

Titanium Sponge Production in China

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Introduction

- Wellmet International, Inc.
- Exclusive US representative of Zunyi Titanium Co. Ltd, China
- Zunyi is the largest titanium sponge producer in China with full capacity of 34000mt, sponge are used in aerospace and other industries in China.

Titanium Sponge Production in China

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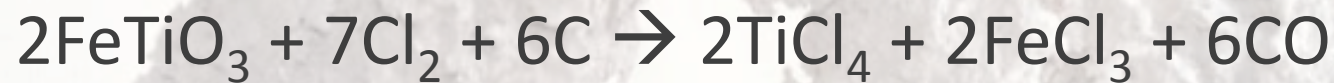


Main talking points

- Product Details
- Pre-2005: Developmental Stage
- Post-2006: Increasing Supply
- 2008: Financial crisis in the US
- 2013: Sponge production
- Conclusion

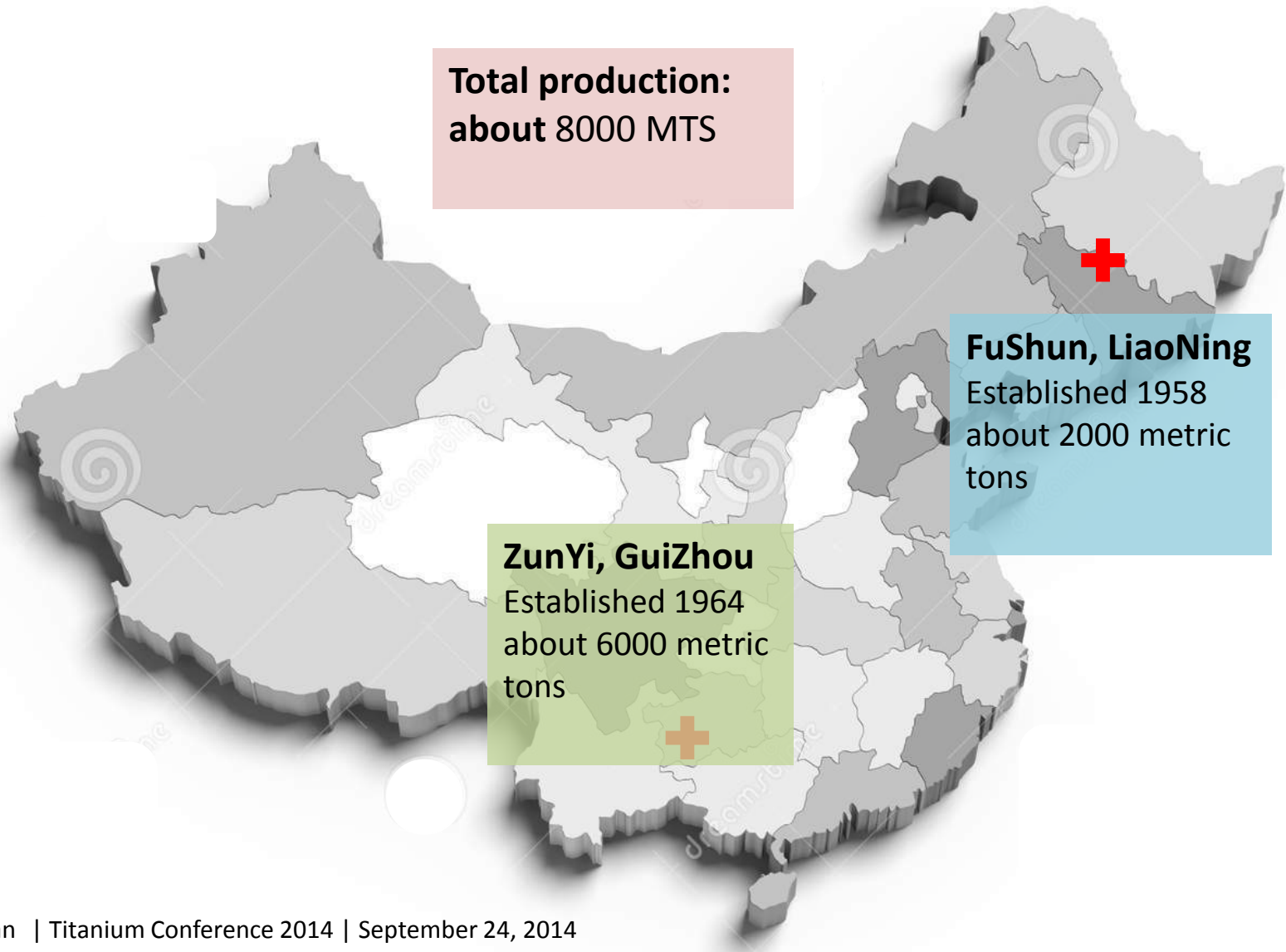
Product Details

- **The Kroll Process**



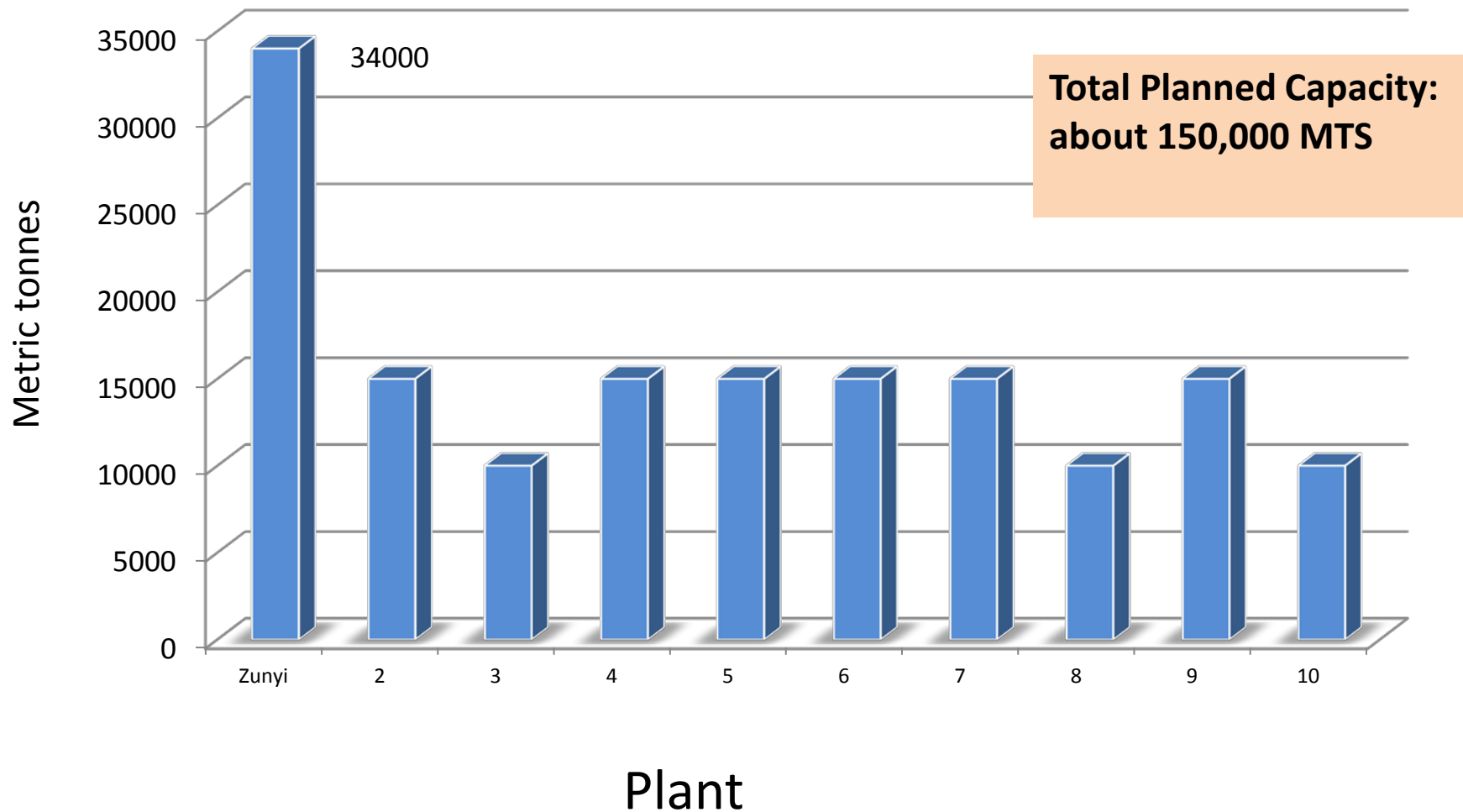
- **ZunYi:** only producer to actively recycle used **Mg**.

Pre-2005: Developmental Stage

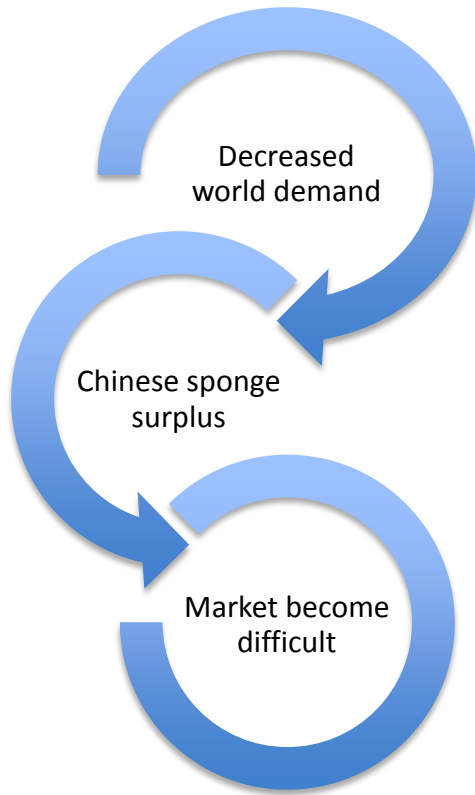


Post-2006: Potential Capacity

Titanium Production (mt) per plant



2008: Global Recession



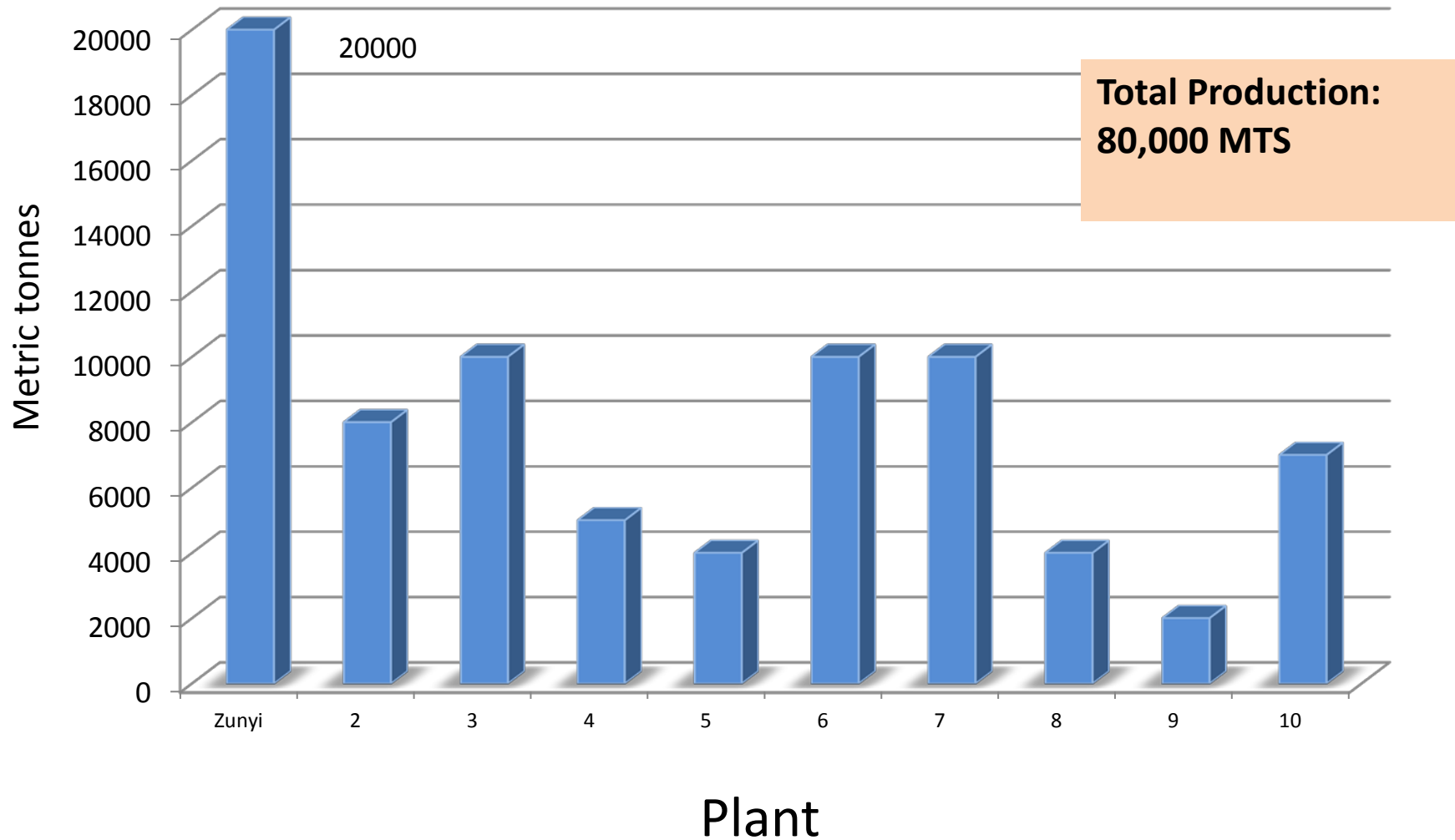
**Market showed
some recovery
post 2011**

- **Chinese landscape**
 - GDP growth ~ 9.6%
 - Stimulus plan boosts economy
 - New projects mostly in developmental stage

**Investment on sponge
Projects initially
unaffected**

2013 Sponge Production

Titanium Production (mt) per plant



Current State of Sponge Production

Difficult overseas conditions

- Overcapacity resulted from high investment
- Difficult overseas market
- Ti sponge producers not profitable

Difficult domestic conditions

- 2013 GDP growth 7.7%
- Smaller and uncompetitive producers closed
- Major producers cutting productions

Conclusion

- Volatility in the Titanium sponge market
 - Pre-2006 are very low production of sponge
 - 2006-2012 high investment resulted over capacity
 - Post-2012 producers forced to make cuts
- GDP chasing is not very popular now in China
- Over capacity of some industries addressed
- The market features will play more roles in deciding the production or capacity of the sponge.