ALTA 2022 26
20 - 27 May | Perth, Australia | Online

RARE EARTH IONIC CLAYS - PROVIDING SECURE AND DIVERSE HREE SUPPLY TO OEMS

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ABSTRACT

Today the global rare earths industry faces a herculean task to meet the growing rare earth needs of the high technology manufacturing industry. Why 'herculean'; because quite apart from COVID19, rare earths end users are faced with the twin issues of security of supply and rising prices.

Nevertheless, despite COVID19, the forecast demand for rare earths in 2022 will be >25% than last year; an unprecedented increase that has not been seen since the last century.

Rare earths used in the production of high strength permanent magnets (REPMs) is the main driver of the industry; constituting 30% by volume and 90% of the consumption. Complicating the rising demand for the seventeen rare earths is the fact that the ratio in which they are consumed does not match the ratio in which they occur or are produced. Furthermore, the two rare earths, terbium and dysprosium, enable REPMs to function at high temperature and are only produced in China from ionic clays.

The recent discovery of ionic clay deposits in Australia is therefore strategically significant and provides us with unique metallurgical opportunity to bring them into production within the next 5 years.

Dudley Kingsnorth's presentation will trace the history of the industry over the past decade to explain the rationale behind the current status quo. This will be used as the basis to forecast demand through to 2030, thereby identifying the prospects for Australian heavy rare earth projects.

Keywords: Rare Earths, high strength permanent magnets (REPMs) ionic clays, terbium, dysprosium, Australian deposits