

IMnI Annual Conference, St Andrews, Scotland

Nippon Denko's SiMn Project in China

June 1 – June 3, 2005



Nippon Denko Co., Ltd.
Keigo Takahashi

★Pre-requisites for Foreign Companies investing in China

Essential conditions for investing in China

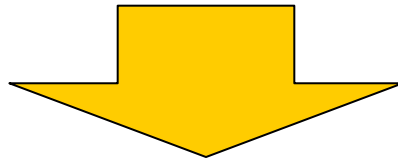
1. Promotion of structural adjustment in China's Ferroalloys Industry

Establish an efficient supply structure to meet domestic demand
Improve an excessive competition structure

2. Elimination of legal risks and protection of the right of profit-gain

★Japanese Ferroalloys Industry

Japanese Ferroalloys Industry
Few domestic natural resources
Higher labor costs
Higher electricity fees
Stringent environmental regulations

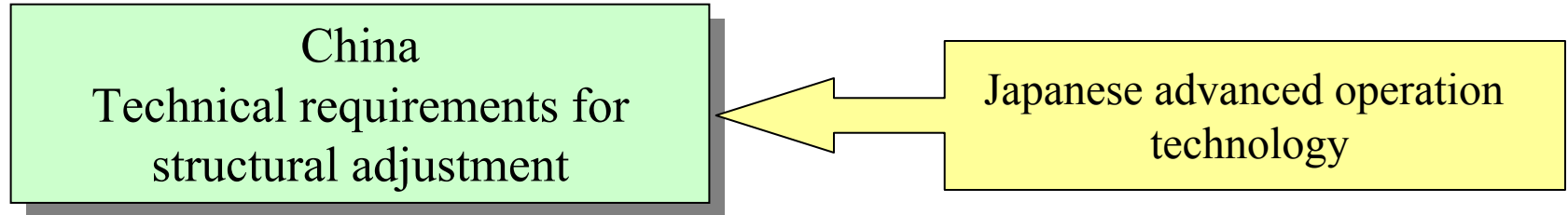


HC FeMn

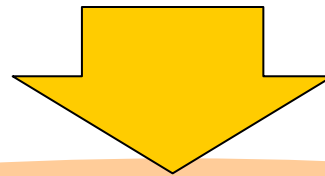
Operation technology developed focusing on natural resource & energy saving, environmental protection measures

Maintaining strong competitiveness in the international market

★ Stable supply of high quality products by the J/V



- Promote expansion of facilities and create technology for stable operations
- Introduce equipment for protecting the environment
- Establish natural resource & energy-saving technology
- Improve and stabilize quality



Establish a Sino-Japanese J/V company
Supply high quality products using Japanese technology

Promote natural resource & energy saving,
environmental protection measures

★Structural adjustment in China's Ferroalloys Industry - 1999

Solutions

1. Excessive number of producers

2. Excessive production capacity

3. Excessive competition



●Structural adjustment by the Chinese Government - 1999

1. Disposal of electric furnaces with a capacity of less than 3,200kVA and blast furnaces of less than 100 M3

2. Suspension of new plant construction

Suspend construction of new plants for 5 years from 1999

3. Environmental protection measures

Regulate the emission standards of soot & smoke and shut down facilities which do not comply with the standards

4. Reduction in number of producers but expansion through integration in the size and scale of the remaining companies, etc.

★Structural adjustment in China's Ferroalloys Industry - 2004

Solutions

1. Excessive number of producers

2. Excessive production capacity

3. Excessive competition



●Structural adjustment by the Chinese Government - 2004

1. Disposal of small-scale facilities

Close electric furnaces with a capacity of less than 5,000kVA by the end of 2005

2. Compliance with environmental protection standards

3. Control on bank loans to facilities

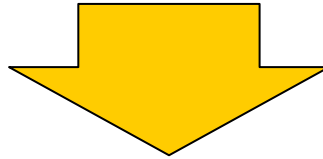
4. Withdrawal of preferential treatment for land use

5. Imposition of additional electric fees for the electric furnaces constructed after 1999, etc.

★ Establish fair and transparent business rules

Necessity to eliminate legal risks and protect the right of profit-gains

- 1) Secure transparency & consistency in laws and their applications
- 2) Assure the protection of Intellectual Property Rights (IPR)
- 3) Ensure the collection of accounts-receivable



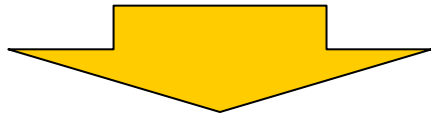
**Review laws & regulations based on international rules
Deregulate and open markets for foreign investments**

Expect further improvement in the practical application of laws and regulations, the protection of IPR, etc.

★ Purpose of the J/V

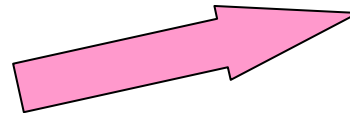
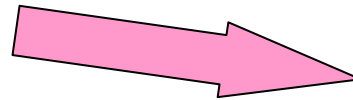
Nippon Denko

Produce high quality SiMn
at the Hidaka Plant in Japan



Transfer demand and
technology to a J/V company

Highly efficient and environmentally-friendly
production facilities



Provide stable supply
to Japanese customers

**Aim to be a Model Plant in the Chinese
Ferroalloys Industry !**

★Outline of the J/V

●Founded	August, 2004 (Toyota Tsusho took a stake in November, 2004)
●Name of company	Jinzhou Nichiden Ferroalloy Co., Ltd.
●Location	Jinzhou City, Liaoning Province, China
●Registered Capital	US\$10.3 million (RMB85 million Yuan)
●Equity share	Nippon Denko 70.0%
	Toyota Tsusho 25.2%
	Jinzhou Ferroalloy 4.8%
●Production capacity	50,000mt per year
●Start of production	Early 2006

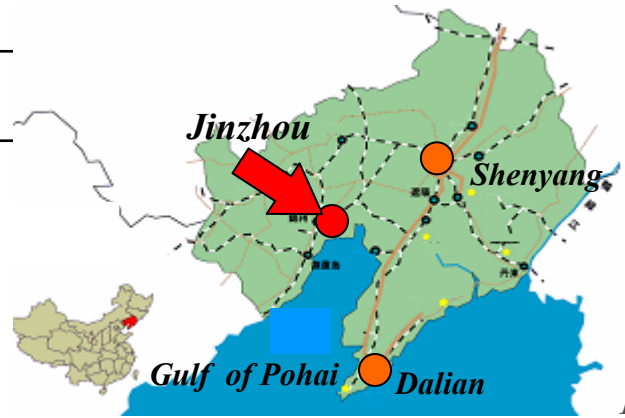
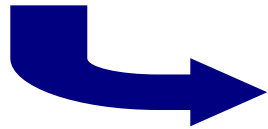


Fig 8

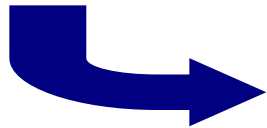
★ Advantages & competitiveness of the J/V

- Located near to local manganese mines and to Jinzhou Port which can accommodate 70,000 DWT vessels



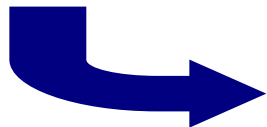
Stable procurement of ores which allows for their use in the most cost-effective and quality-assuring way

- Silicious ore and limestone also produced in the surrounding area



Stable procurement of secondary raw materials

- Liaoning Province has surplus power



Stable procurement of electrical power

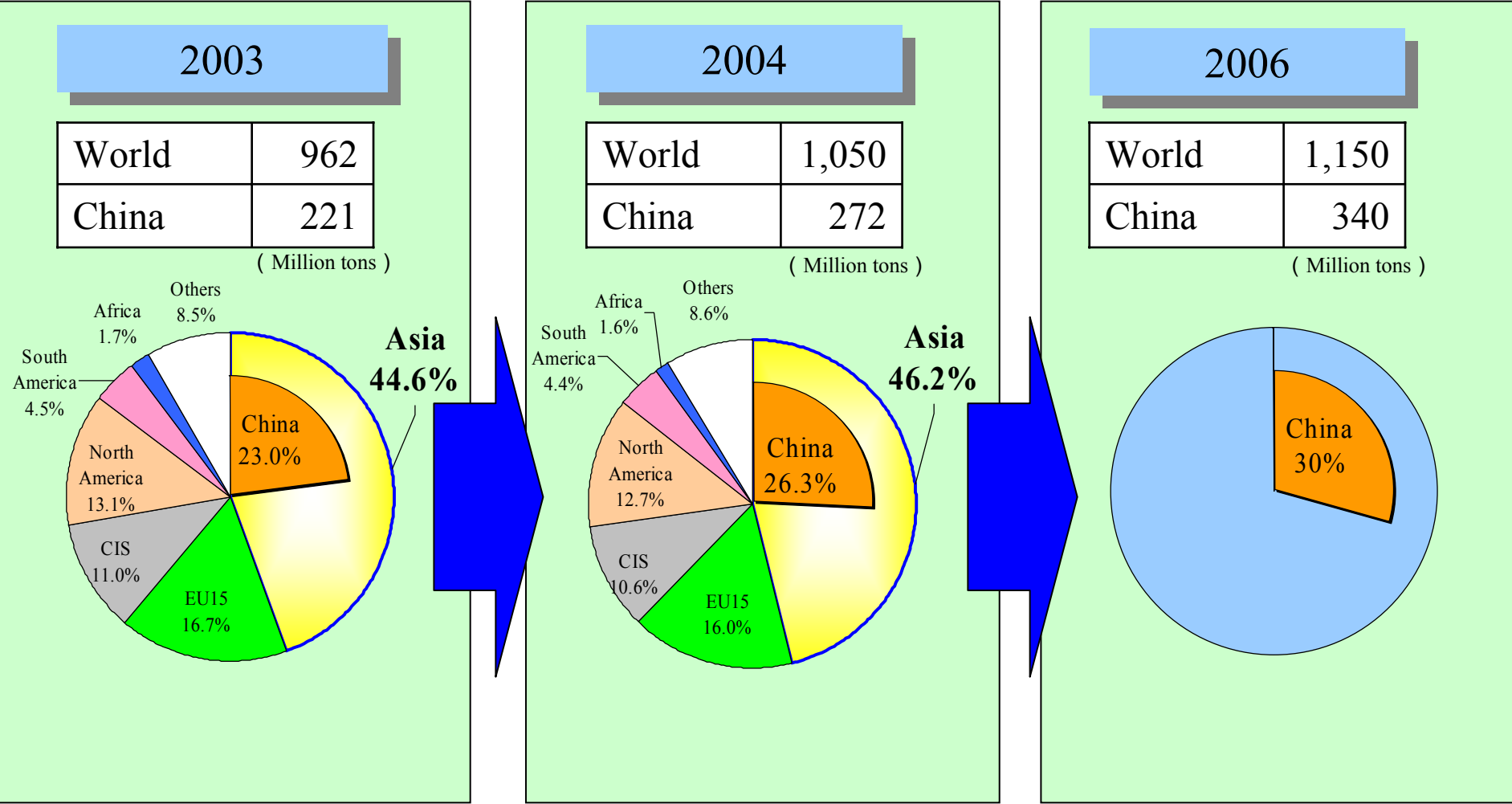
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Will stop SiMn production at the Hidaka Plant in Japan

Jinzhou Ferroalloy

Will shut down one by one existing small electric furnaces with capacity of less than 5,000 kVA

★Crude steel production by region



(2003,2004: IISI statistics / 2006: OECD statistics)

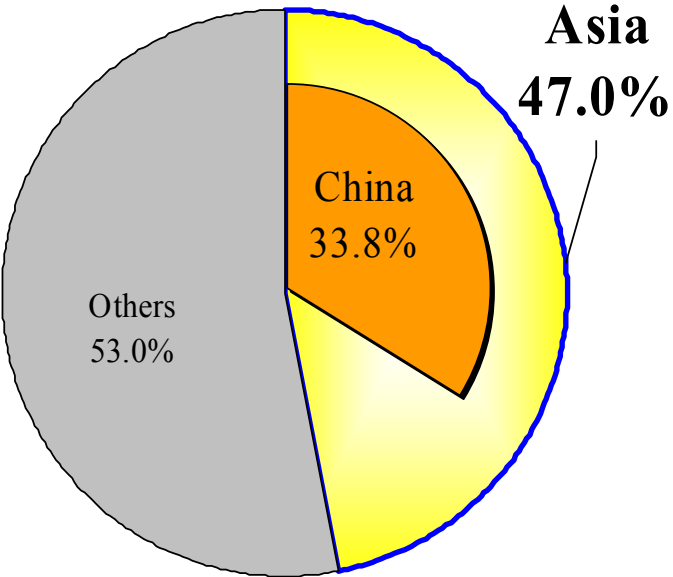
Fig 11

★ Global Manganese alloys production

2003

World	9.08
China	3.07

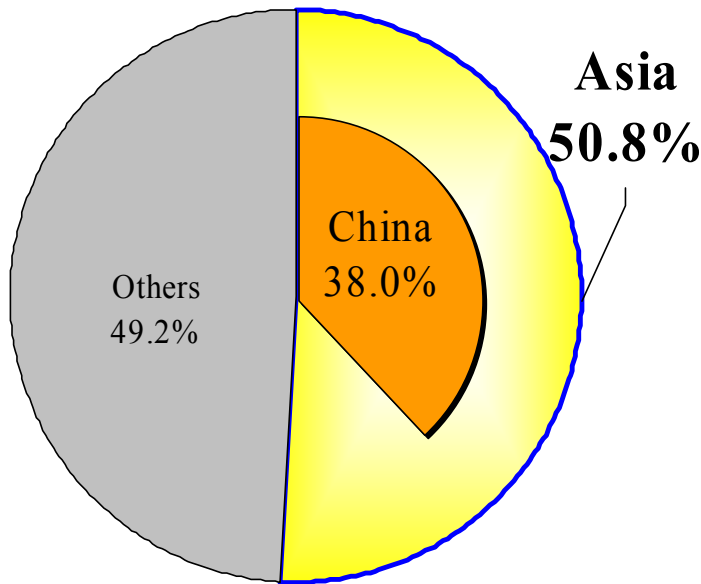
(Million tons)



2004

World	10.50
China	4.00

(Million tons)

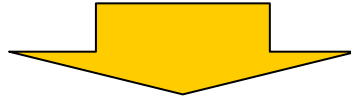


(IMnI statistics)

Fig 12

★For the further development of the Ferroalloys Industry

China : much weight in the world steel and ferroalloy industries



Expected to further increase its weight and influence

**The J/V company has
Highly efficient production facilities equipped with
the latest environmental protection measures**



**Will contribute to the development of
the Chinese Ferroalloys Industry**

**It is important for the further development of the world
ferroalloys industry to seek higher efficiency and have healthy
competition among companies in this sector**