

2015 TZMI China Day

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Investing in China's Future
投资中国的未来

November 19, 2015

Disclaimer – Forward Looking Statements



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- changes in product pricing assumptions;
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- changes in equipment life or capability;
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Non-IFRS Financial Information

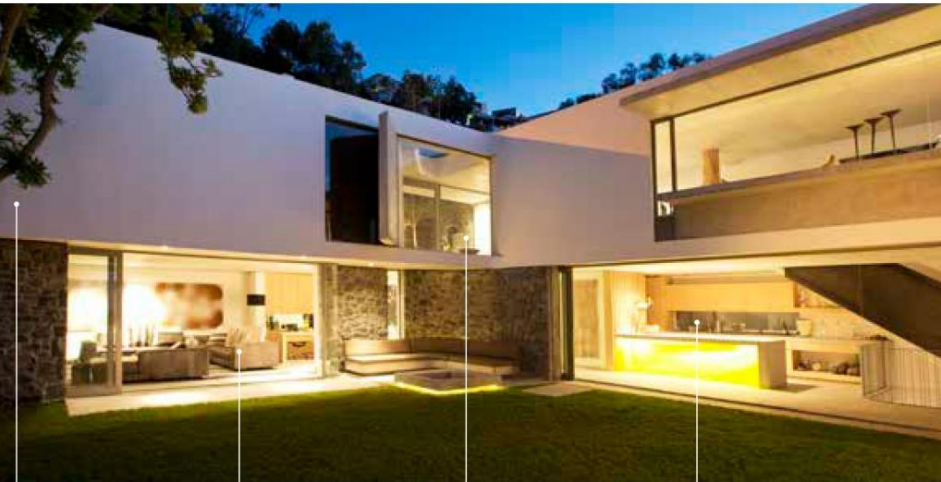
This presentation uses non-IFRS financial information including mineral sands EBITDA, mineral sands EBIT, Group EBITDA and Group EBIT which are used to measure both group and operational performance. A reconciliation of non-IFRS financial information to profit before tax is included in the supplementary slides. Non-IFRS measures have not been subject to audit or review.

Mineral Resources Estimates

The information in this presentation that relates to Mineral Resources estimates on the Tapira and Puttalam Projects has been previously announced to ASX (see relevant slides for details). Iluka confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. Iluka confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Mineral Sands – Part of Everyday Life

矿砂 – 日常生活的一部分



Roof/building/construction

Home/office

Bathroom/lifestyle

Kitchen/utilities



Automotive

Sporting goods/recreation

Healthcare/medicine

Aircraft/industry



Iluka's Approach

澳禄卡的方法



Objective: Create and deliver value for shareholders

目标：创造和传递价值给股东



Three key aspects:

三个关键方面：

- flex asset operation in line with market demand
- 灵活的资产业务与市场需求一致
- preserve and advance growth opportunities
- 保护和推进增长的机会
- act counter cyclically where appropriate
- 适当的时候采取行动以抵消市场周期变化带来的影响

Organisational capabilities and alignment critical

组织能力和调整很关键

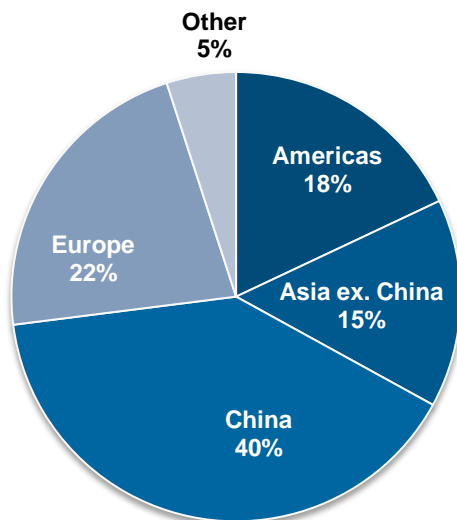
Company Overview

公司概况



- Largest producer of zircon in the world
- 世界最大的锆英砂生产商
- Significant high grade titanium dioxide producer (rutile and synthetic rutile)
- 重要的高品位钛矿生产商（金红石和人造金红石）
- ~10 years reserve life; resources¹ ~ 5 times reserves
- 十年的储量寿命；净储量 ~ 5倍于储量
- Royalty from BHP Billiton's Mining Area C in WA
- 来自于比和必拓位于西澳C矿区的开采税
- Strong balance sheet, 3.9% gearing as at 31 December 2014
- 强健的财务报表，截至2014年12月31日，负债比率为3.9%

2014 Revenue by Region



Notes:

¹ Net of reserves

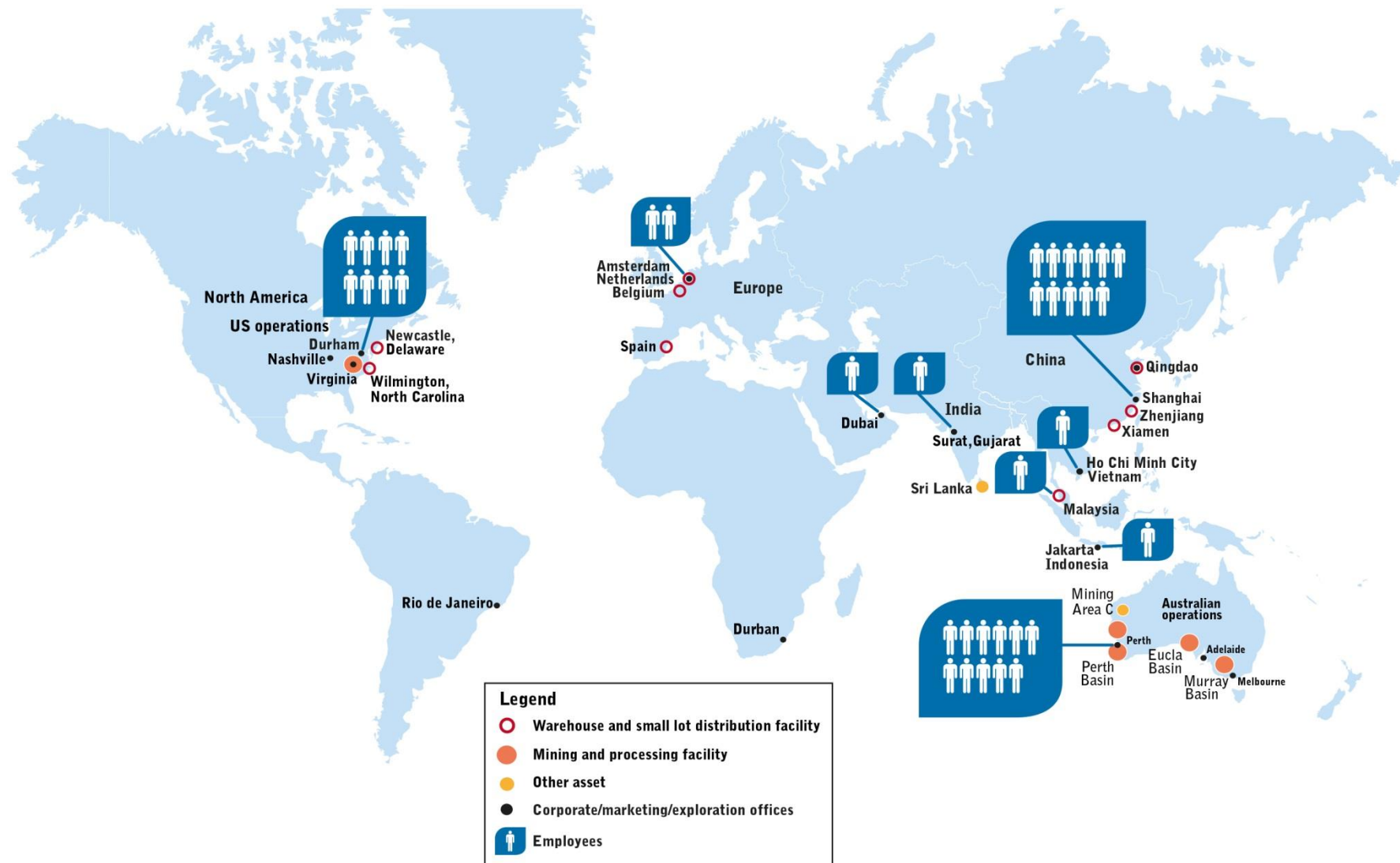
Note:

(1) As of December 2014

(2) Reflects FY 2014 Revenue Distribution

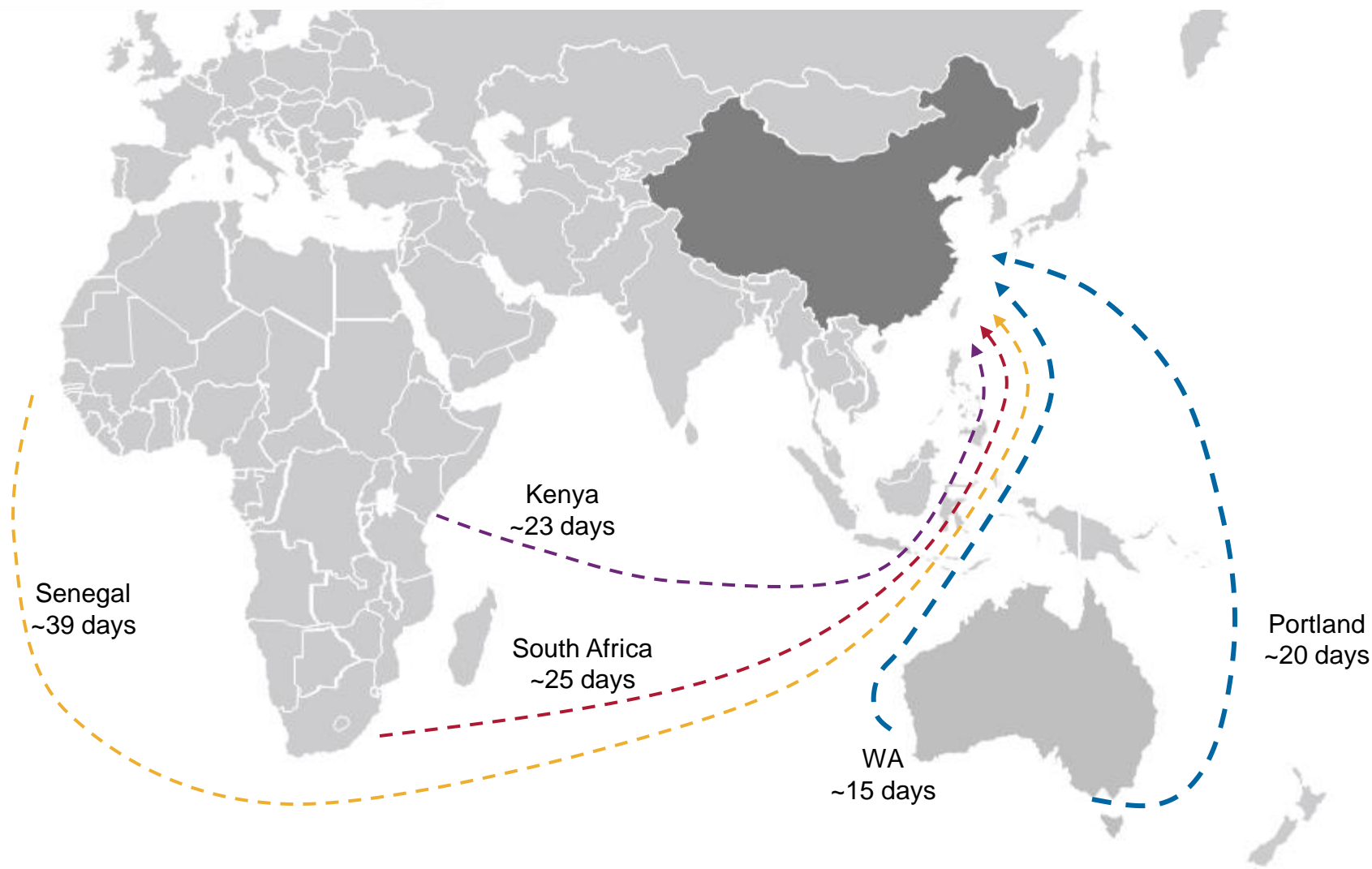
International Customer Support

国际客户支持



Freight Advantage

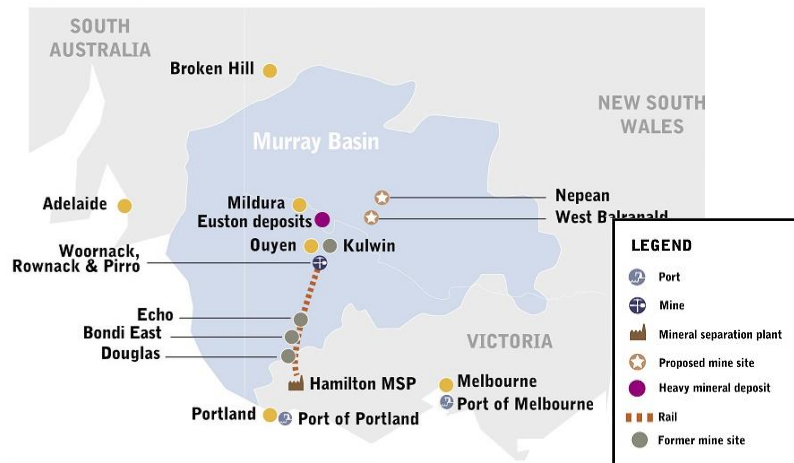
货运优势



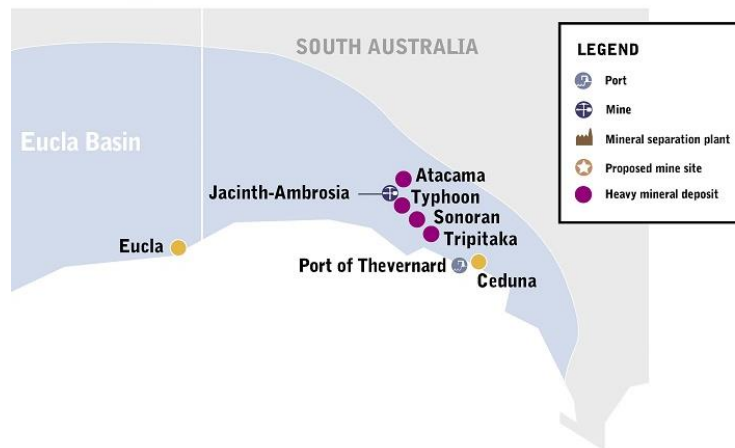
Project Development Options

项目发展的选择

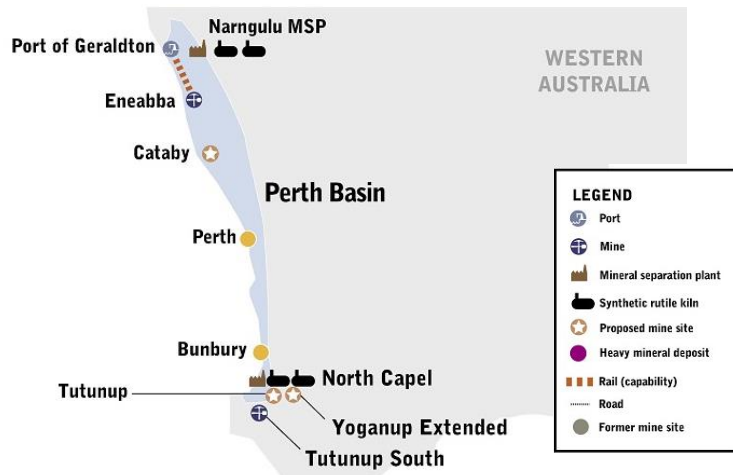
Balranald, New South Wales



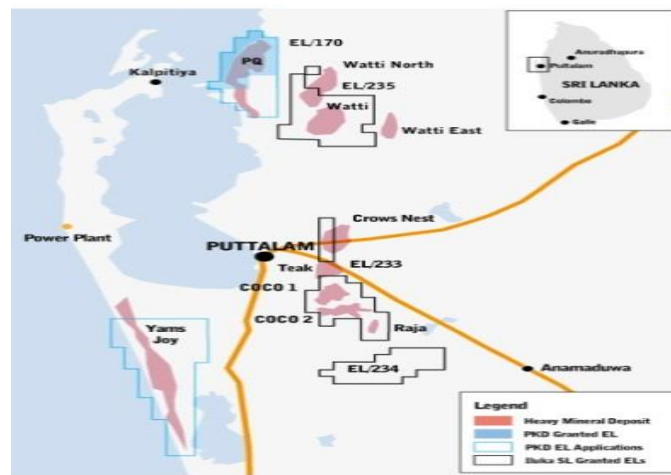
Eucla Basin Satellite Deposits, South Australia



Catby, Western Australia



Puttalam, Sri Lanka



SR2 Up and Running

人造金红石开炉生产

- SR2 start up in late March 2015
- 人造金红石二厂于2015年三月早些时候开炉生产
 - Zero recordable safety incidents
 - 生产事故零纪录
 - On time
 - 准时
 - On budget
 - 按计划
 - On specification
 - 按质量
 - Ahead of forecast on production volumes
 - 超出生产的预测



North Capel operation, Perth Basin, Western Australia

Asset Operation Flex – Results

资产业务的灵活 – 结果



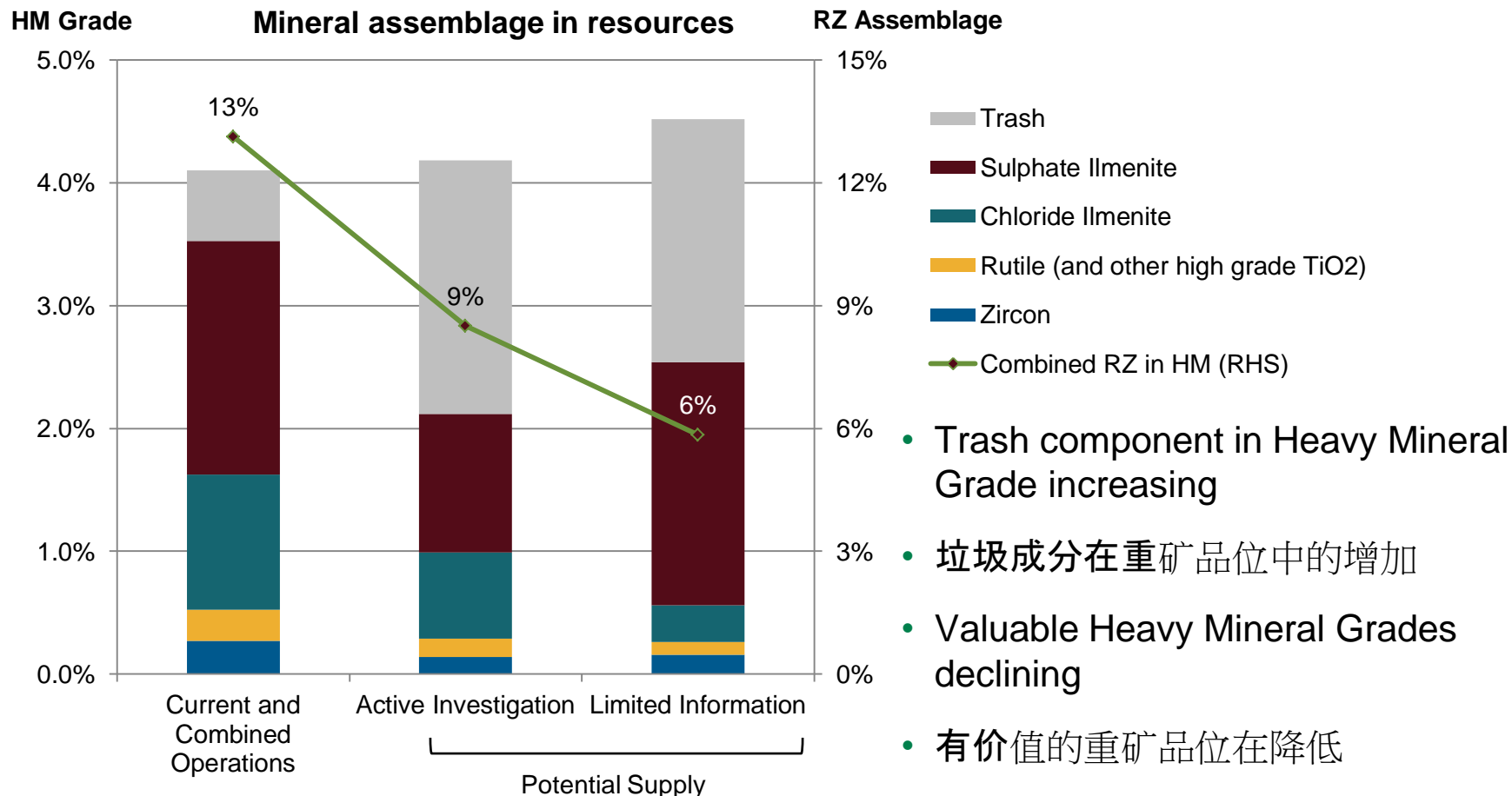
- Recent market conditions challenging, but Iluka has maintained:
- 最近的市场环境具有挑战性，但是澳禄卡依然保持着：
 - free cash flow generation
 - 产生现金流
 - balance sheet strength
 - 强健的报表
 - inventory monetisation potential
 - 库存变现的潜力
 - production reactivation capability (at low / appropriate capital cost)
 - 重新生产的能力（以适当的低成本）
 - e.g. recent SR kiln reactivation
 - 最近人造金红石炉子重启
 - market development activities
 - 市场拓展活动



Synthetic Rutile Kiln
Perth Basin,
Western Australia

Global Grade and Assemblage Challenges

全球矿的品位和矿藏的挑战



- Trash component in Heavy Mineral Grade increasing
- 垃圾成分在重矿品位中的增加
- Valuable Heavy Mineral Grades declining
- 有价值的重矿品位在降低
- RZ assemblages reducing
- 金红石和锆英的矿储在减少

Exploration 开采

- Consistently and well funded exploration programme ~\$20 million per annum
- 持续并且有很好资金保障的开采项目 – 每年两千万澳币
- Gated approach to exploration expenditure
- 门控的方法来应对开采的支出
- Mineral sands exploration in Australia
- 在澳洲的矿砂开采
 - testing new concepts in mature basins
 - 在成熟的盆地测试新的概念
- Increasing international focus
- 增加国际聚焦
 - Sri Lanka, Kazakhstan, Brazil, US, Denmark
 - 斯里兰卡, 哈萨克斯坦, 巴西, 美国, 丹麦
- Targeting ‘adjacent’ commodity opportunities
- 把伴生商品的机会做为目标
- Capturing opportunities when others are ‘cash strapped’
- 当其他竞争对手缺乏资金的时候抓住机会



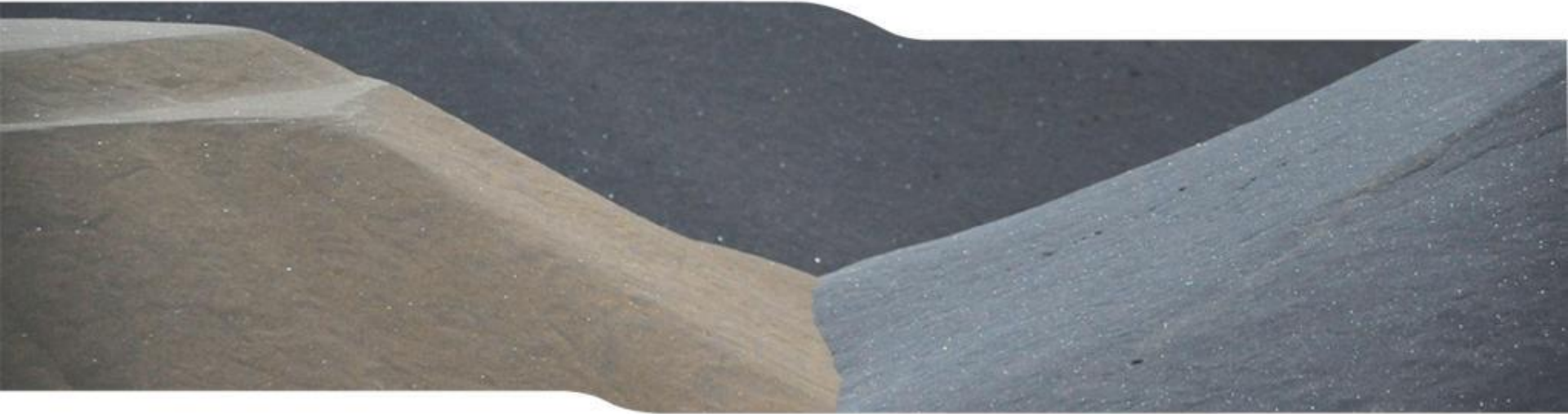
Consistent Investment
in Exploration



ILUKA

China TiO_2 Feedstock Market

中国钛原料市场



Peter Slyth

Vice President TiO_2 Sales - Asia

China TiO₂ Industry Overview中国钛工业进展

Plants & TiO₂ Feedstocks工厂及钛原料



- China's titanium industry consists of over 250 plants;

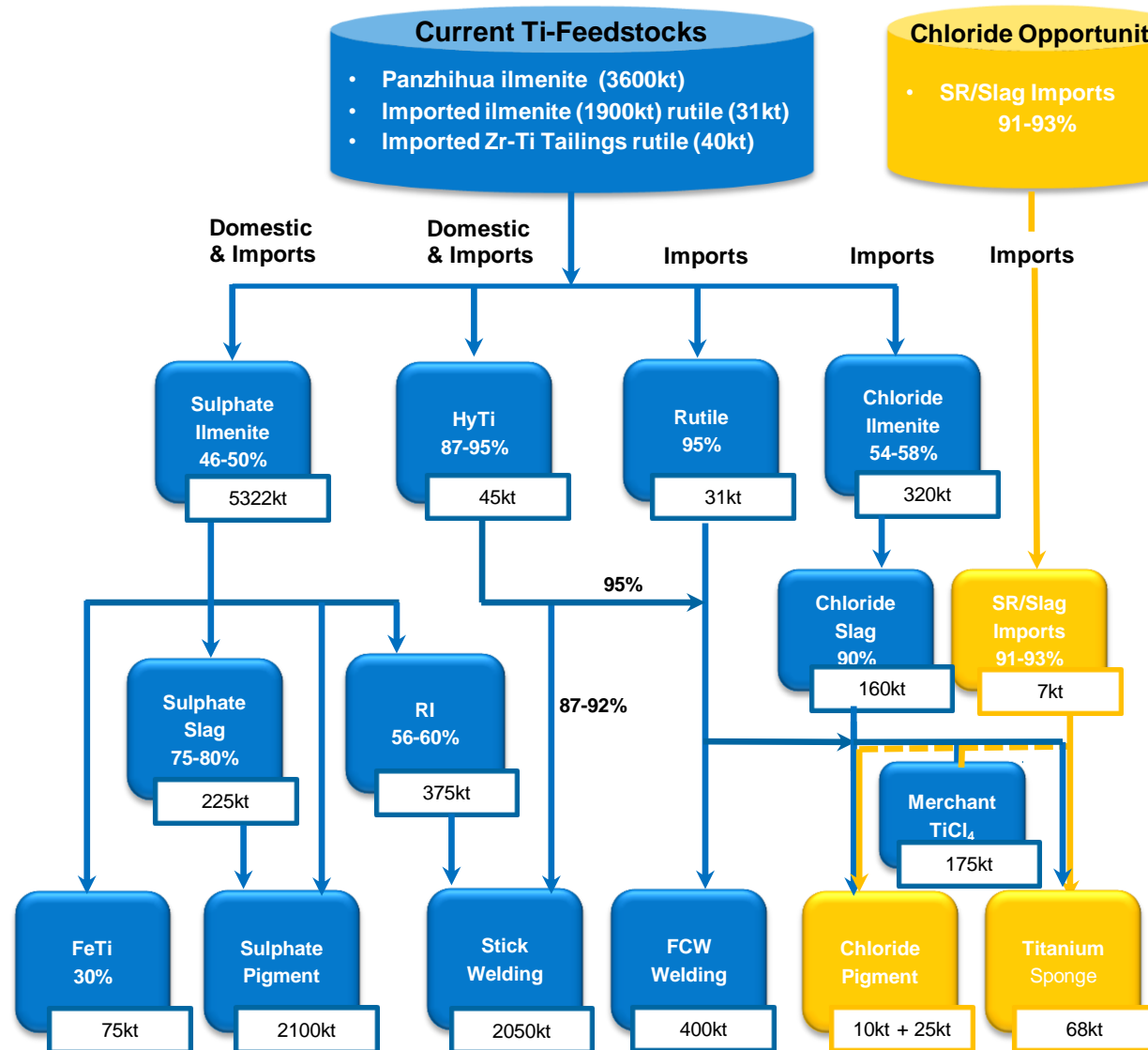
中国钛工业有大约250家工厂

- Existing Sulphate Pigment, Ti-Sponge, Welding, Fe-Ti plants
现有硫酸法钛白，海绵钛，焊接，钛铁工厂
 - Linked with upgraded products; RI, Sulphate Slag, Chloride Slag, Merchant TiCl₄
加上钛原料加工产，例如还原钛，酸渣及高渣，四氯化钛
 - Emerging Chloride Pigment
新兴氯化钛白
- Over-capacity and low utilisation rates are a key feature of the TiO₂ industry
产能过剩，低开工率是目前钛行业现状的一个缩影

China TiO₂ Feedstock Flowchart

中国钛原料流程图

FY 2014



TiO₂ Feedstocks 钛原料

Upgraded Products 中间产品

End Products 最终产品

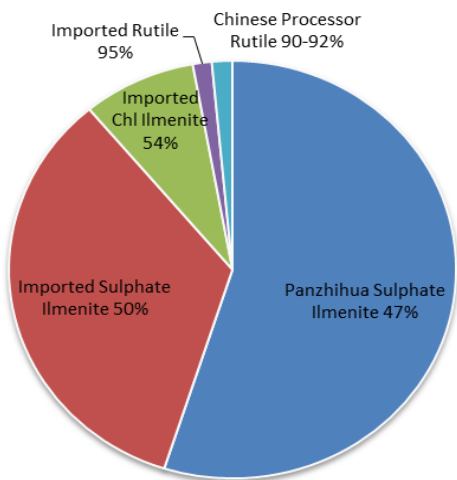
China TiO₂ Feedstocks

中国钛原料

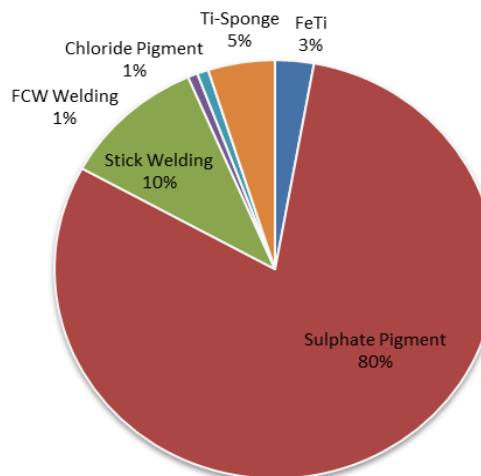
FY 2014

- China requires 2.7m tpa of TiO₂ feedstock units
中国钛原料需求270万吨Ti
- Sulphate pigment is the dominant end product accounting for 80% of TiO₂ units
硫酸法钛白对钛原料需求占主导，大约80%钛（以钛单独计算）
- China is partly self-sufficient in ilmenite but also requires high quality TiO₂
中国钛矿部分自产自销，同时也需要进口高质量钛原料，如钛矿和金红，满足国内需求。
- Since 2011 Chinese processing plant capacity has expanded to provide TiO₂ feedstocks
自从2011年，中国加工厂产能增加，供应钛原料

**China TiO₂ Raw Feedstocks
(2.7m TiO₂ Units)**



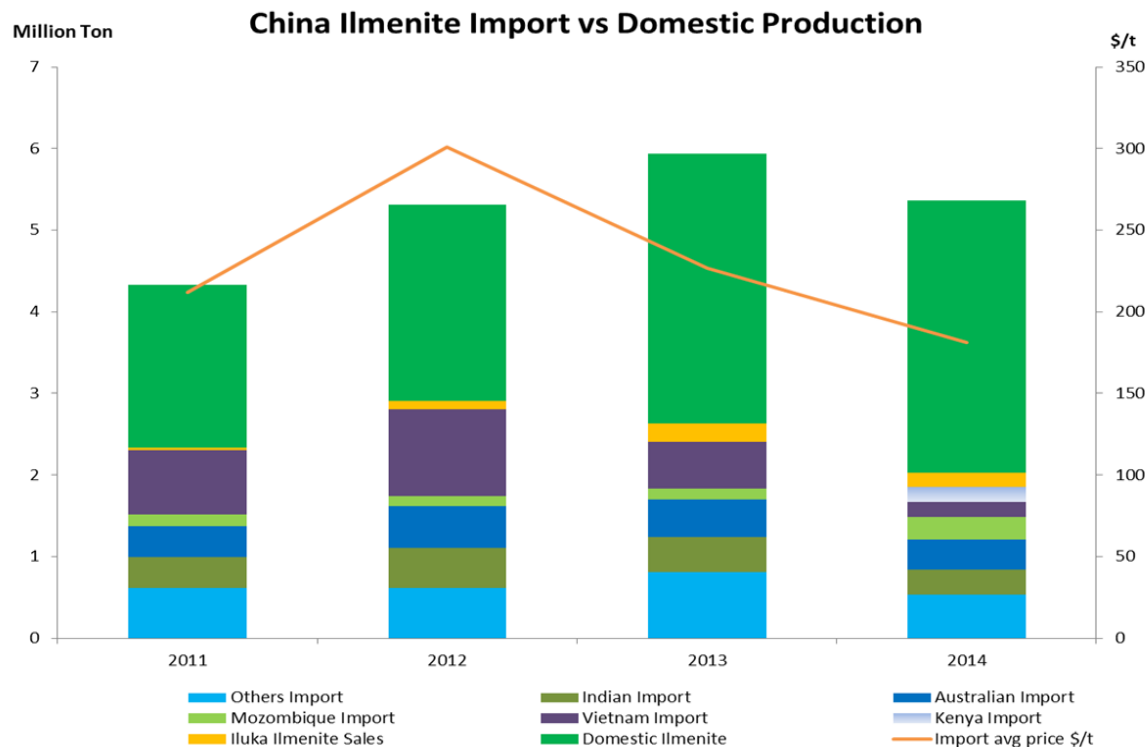
**China TiO₂ Feedstock in End Products
(2.7m TiO₂ Units)**



China Ilmenite Imports vs Domestic Supply中国

进口钛矿与国产矿对比 2011-2014

- China's domestic ilmenite market share is increasing versus imported ilmenite
相比进口矿，国产矿份额增加
- African suppliers are replacing Vietnamese and Indian imports
非洲供应逐渐取代越南和印度进口量
- Ilmenite imports are increasingly chloride slag feedstocks for pigment/sponge end markets
进口矿主要加工高钛渣，供氯化钛白和海绵钛生产终端市场。



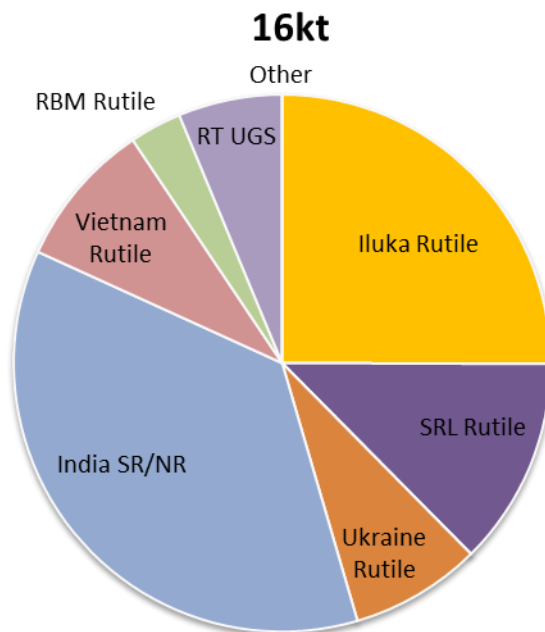
China Chloride TiO₂ Feedstocks 中国氯化钛原料



Chloride Market Share 氯化市场份额

- Chinese slag 90-92% TiO₂ supplies 86% of China's existing chloride market
国产高钛渣和加工天然金红石可以满足86%传统旧的氯化技术需求
- Rutile/synthetic rutile are increasingly important to feed China's **new fluid-bed** chloride plants
天然/人造金红石将对新的沸腾氯化钛白发展越来越重要
- Iluka supplied 25% of China's chloride feedstock imports in 2014
2014澳禄卡金红石占全部进口的1/4

2014 China Chloride TiO₂ Feedstock Imports



Chloride Pigment Process

氯化法钛白粉生产流程

Plant Economics – Value in Use

工厂经济——使用价值

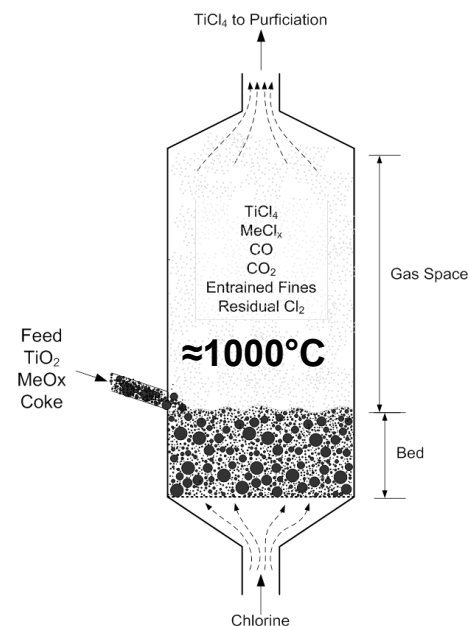
- Majority of chloride pigment plants target a “head grade” between 88% and 92%
绝大部分的氯化法钛白粉工厂的目标品位在88%-92%之间
- Feedstocks have unique characteristics – requiring extensive testing and optimization:
原料具有独特性——要求大量的测试和优化
 - value in use models
使用价值模型
 - waste generation, by products
废物产生，副产品

TYPICAL CUSTOMER FEEDSTOCK BLEND

典型的客户原料混合

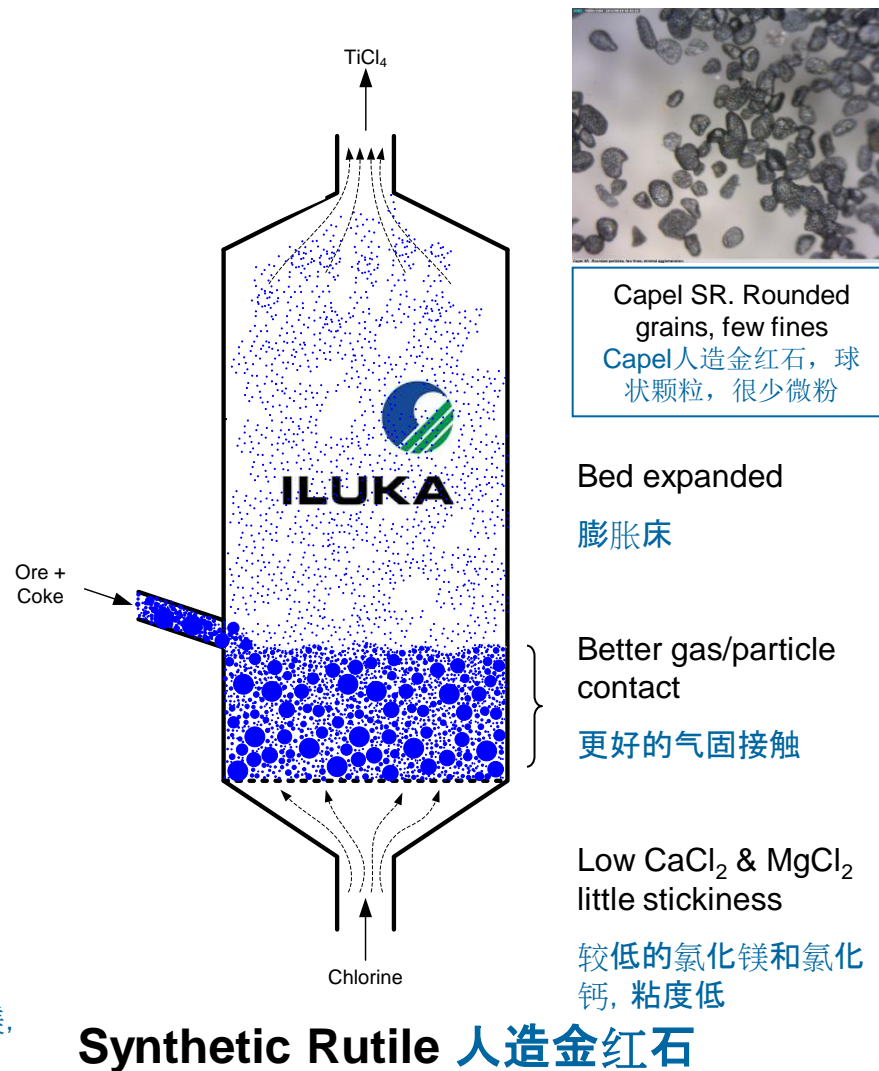
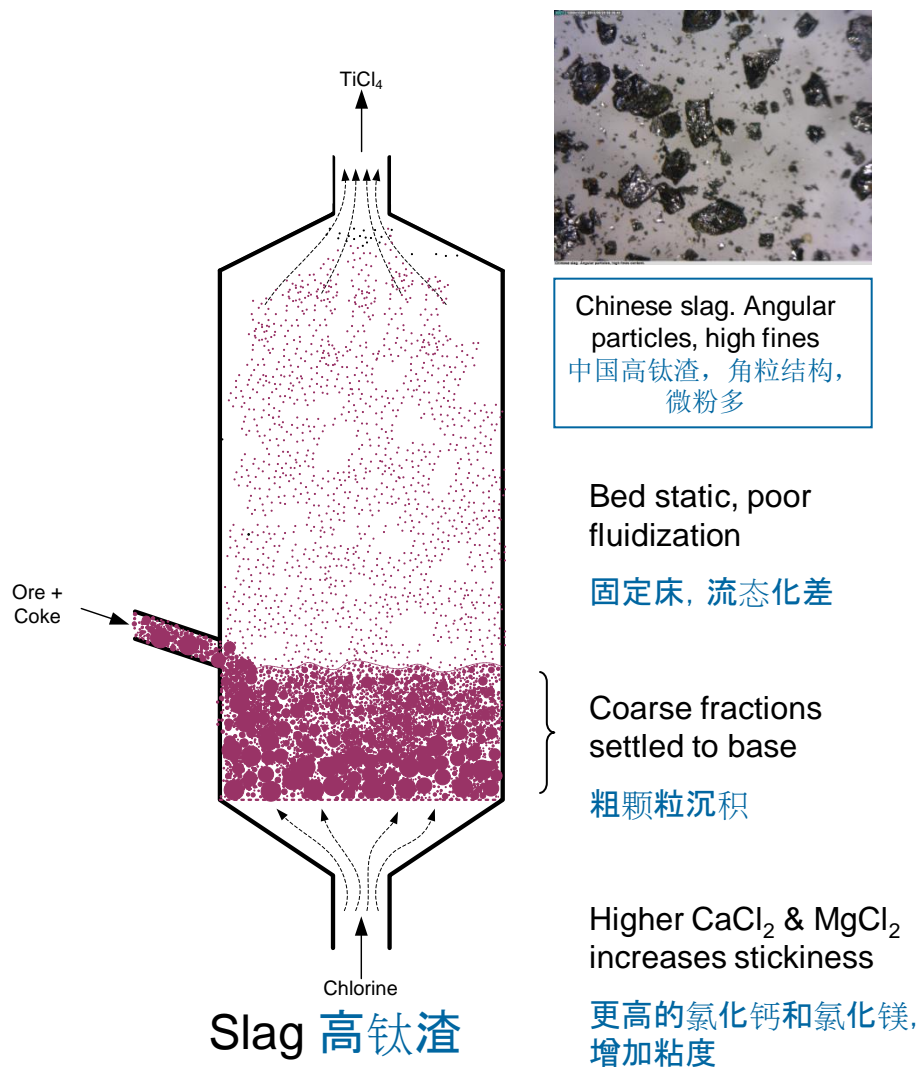
Feedstock 原料	TiO ₂ (%)	Value in Use Considerations 使用价值考虑
Synthetic Rutile 人造金红石	92	High TiO ₂ content – good lateral velocity resulting in reduced wear on refractory lining 钛含量高——由于耐火炉衬的磨损降低而提高了利用率
Chloride Slag 氯化法钛渣	86	Lower TiO ₂ content, higher chlorine consumption, higher waste generation 钛含量低，更高的氯消耗量，更多废物产生
Target Head Grade 目标品位	90	Provides best economic fit for various parameters 针对不同的参数提供最好的经济使用性

Chlorinator



Fluid Bed Comparison

沸腾氯化对比



Comparing Iluka SR to Slag

澳禄卡人造金红与高钛渣的比较

Low CaO + MgO.
Less bed stickiness and
duct deposits
镁，钙低，较少的板结和灰
尘沉积

Lower waste generated
产生较少的废物

Lower average particle size =
better fluidization & fewer fines
平均粒径更小，沸腾氯化率更
高。同时较少的微粉

	SR Premium	Chinese Slag ≈ 92	Chinese Slag ≈ 94
TiO ₂	92.1	92.0	94.6
Al ₂ O ₃	1.14	1.90	1.41
CaO + MgO	0.33	1.37	1.88
Fe(t)	3.6	3.34	2.86
MnO	1.00	1.41	1.67
P ₂ O ₅	0.03	0.01	0.01
Waste (all sources)	207 kg / tonne TiCl ₄	242 kg / tonne TiCl ₄	212 kg / tonne TiCl ₄
D50 μm	168	235	215
Size <75 μm	0.7	13.3	12.8

China Chloride Feedstock Market

中国氯化原料市场简介



- Chinese government 5-yr plan very supportive of the chloride industry
中国政府的五年计划鼓励氯化工业发展
- However, two key barriers are;然而，面临两个屏障
 - Fluid-bed chloride technology 沸腾氯化技术
 - Lack of suitable domestic high grade TiO_2 feedstocks >90% TiO_2 高品质钛原料
- China's domestic chloride slag capacity expanding but high $\text{CaO}+\text{MgO}$ limits usage
中国国内高钛渣产能将扩张，但是低钙镁矿有限。
- Continued supply of tailings processor rutile is uncertain with mine closures
需要加工的金红石尾矿供应不稳定伴随者矿厂的关闭
- Iluka has significant rutile/synthetic rutile feedstocks to blend in with Chinese chloride slag
澳禄卡供应充足的天然和人造金红石，这些原料是公认的配比高钛渣的理想原料
- Iluka's CTC will test the most efficient, cost-effective feedstock blends for customers
澳禄卡技术中心将为客户测试最有效，最节省成本的原料混合

Iluka – Investing in China's Future

澳禄卡-投资中国的未来



- Establishment of Iluka China Technical Center – opening 2016
成立澳禄卡中国技术中心 – 2016年开业
- Regular technical visits to customer production facilities – deepen collaboration
经常技术拜访客户的生产线 – 加深合作
- Educate customers on Iluka's resources, expertise, investment and commitment
给客户灌输澳禄卡的资源，专业性，投资和投入的价值
- Utilise state of the art equipment to optimize Iluka's products in customer formulas
利用最先进的设备来优化澳禄卡产品在客户生产中的应用
- Provide local quality testing capabilities
提供产品能够本地测试的服务

TECHNICAL COLLABORATION



MARKET DEVELOPMENT



PROCESS TECHNOLOGY



QUALITY TESTING



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