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THE NON-METALLURGICAL BAUXITE AND ALUMINA INDUSTRY WORLDWIDE

A MARKET / TECHNOLOGY REPORT

By Ted Dickson, *TAK Industrial Minerals*

ISBN 1 871677 62 9 (Published February 2011)

The report provides in-depth information on:

- Detailed information on production, consumption, imports and exports for non-metallurgical bauxite and alumina worldwide, including up-to-date statistical data presented in tables, and in-depth analysis of the current and potential markets
- Full listing of metallurgical and non-metallurgical bauxite and alumina mines and refineries worldwide, including annual quantities mined and processed, and location of mines and plants
- Market status and production levels for non-metallurgical bauxite (raw and calcined) for refractories, abrasives, chemicals, cement, etc.
- Market status and production levels for non-metallurgical alumina (calcined, fused, tabu1ar, high purity) for refractories, abrasives, advanced and traditional ceramics, catalysts, absorbents, etc.
- Review of aluminium trihydrate (ATH) markets, including chemicals, flame retardants, fillers and additives, and potential for market development
- Specifications for commercially available non-metallurgical alumina and bauxite grades
- Trends in prices, both current and forecast
- Technical developments in non-metallurgical bauxite and alumina processing and products
- Profiles of major companies in the non-metallurgical bauxite and alumina sector, including current status and financial results
- Analysis of overall markets for non-metallurgical bauxite and alumina and the drivers that influence them
- Over 100 tables and charts

Now available - "*The Non-Metallurgical Bauxite and Alumina Industry Worldwide*", a new market report that analyses the current position and future prospects for this important industry and its end-user applications worldwide.

Over 200 pages long and featuring more than 100 tables and charts of statistical data, the report updates and extends information presented in previous editions and assesses the effects of the recent economic downturn and the recovery that is already well underway across the industry (with record sales for alumina in 2010). The report is written by Ted Dickson, an industrial minerals consultant who is an acknowledged expert in the bauxite and alumina industry.

Total production of bauxite in 2009 was 201 million tonnes, a decline of about 2% over record high levels in 2008 but still an increase of 29% since 2004 and an increase of 55% over the last decade. Total production of bauxite in 2010 is estimated to have been 215 million tonnes, with much of the growth due to strong demand in China. More than 95% of raw bauxite is for use in the production of aluminium, with the remaining amount used in non-metallurgical applications, equalling about 8.0 million tonnes in 2010 and about 7.0 million tonnes in 2009, down from a peak of around 10 million tonnes in 2008.

The non-metallurgical applications are primarily in the refractories, abrasives, cement and chemicals industries. These different consuming sectors have had mixed fortunes in recent years. Some, such as water treatment chemicals, which use alumina trihydrate (ATH), have remained quite stable whereas the refractories and abrasives sectors have experienced sharply reduced markets, although these are now recovering.

Growth in the markets for raw bauxite in direct non-metallurgical applications is expected to be 3-4% a year, in such products as slag conditioners, cement and alumina-based chemicals. In recent years there has been considerable concern about the availability and price of calcined bauxite – used in refractories and abrasives – a situation that has arisen because of restricted supply from China.

Refractory grade calcined bauxite growth is determined largely by growth in the steel industry and is expected to be about 4% a year over the period 2011-2012, providing world economies continue to recover. Abrasive grade calcined bauxite is largely used to make brown fused alumina (BFA), but it is also used in applications such as proppants. Growth rates for abrasive grade calcined bauxite are expected to be about 3-4% a year (with a slightly higher growth rates for China). Proppants will also experience good growth rates due to the very large growth in shale gas production requiring hydraulic fracturing of the rocks.

Total production of alumina in 2008 was about 83 million tonnes, of which about 6 million tonnes was for non-metallurgical applications. The situation changed considerably in 2009, with particular declines in sectors such as refractories in the early part of the year. A recovery in the European markets began in the third quarter of 2009, with double digit increases. On a worldwide basis, sales of non-metallurgical grades of alumina had completely recovered by the second quarter of 2010. By the third quarter of 2010, sales reached a record level of 1.53 million tonnes, exceeding the previous peak of 1.42 million tonnes achieved in the third quarter of 2008. Longer term growth rates for non-metallurgical alumina are likely to be on the order of 3% a year, although there may be higher growth rates in certain sectors, such as refractories and ceramics.

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SOME OF THE 100+ TABLES FEATURED IN THE REPORT

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ABOUT THE AUTHOR

Ted Dickson has over 34 years experience in the industrial minerals industry. He spent more than twelve years on the editorial staff of Industrial Minerals magazine, working at both the London and New York offices, latterly as American Editor. He then spent five years with a mining company, Cluff Resources, primarily assessing opportunities for the company to diversify into industrial minerals. For the past 19 years, Ted Dickson has been working as an independent consultant, running TAK Industrial Minerals, which specialises in the markets for industrial minerals and includes, amongst its specialist activities, the production of dedicated reports and appraisals for individual clients within the minerals sector, as well multiclient studies on a range of industrial minerals, including alumina and bauxite. In recent years, he has carried out a number of detailed studies of the bauxite and alumina markets for private clients

Ted Dickson has also authored a number of technical and marketing papers on bauxite and alumina, including *Non-Metallurgical Alumina Markets – Recession and Beyond*, which was presented at the 16th Bauxite and Alumina Seminar, Miami, Florida, USA, in 2010, and *Tabular Alumina and Activated Alumina*, which appeared in *Bauxite & Alumina*, published by Industrial Minerals Information Ltd. He is also the author of the previous editions of this market report.

Established in 1985, Materials Technology Publications specialises in the publication of market reports within the area of industrial materials. Each report analyses the current and future prospects for specific industries and provides pertinent statistical data on production, growth rates, imports, exports, etc. Key companies are identified and their performances compared. The impact of advances in production methods and materials technology is also assessed.

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