Refractory Bauxite Trends

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Supply

- Continuing uncertainty about Chinese supply
- Existing Guyanese production expanding
- New production from Guyana
- Brazilian developments
- Indian production with upgrading

Logistics

- > Major influence on logistics during pandemic
- > Container shipments costs from China risen 10 fold in a year
- Severe shortages of containers from Asia to Europe/North America
- Bulk and break bulk shipments continuing to larger customers and traders with warehousing facilities
- Shipments from Guyana were normally in bulk
- Effect likely to be temporary, but could last throughout 2021 and into 2022

Trade patterns

China still to be major factor in world trade at least in short to medium term

➤Guyana gaining in importance again

- >Existing operations largely unaffected through pandemic
- >New operation currently exporting raw washed bauxite for calcining
- >At some stage plan to install local calcining plant
- Potentially bulk shipment developments from Guyana to India as alternative to Chinese imports
- Suyana fastest growing country in the world in 2020
 - Due to income from major oil and gas developments and may eventually result in enhanced port facilities

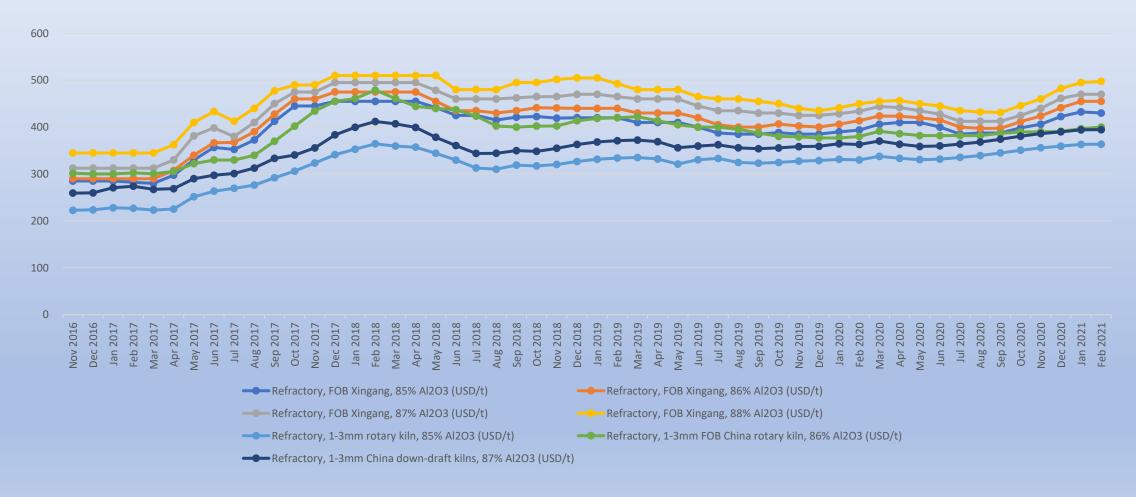
Prices

EU and USA Imports Bauxite Average Price

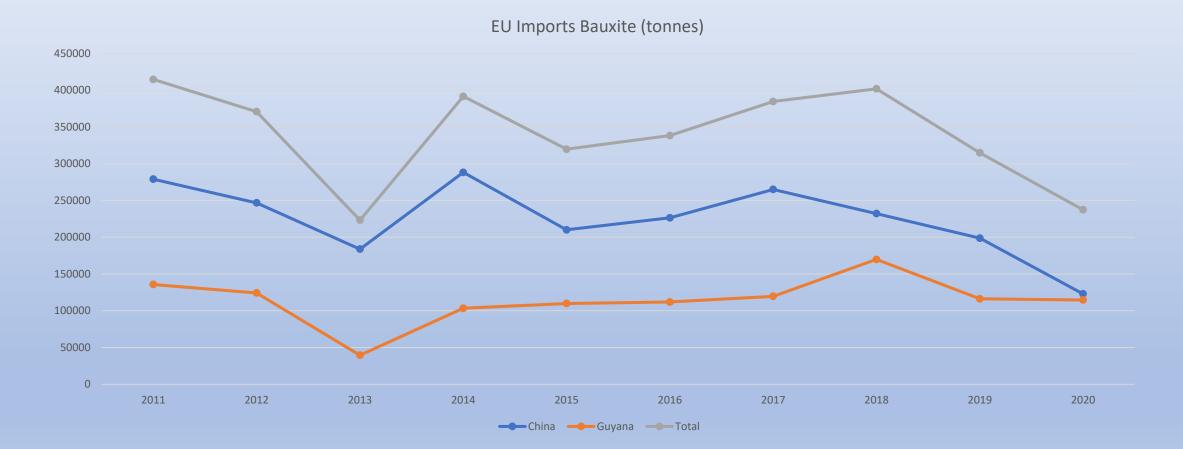


Some low cost imports from Guyana to Ireland and others EU countries eliminated as uncalcined metallurgical grades. Some allowance made for raw imports to Spain from Guyana for calcining, but may still show lower average figures. US figures from separate category for calcined bauxite.

Published Chinese Bauxite Prices

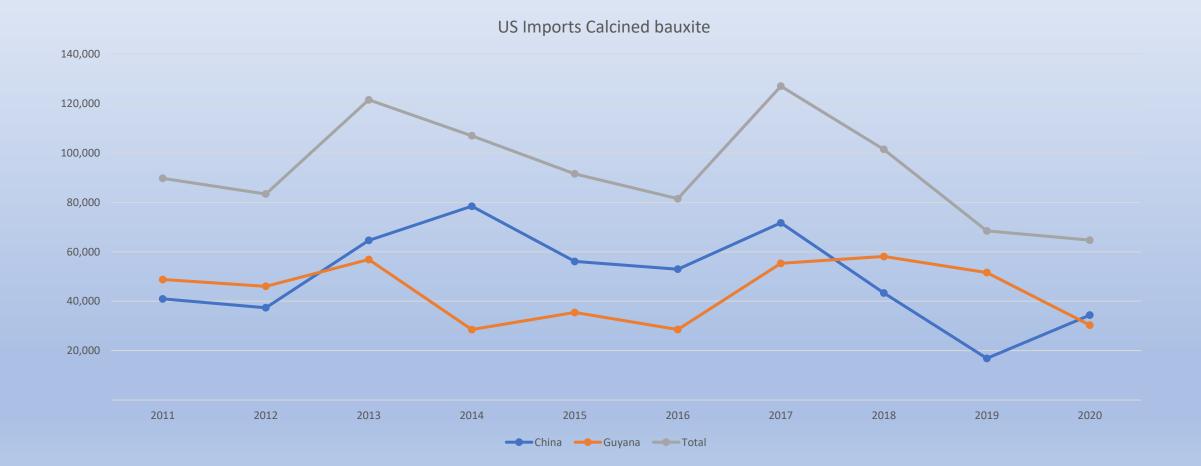


Covid effects on volumes EU



Amended to remove low cost metallurgical grade

Covid effects on volumes USA



Covid effect Japan & China

- Japan experienced considerable decline in bauxite (and other refractories consumption in 2020 with imports from both China and Guyana well down
- Chinese refractory demand and the economy in general has grown during 2020 after a hard lockdown restricted domestic spread of Covid 19 with steel production rising by 5.2% compared with 2019
- Greater use of high alumina refractories in recent years using tabular alumina, WFA and calcined alumina may have reduced demand for calcined bauxite and BFA.

Outlook

- Supply from China remains uncertain, especially for higher grades
- Logistics cost expected to return to more normal levels possibly in 2022 but concerns about long supply chain likely to remain
- Supply from Guyana seems likely to grow from both existing calcination plants and from raw washed bauxite exports with eventual local calcination
- Large oil and gas discoveries and development in Guyana could change the economics of calcined bauxite production if infrastructure developments allow the use of local low cost gas to replace imported heavy fuel oil for calcining
- Potential for further availability of refractory grades from Brazil, higher in iron but low in titanium and potentially greater use of local bauxites for refractories in India
- If recovery from the pandemic is strong, supply may struggle to meet demand in the short term, especially if there is a short term "catch-up" surge

Roskill

Non-metallurgical Bauxite & Alumina

Outlook to 2029, 10th edition



Thank you for listening

If you have any questions I am happy to answer in this session if possible. Otherwise please feel free to send them to me at the contact details below TAK Industrial Mineral Consultancy

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