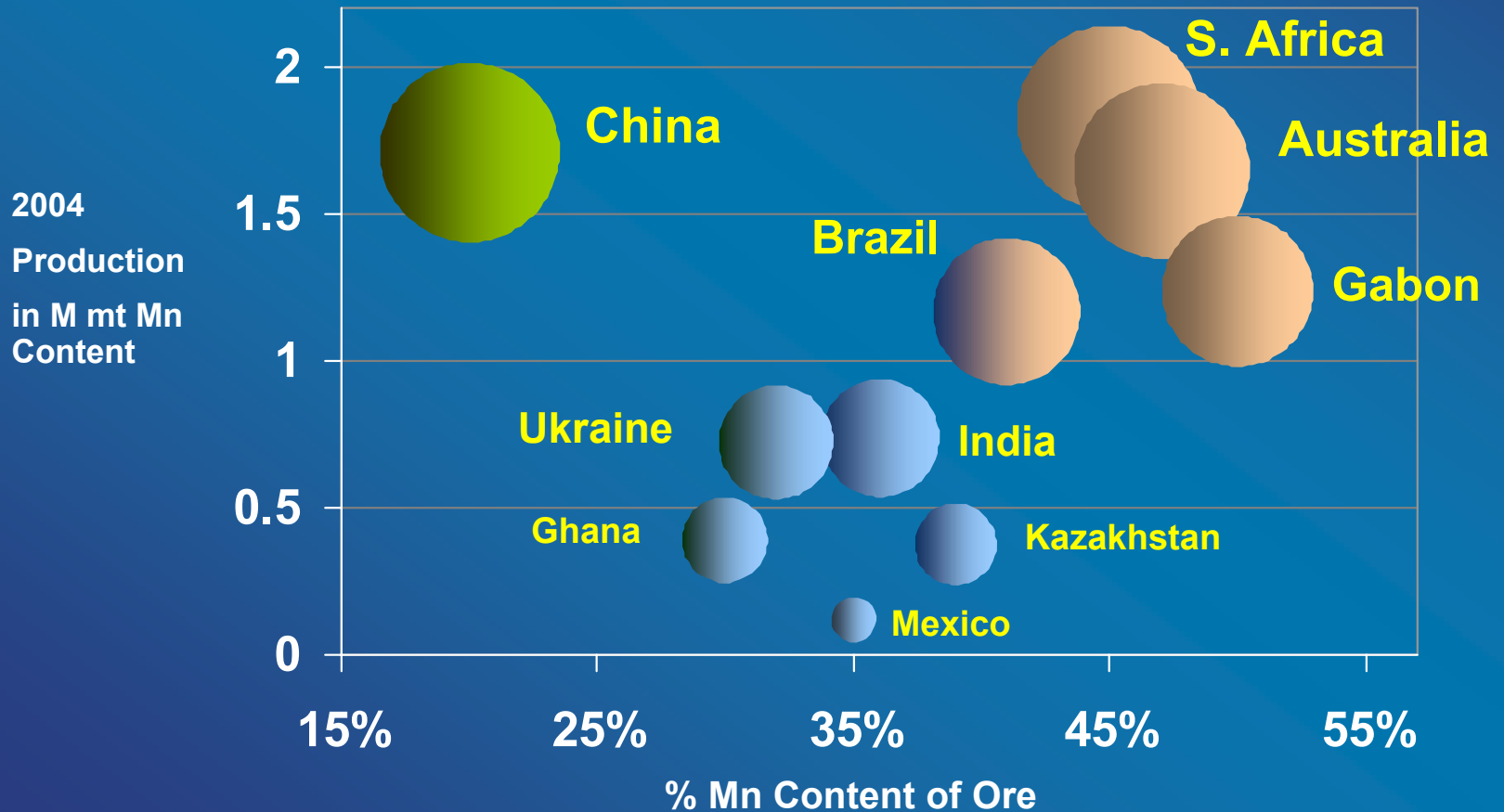
Mn Ore Production

2004 World Mn Ore production by grade
29.4 million mt wet (10.3 M mt content)



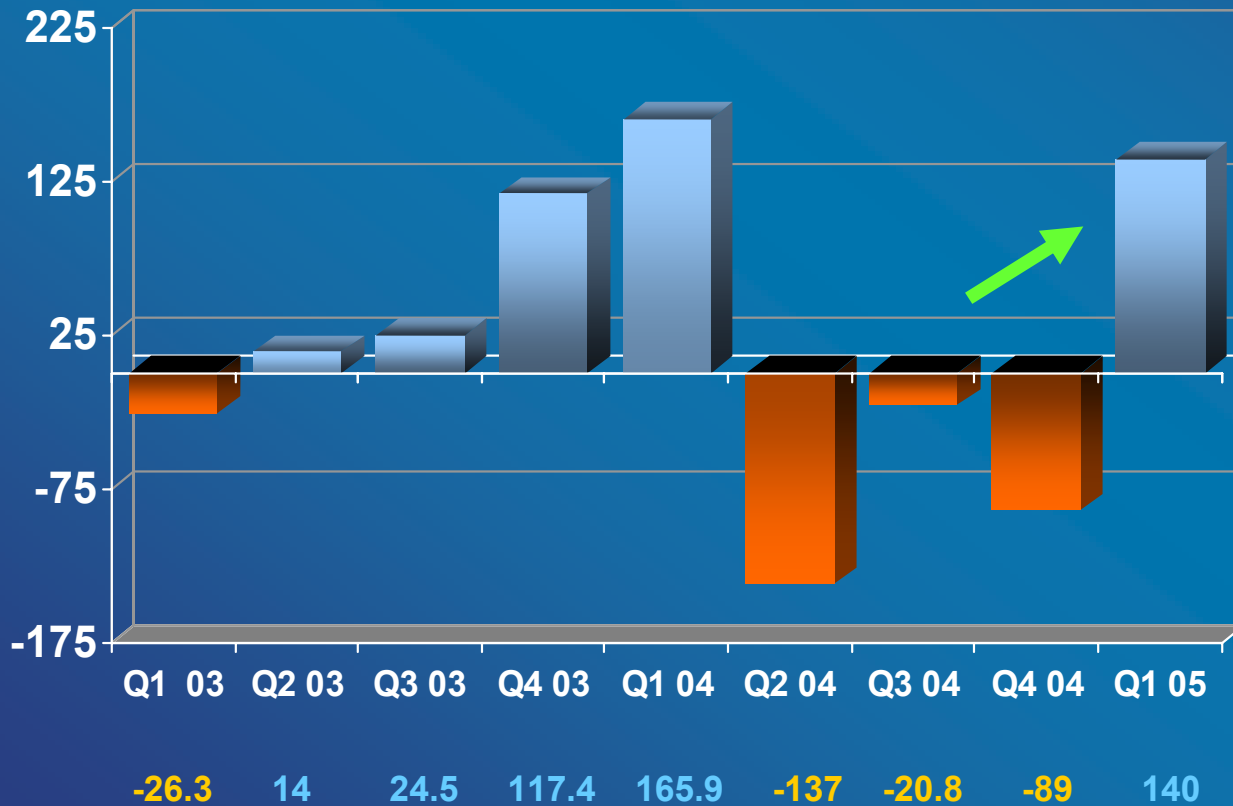
Top Ten Mn Ore Producers 2004

(M mt Mn content)





Mn Ore Supply and Demand Balance Q1 05 (in 000 mt Mn Content)

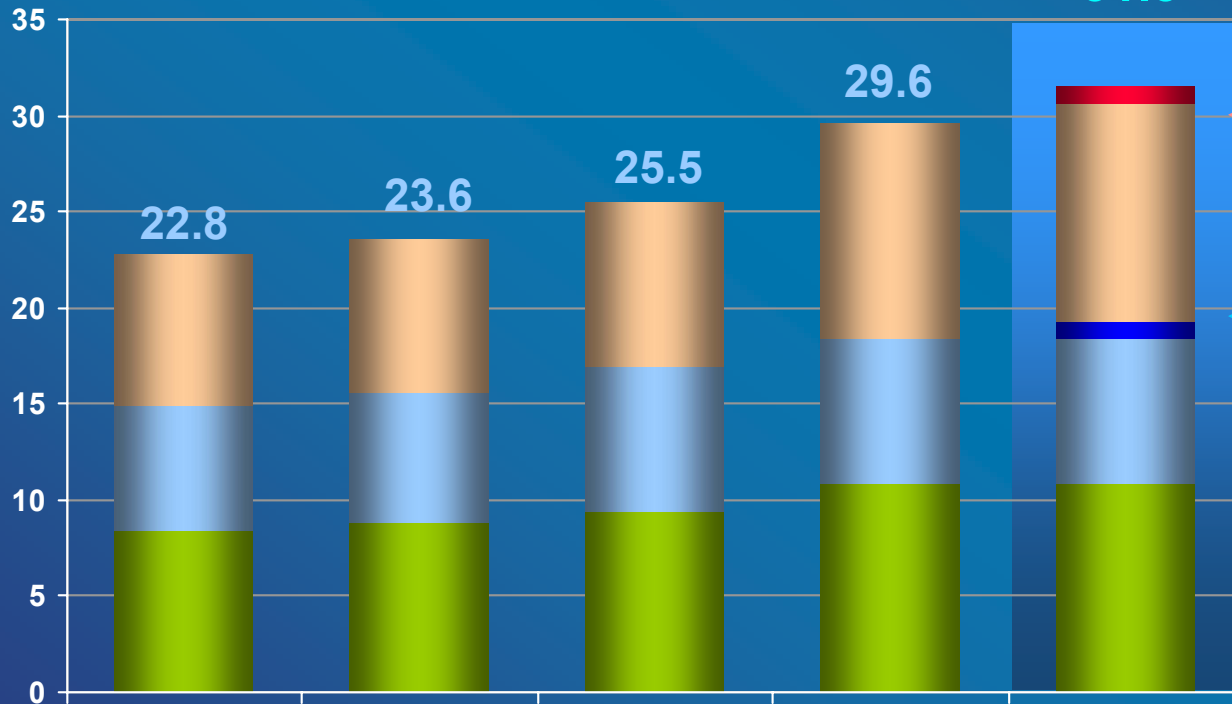


The Balance:
+ 140 K for Q1



Mn Ore Capacity Expansions in 2005 and Historic Mn Ore Production

(M mt)



>44% Mn Ore
+ .875 M mt

Between 30% &
44% Mn Ore
+ 1.0 M mt

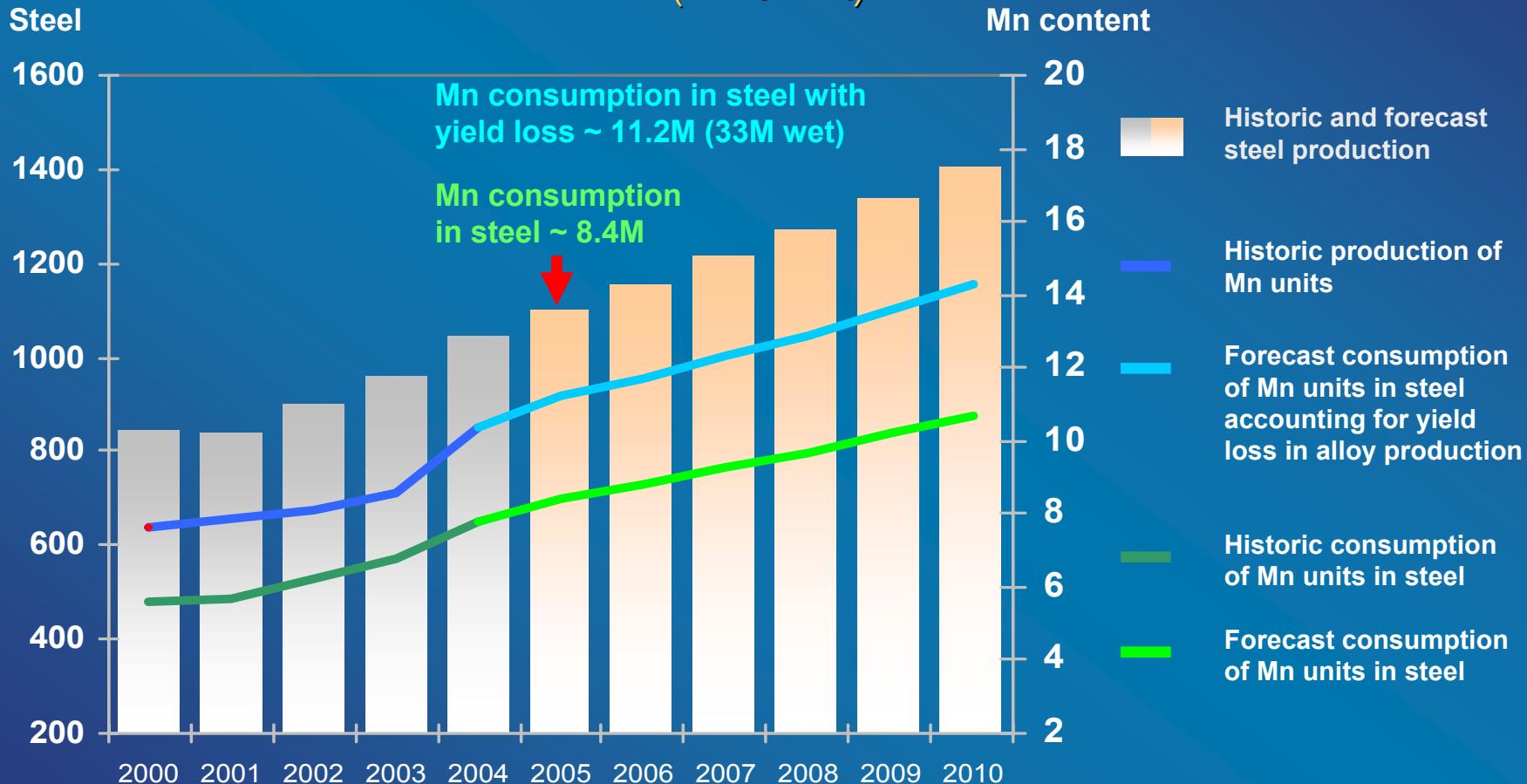
Mn Ore Low
Mn Ore High

Mn Ore Mid
Mn Ore High in 2005

Mn Ore Mid in 2005



Consumption of Mn units and Steel (million mt)



Summary of Key Points

- Steel production up strongly in China, flat elsewhere in Q1 05
- Upward trend in global alloy unit consumption to **9.5kg/mt**
- 2005 began with over supply for alloys
- Ore benchmark price negotiated in March at a record +63%
- Q2–Q4 2004 producer ore inventory declines halted in Q1 05
- Industry faces major unknowns in China and Ukraine
- Announced capacity increases for 05 are **4% Mn for alloys, 5% for Mn ore**
- Total Mn Alloy Real Consumption forecast of **10.8 M mt** in 2005



Questions?

Thank you