



Mn Industry: China in focus

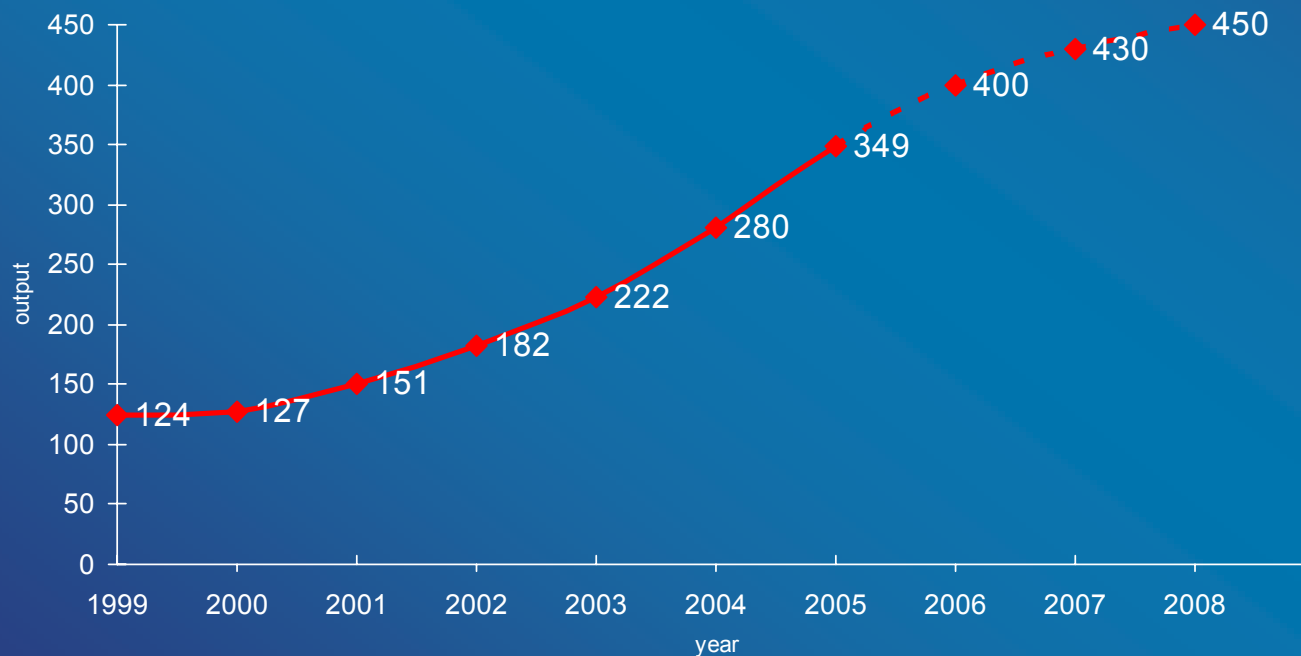
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IMnI China Representative

The Steel Industry: a determining factor of the Mn industry

Steel output: dramatic increase over the last two decades

China's steel production



China's Ferroalloy industry: today and perspective

Current situation:

- Overcapacity an issue for the industry

Number of producers: 1570

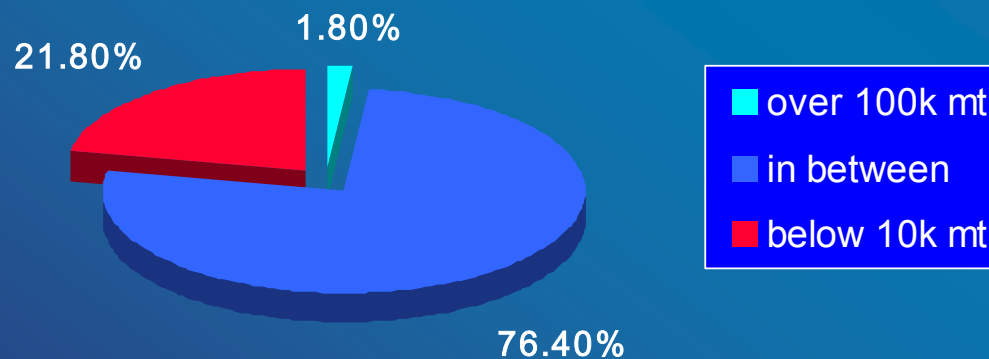
Capacity: 22 million tons

Utilization rate: 48%

New capacity in planning: 3 million tons

- Low consolidation

Ferroalloy producers by capacity

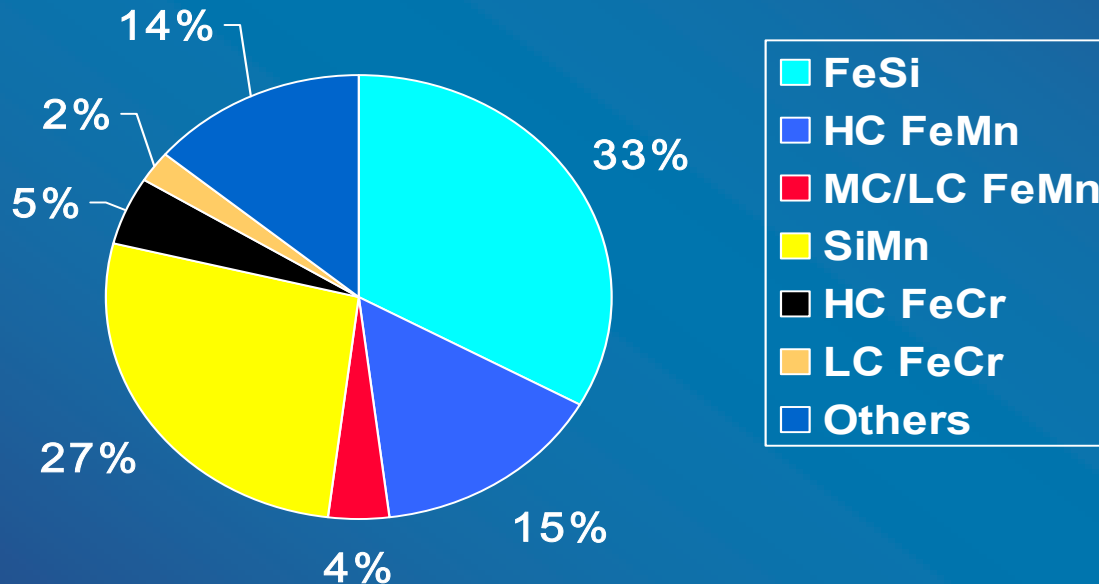


- High power and energy consumption
 - Poorly equipped production facilities
- Furnaces: Majority below 6MW or even smaller 1.8-3.2MW



➤ **Non-specialty alloys are the majority**

Ferralloy production by varieties



➤ **Polluted industry**

Future perspective

Macro-controls to reshape the industry

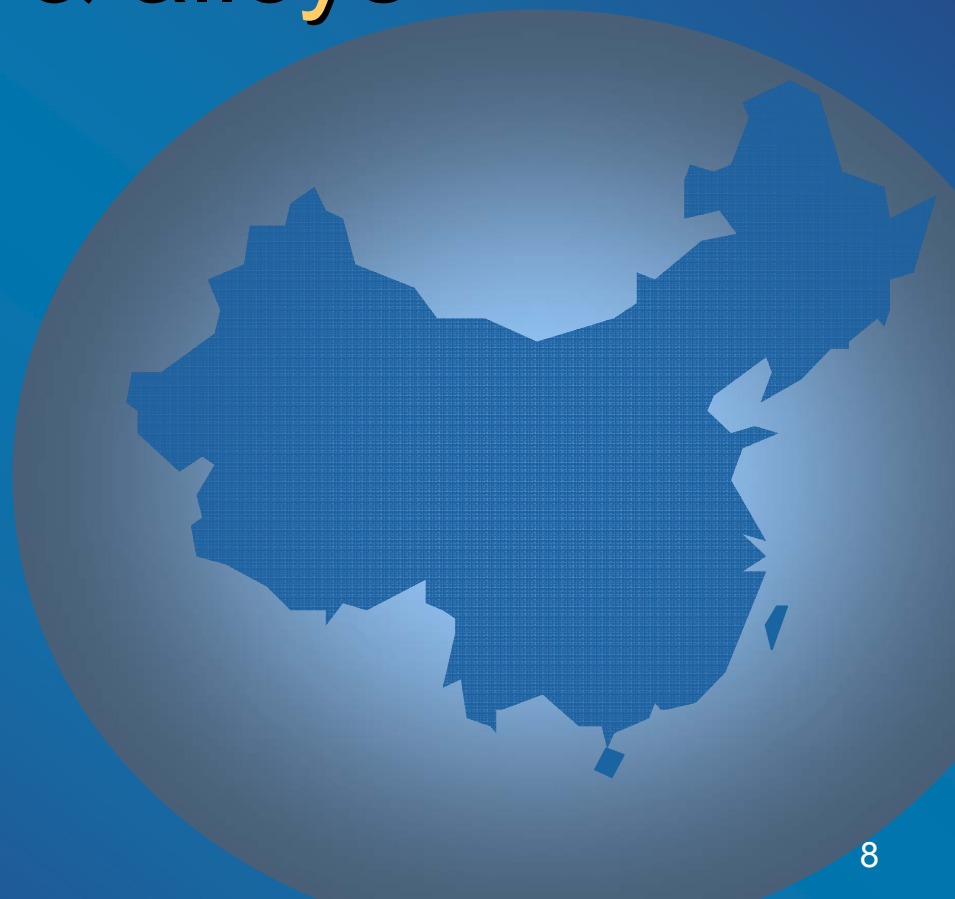
Target:

- Capacity reduced by 25% in 5 years
- A more consolidated industry
- Energy saving through technical innovation
- Increasing capacity of furnaces
- Increasingly tightened environmental measures

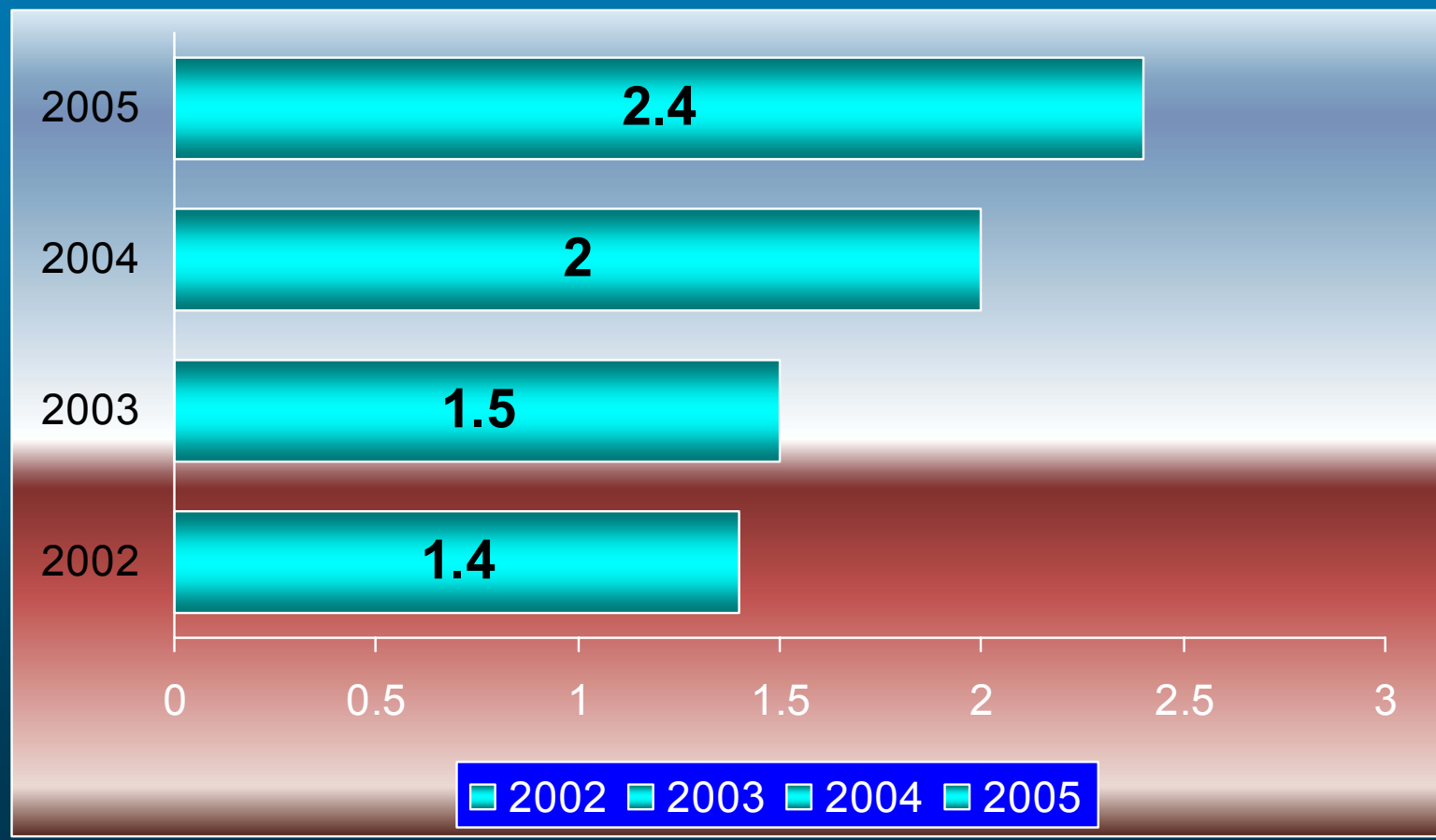
What restrictions will the government place on the industry?

- Investment restriction
- Differential electricity pricing policy
- Increased export control

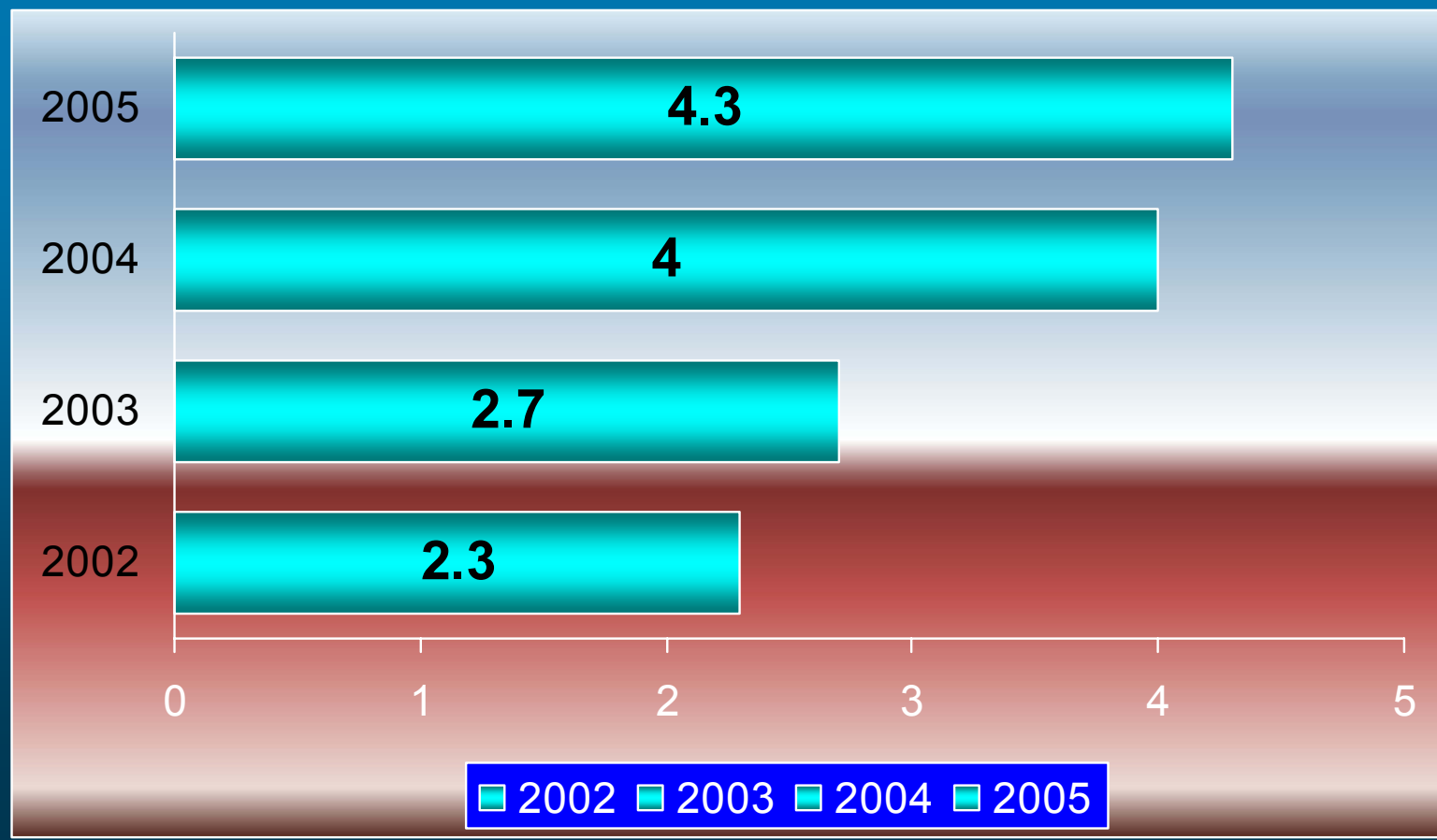
Mn ore & alloys



China Mn ore production (million mt Mn content)

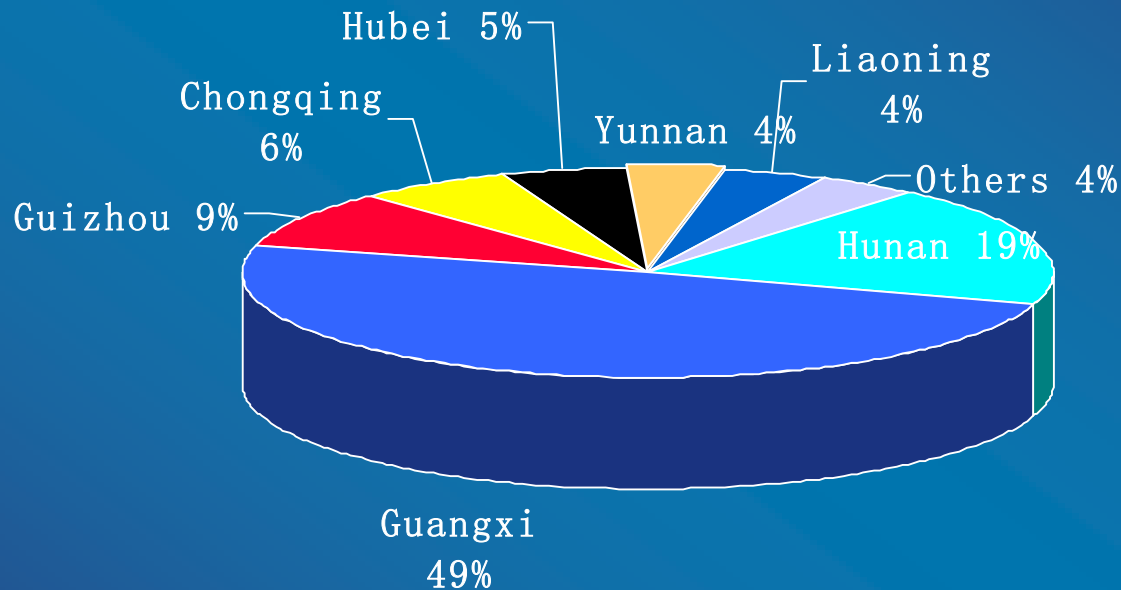


China Mn ore demand (million mt Mn content)



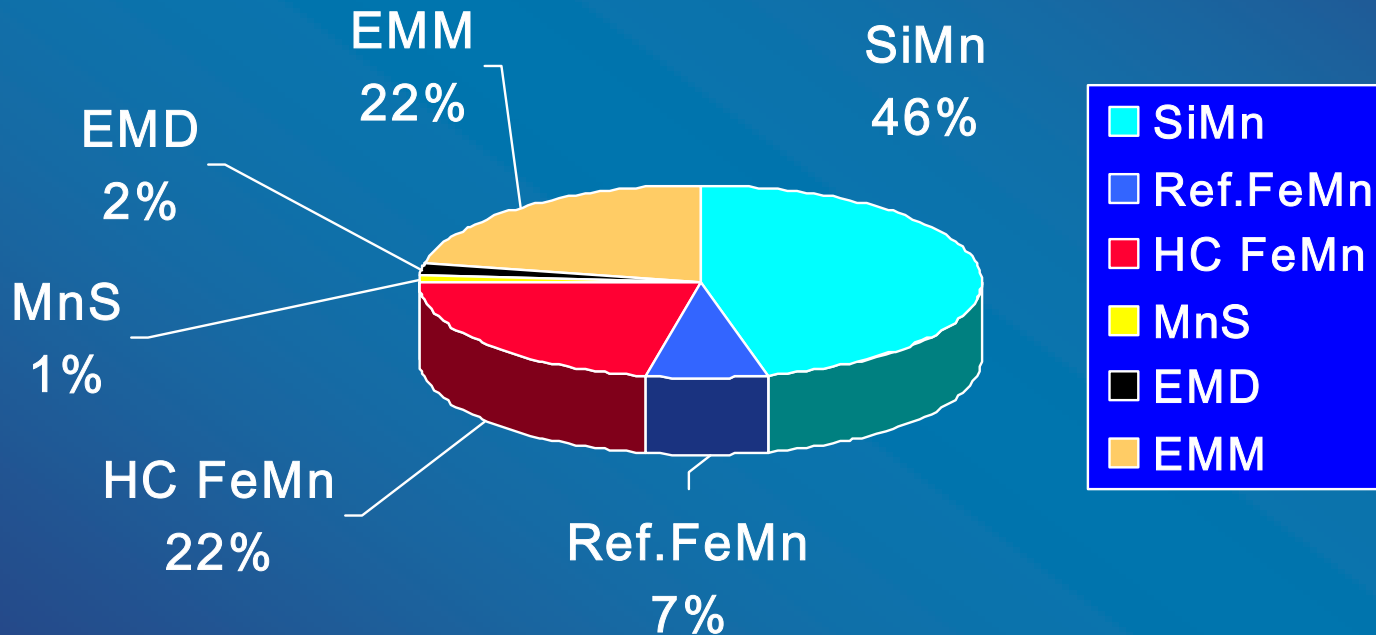
Domestic ore distribution and features

Mn ore distribution



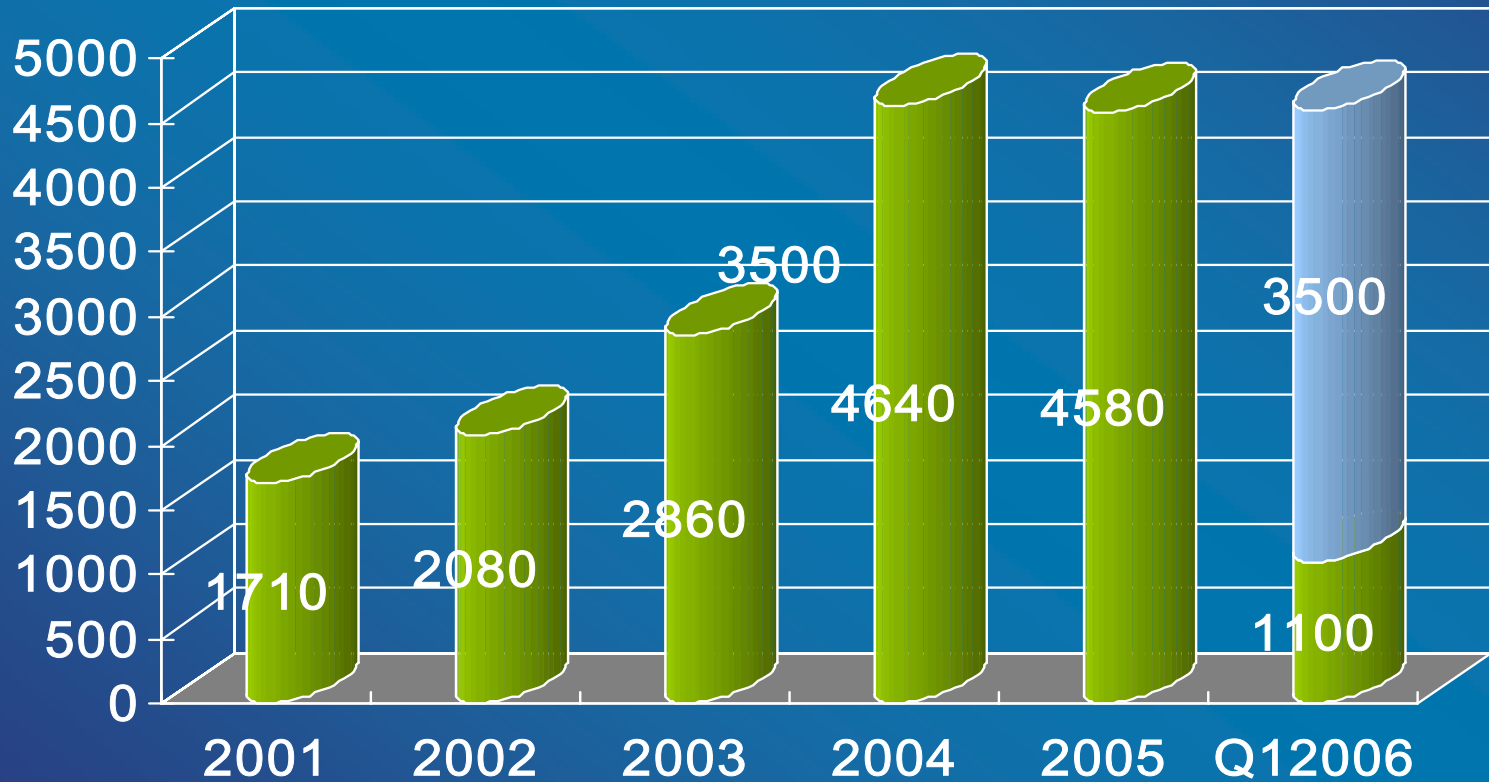
- low grade (average 20%), thin ore deposit, impurities & fine size
- Small scale mine fields

Domestic Mn ore consumption by product



Imported Mn ore

unit:000 mt



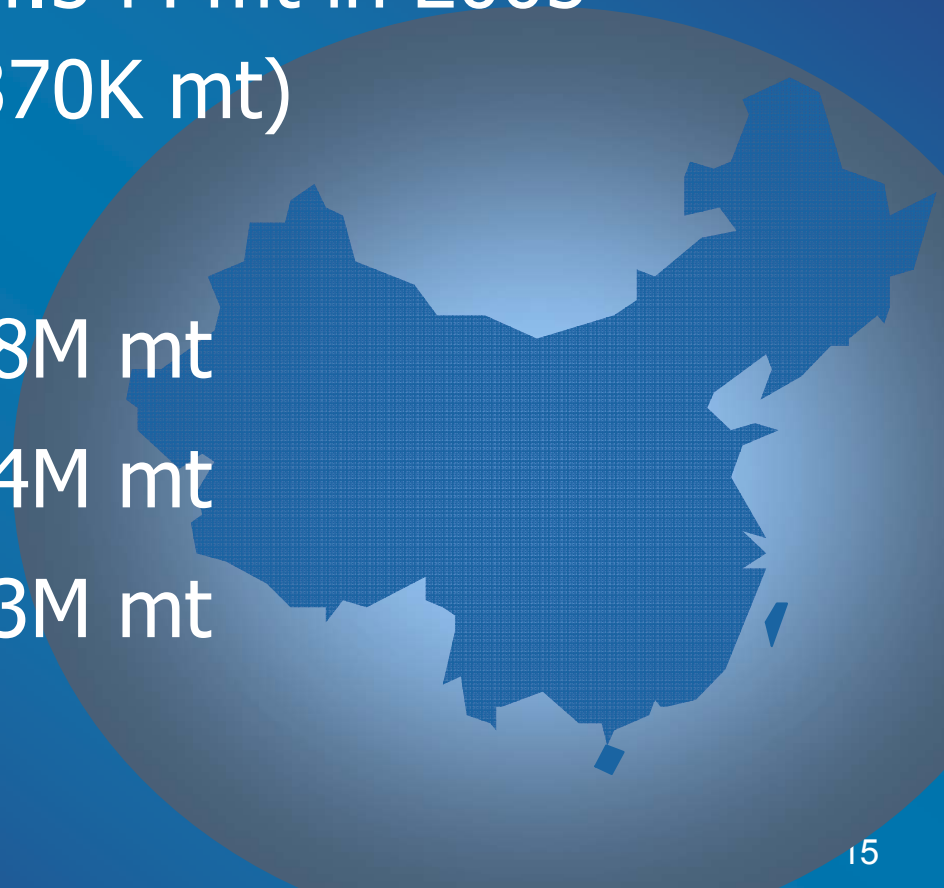
China will rely on imports in the long run

- Domestic ore does not meet the demand of Mn alloy production
- High processing costs of domestic ore
- Steel production growth demands more Mn alloys
- Mn alloy production demands high grade Mn ore
- EMM producers might shift to high grade ore

China Mn Alloy Industry in 2005

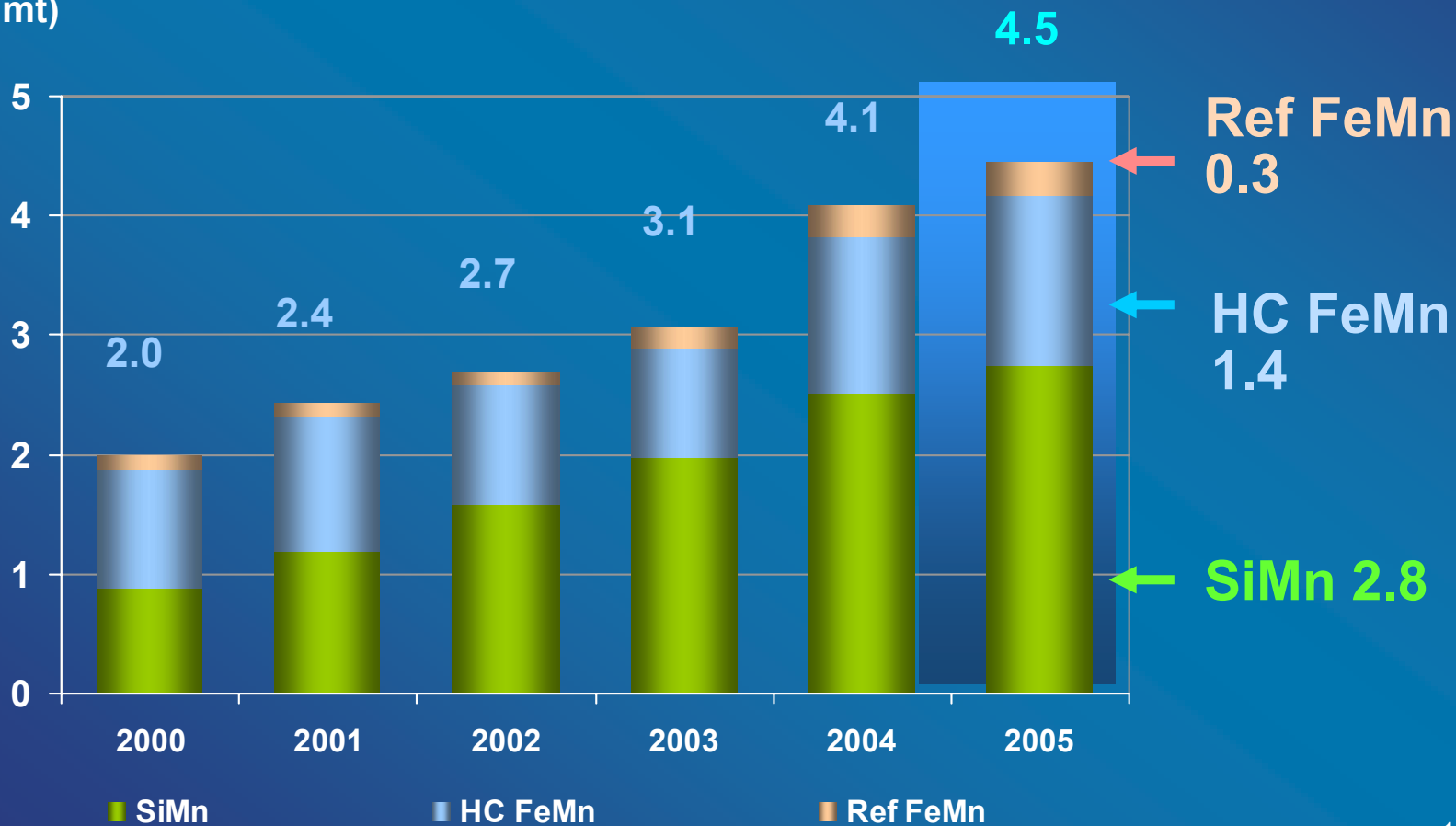
Total Production 4.5 M mt in 2005
(8% increase, 370K mt)

➡ SiMn	2.8M mt
➡ HC FeMn	1.4M mt
➡ Ref FeMn	0.3M mt



China Mn Alloy Historical Production (M mt)

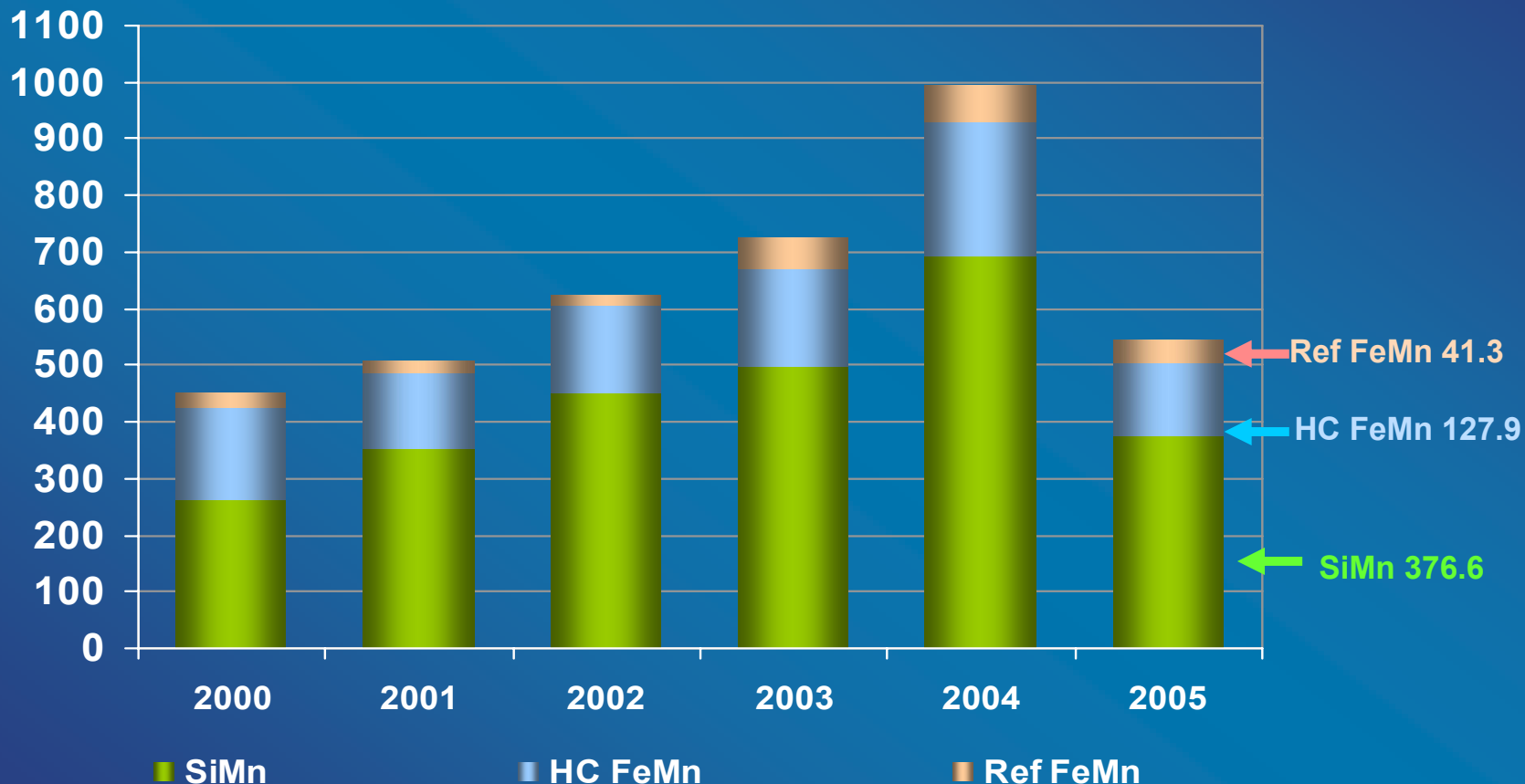
(M mt)



Mn alloys strong in demand

- Steel output growth, a driving factor for Mn alloy production
- Steel production is estimated to reach 390-400 million MT in 2006
- Crude steel production will be stabilized at 450 million tons in the next five years

China Mn alloy exports (000 mt)



Factors to effect Mn alloy exports

Competitiveness of Mn alloys

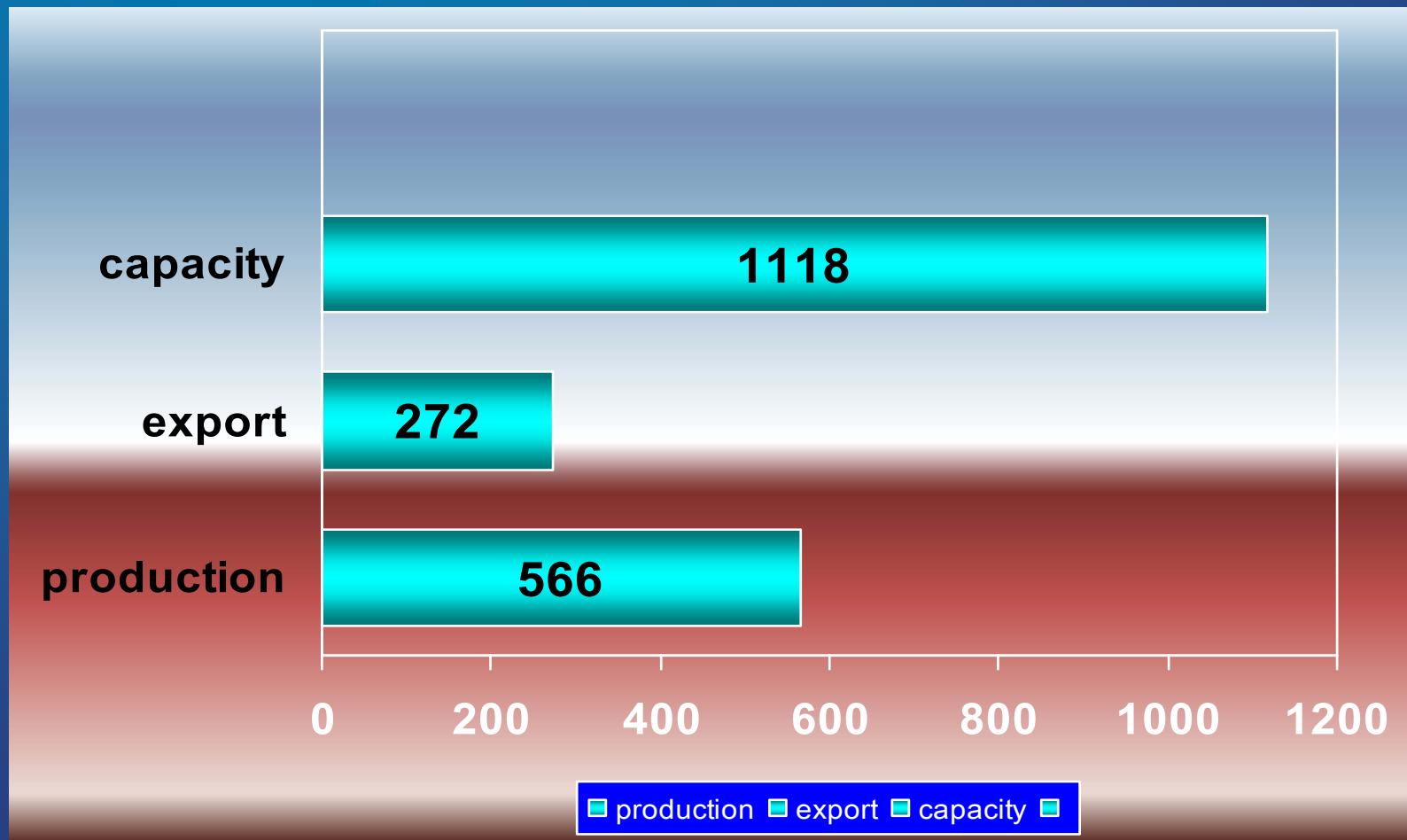
- Electricity cost varies in different provinces
- Labor costs up
- Environment costs up

Chinese Mn alloys are losing competitiveness and North China now has an advantage in Mn alloy production



EMM & EMD

EMM production 2005 (000 mt)



What is happening

- An oversupplied industry
- A polluting industry
- Macro control policies to reshuffle the industry
 - Increasingly strict environment regulation
 - A system of increased barriers to entry designed to cut down production

EMD at a glance

- China has become the largest EMD producer, consumer and exporter

China EMD basic data

Items	2004	2005	Increase Rate
Producers	16	16	
Capacity* (tpa)	145,000	193,800	+ 33%
Output (t)	116,649	149,407	+ 28%
Export (t)	38,258	34,399	- 10%
Import (t)	8,520	9,010	+ 6%
Export ratio	32.8%	23%	-9.8%

What is happening

- Estimated global demand to increase steadily by 5-8%
- China's new capacity expanded considerably
- Costs up and price down
- Shifting to alkaline EMD
- Strong expansion from China will change the supply and demand balance

Outlook of Mn Industry

- Steel production estimated at 450 million mt in the next few years
- Ferroalloy capacity to be reduced by 25% in 5 years
- More stable Mn alloy and ore market
- EMM capacity reduced
- EMD capacity increasing, and has potential to repeat the development experienced by the EMM industry



Thank you!