Rutile

Nordic eyes benefits from pigment plant consolidation

- **Strongest TiO_2 growth expected in China**
- **Fewer and larger plants in Europe**
- **100,000 tpa Norway rutile 2014 start-up**

Simon Moores

Europe's titanium dioxide (TiO_2) industry will experience plant closures and consolidation in the coming decade as the push towards cost-efficient production in the face of lower cost Asian TiO_2 grips the continent.

This is the belief of Nordic Mining ASA's chief executive officer, Ivar Fossum, who is looking to position its 100,000 tpa Engebø rutile development to capitalise on a projected increase in demand for high grade feedstock.

"As the industry moves towards larger, even more cost-effective pigment plants, I am confident that the benefits of high grade feedstocks will be recognised," explained Fossum in an interview with **IM**.

"Higher transportation costs, carbon foot print and waste disposal costs are all factors that may impact the future supply patterns for the pigment producers," he added.

Europe has already experience two significant TiO_2 plant closures. Cristal Global's 65,000 tpa Le Havre sulphate plant in France and Huntsman Corp.'s 40,000 tpa sulphate plant in Grimsby, UK have both been closed in the last 18 months owing top profitability issues. Tronox Inc.'s 107,000 tpa Uerdington chloride plant in Germany is bankrupt but still active.

All of Europe's natural rutile supply is predominately sourced from operations in Sierra Leone, Australia, South Africa and Ukraine. Recently there has been a significant increase in demand for the high grade sources from China, a development which will add pressure on rutile supply.

Fossum said: "Considering the significant amounts of feedstocks being imported overseas into the European markets, I believe that a limited new supply from Norway will improve the supply balance between the major consuming regions."

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> **Ivar Fossum, CEO, Nordic Mining**

China's burgeoning TiO_2 industry has created a feedstock sourcing problem in the country which is now overflowing to miners not only outside of China but outside of Asia.

Walter Kansteiner, non-executive chairman of leading natural rutile miner, Titanium Resources Group, told **IM**'s sister publication *Metal Bulletin*, that China's paint sector is driving a glut of new enquiries for the Sierra Leone operator.

"China is really picking up. We have significant tonnage going out to China for the first time," Kansteiner said.

This is a sentiment that many agree with.

Fossum explained: "Asia and China in particular will undoubtedly represent the strongest growth of titanium consumption, primarily to the pigment industry. In Europe, we expect to see further consolidations which may lead to larger and fewer pigment plants. At the same time there is growth potential both in Russia and East Europe."

Engebø rutile chance

Nordic Mining's eclogite resource on Norway's west coast is where the company is planning to mine and process 100,000 tpa rutile with a grading of 95% TiO_2. The aim is to have what will be a globally significant source on a par with the world's leading producers by 2014.

At the end of 2009, Nordic Mining was pushing through an Industrial Development Plan and finalised an application for waste disposal. The resource hosts an estimated 380m. tonnes, enough to last 50 years (*IM 2 June 2009: Nordic rutile hearing*).

Engebø is designed to be integrated in a typical Norwegian fjord landscape. Hence the mine plan is based on an initial open pit of limited size, to be followed by underground mining (*IM 17 June 2009: Nordic changes rutile approach*).

Nordic Mining believes this will limit the visual impact of the project. The mining will be based on traditional open pit and glory hole design, with a processing plant close to at quay side.

The company is planning initial products of various grades of rutile and garnet, and to sell "substantial quantities" of the high specific gravity side rock by-product produced from the open pit operations.

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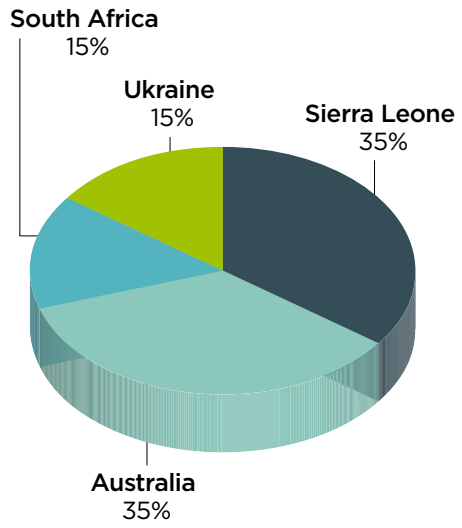
Natural rutile imports into Europe



Total tonnages: >100,000m. tonnes