Basic Situation of Chinese Cement Industry (Mainland)

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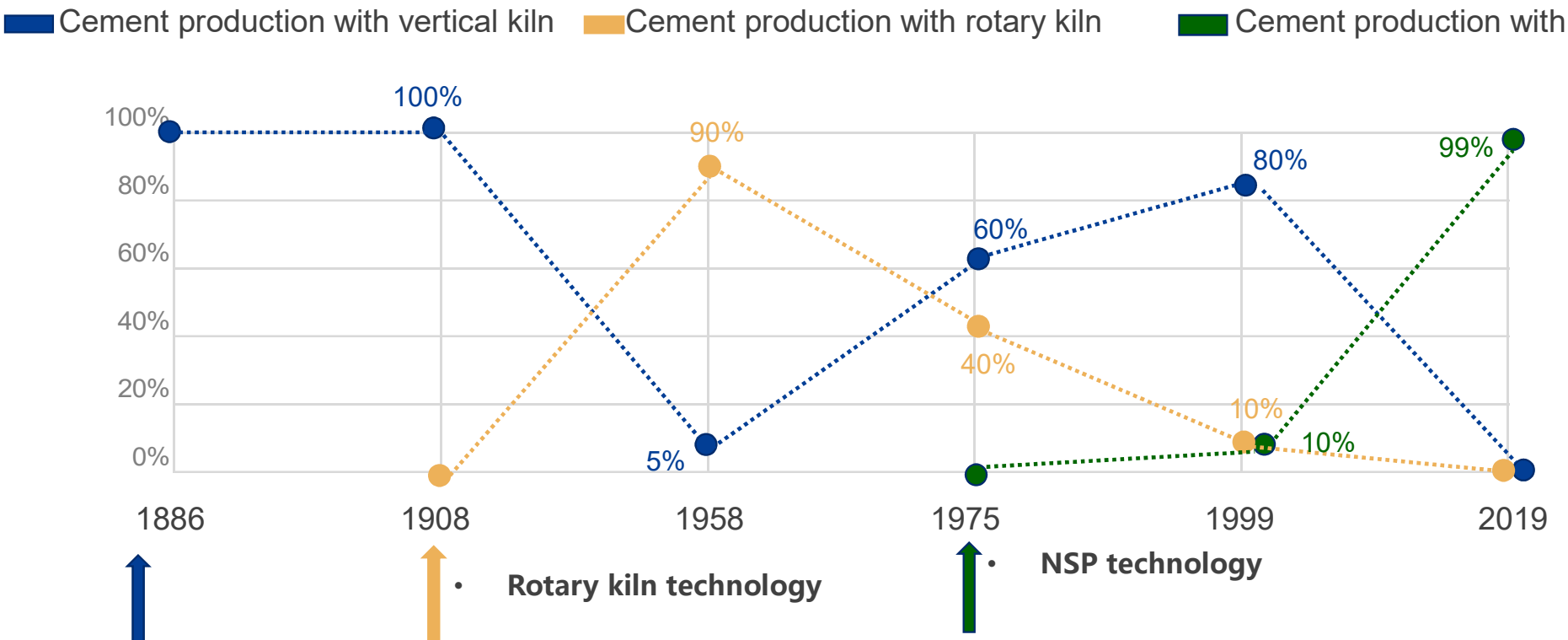
CONTENTS

1. Development History
2. Current Status and Characteristics
3. Exploration and Practice

1. Development History



- **Vertical kiln technology:**

— In 1886, British set up Green Island Cement in Macao, China's first cement plant. That was 133 years ago from today.

— In 1889, Tangshan Cement Factory (predecessor of Chee Hsin Cement Co., Ltd.) was set up as the first self-built cement plant by Chinese, 130 years from today.

- **Rotary kiln technology**

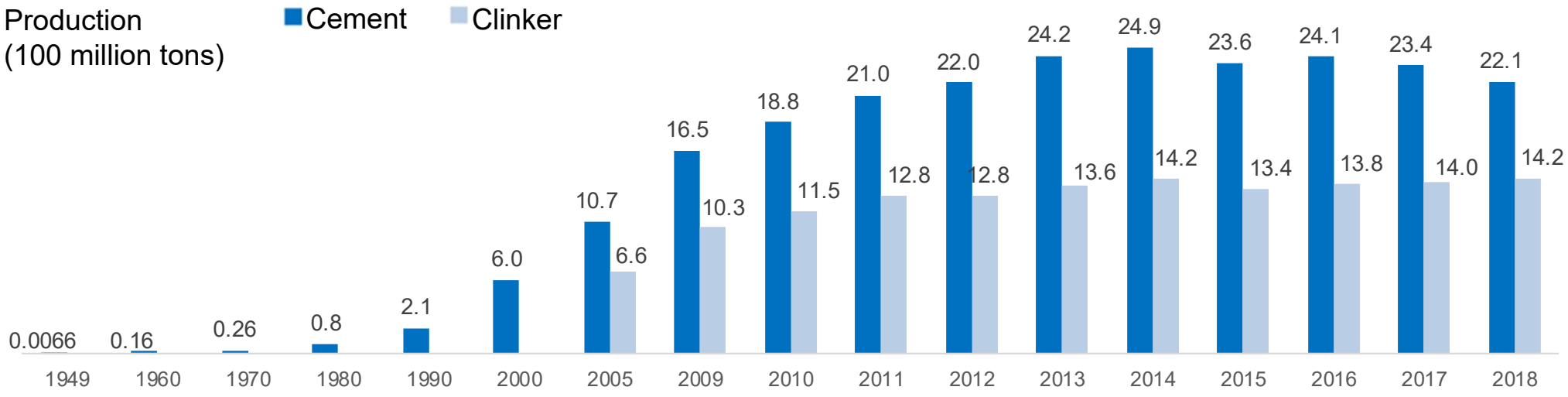
- **NSP technology**

Data source: Wang Yanmou. *Cement Development History in China*.

2. Current Status and Characteristics

（1） Total demand remains large and relatively stable：

- Annual cement production exceeds 2 billion tons for 8 consecutive years and per capita annual consumption is over 1.5 tons. Annual clinker production surpasses 1 billion tons for 10 consecutive years.
- In 2018, cement production was 2.21 billion tons, 55% of the world's total. Clinker production was 1.42 billion tons, 51% of the world's total.

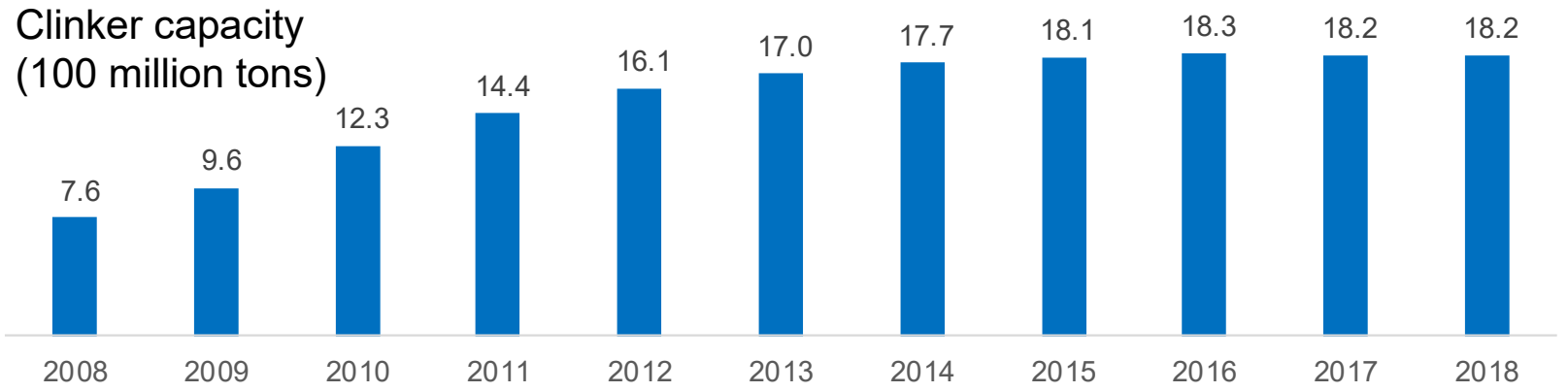


Data source: National Bureau of Statistics.

2. Current Status and Characteristics

（2）Severe overcapacity:

- By the end of 2018, the number of new-type dry cement production lines reached 1,681, with a designed clinker capacity of 1.82 billion tons and actual clinker capacity of 2.01 billion tons.



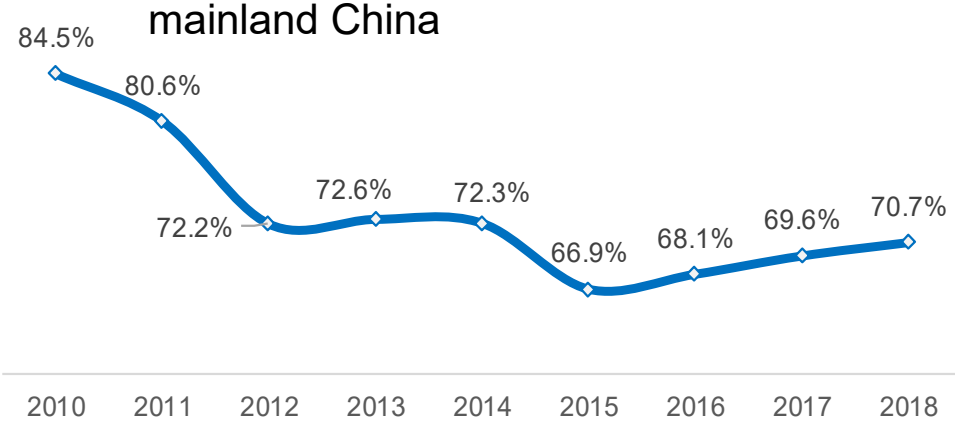
Data source: China Cement Association

2. Current Status and Characteristics

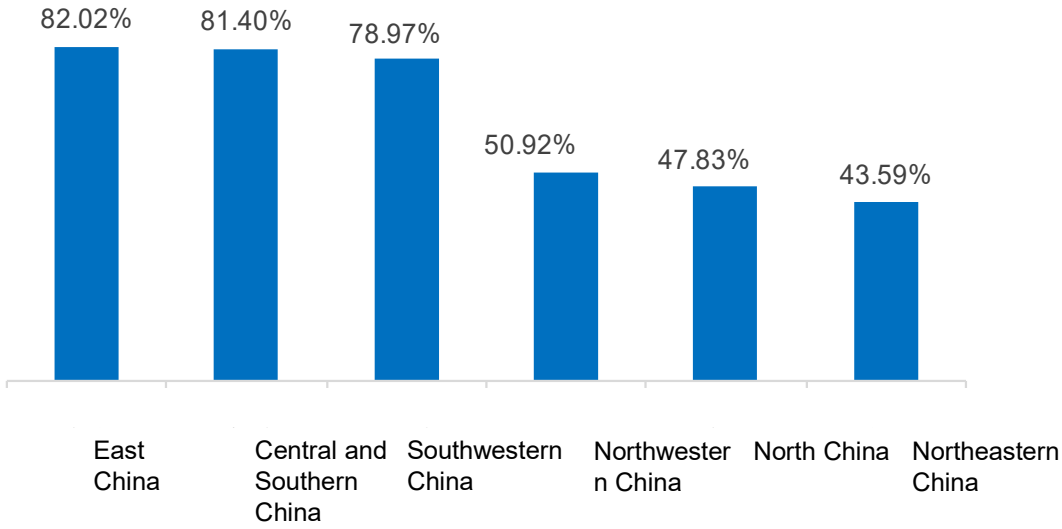
（2）Severe overcapacity:

- Capacity utilization is low, with a wide gap between the north and south and between the east and west. The rate is less than 50% in some areas.

Clinker capacity utilization in mainland China



Clinker capacity utilization by region in 2018



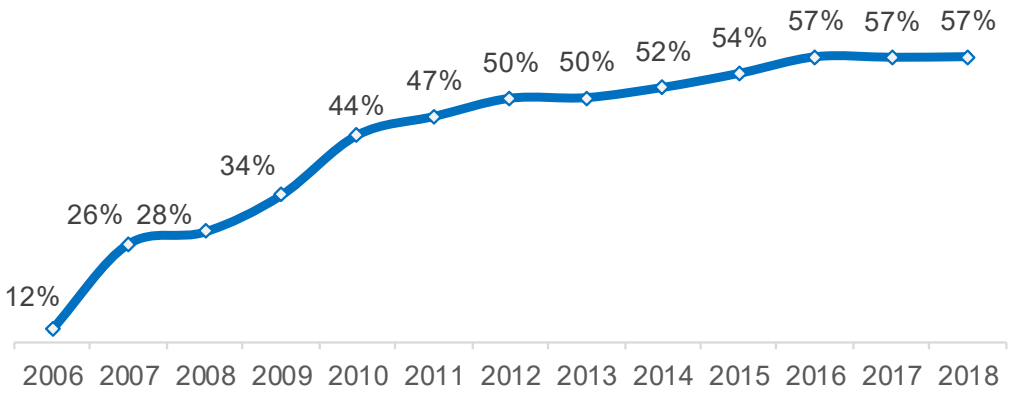
Data source: China Cement Association – Digital Cement

2. Current Status and Characteristics

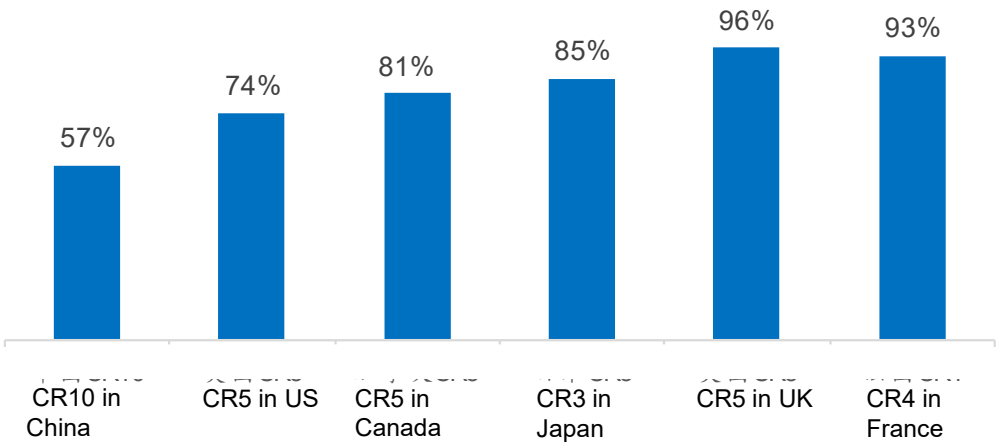
（3）Low industrial concentration:

- In 2018, clinker capacity concentration of the top 10 enterprises was 57%, lagging behind that in developed countries.
- By June 30, 2019, there were totally 3,427 cement enterprises, among which 1,148 were engaged in clinker + grinding, 57 clinker, 2,202 grinding and 20 cement proportioning.

Clinker capacity concentration CR10 in mainland China



Concentration rate by country



Data source: China Cement Association – Digital Cement, Huatai Securities, Ccement.com.

2. Current Status and Characteristics

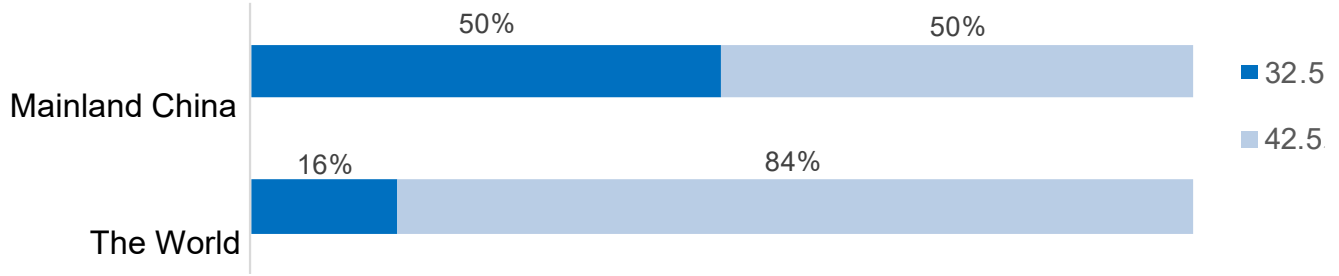
（4）High level technology and equipment:

- Techno-economic indicators lead the world and global market share of whole-set equipment and engineering services reaches 65%.

Indicator	Unit	Standard Value	Target Value	Best Performance So Far
Standard coal consumption of clinker	kJ/kg	3,160	3,013	2,750
Comprehensive power consumption of clinker	kWh/t	60	56	45

2. Current Status and Characteristics

（5） Irrational product structure: Production of cement 32.5 accounts for around 50%.



（6）Heavy environmental pressure: PM emission is less than 1/5 of the previous level; other pollutant emissions are reduced greatly.

Unit: mg/m3

	Previous Chinese standard (1985)	Previous Chinese standard (1996)	New Chinese standard (2013)	Ultra-low emission standard	
				Henan (2018)	Hebei (2019)
PM	150-800	100-150	20-30	10	10
NOx	_	800-1,600	320-400	100	100
SO_2	_	400-800	100-200	50	30

3. Exploration and Practice

（1）Multi-measures to resolve severe overcapacity

- **Supply-side structural reform**: Cut overcapacity, destock, deleverage, reduce costs and shore up weak spots.
  The core lies in cutting overcapacity: Limiting new capacity and phasing out the backward.
- **Off-peak production and restricted production for environmental protection**:
  Production is suspended for 4-6 months in the winter heating period in the north;
  In other areas, production is staggered properly according to actual conditions.
- **Self-disciplined production limitation**: Rational competition is advocated to maintain the market environment.

（2）Green, environmental-friendly, smart and sustainable development

THANKS!