



Título

Scenarios and Perspectives of Rare Earths in Brazil

Texto do resumo

Brazil has the third largest rare earth reserves in the world, measured mainly in alkaline rock deposits with rare earths associated with other mineral resources. However, until the 1990s, rare earth oxide was produced in Brazil from monazite separated from heavy mineral deposits (marine placer deposits). In recent years, the country is emerging as a major player on the global rare earths scenario, as evidenced by numerous ongoing research projects and the mining of the Serra Verde ionic clay deposit. The indicated and inferred resources published by these companies reveal a promising perspective for Brazil in this sector. This context is timely, as experts predict that the demand for rare earths in 2030 will be 50% higher than today.

The objective of this study is to present the main types of rare earth mineralizations that have been investigated by these research projects and their resource estimates. For this study, reports published by mining companies will be analyzed. The most important rare earth deposit in Brazil is associated with ionic clays, a type of secondary mineralization related to the development of the laterite profile, formed on granitic and alkaline rocks. Enrichment of rare earth elements occurs during alteration of primary rare earth minerals that release them into the laterite profile. During the evolution and development of this laterite profile, these elements are concentrated in the clayey layer at the base of the profile, above the saprock/bedrock. There are also research projects under development on primary

Área

TEMA 12 - Minerais da Transição Energética e Minerais Industriais

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mineralization.

Mineração Serra Verde is a pioneer in the production of mixed rare earth carbonate from ionic clay deposits, being the first company outside China to do so, marking a milestone for the rare earth production chain. In the country, most research projects on rare earth minerals are focused on ionic clay-type deposits, with a greater concentration of areas studied in the states of Bahia, Minas Gerais and Goiás. Given the large number of mining projects underway in the country, and considering the estimated and inferred rare earth resources already published, Brazil may be able to meet the growing global demand projected for the coming decades.

However, it is crucial to mention that the main challenge faced by the Western world, including Brazil, is the lack of development of the entire rare earth production chain, from processing, production of oxides and/or rare earth metals to the permanent magnet, where value is added to products as they progress along this chain. In Brazil, efforts have been made to verticalize this production chain, bringing together the public and private sectors, but the size of the market, the high risk and prices controlled by China present significant challenges for the development of this chain.

Palavras Chave

Rare Earth; Ionic Clays deposit; estimated resource

↑ (JAVASCRIPT:VOID(0))

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13 a 17 de Outubro de 2024

CENTERMINAS Expo, Belo Horizonte - MG

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