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Traceability of rare earths in the supply chain from separated products to permanent magnets

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Forward

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This document was prepared by Technical Committee ISO/TC 298, Rare earth.

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Introduction

0.1 General

The adoption of a traceability system is a strategic decision for an organization that can assist in understanding the supply chain of its goods, products and services. A traceability system is a useful tool to assist an organization operating within a rare earth supply chain to allow traceability, i.e., between its original material source and its final product manufacturing destination including recycling, and to achieve defined goals and objectives within their overall material management system(s). The design of a traceability system is influenced by regulations, product characteristics, and end-user expectations. The complexity of the traceability system varies depending on the nature of the product(s) within the supply chain, the sources of inputs, and the objectives to be achieved.

While implementation of materials traceability is legally mandatory in many countries, the implementation of a traceability system by an organization also depends on:

- technical limits inherent to the supply chain organization and products (i.e., nature of the materials, size of the lots, collection and transport procedures, processing, and packaging methods);
- the cost and benefits of applying such a system;
- the characteristics of processing;
- the environmental impact, waste treatment and disposal processing.

The potential benefits of implementing a traceability system based on this document are:

- the ability to trace rare earth materials and products between separated products and permanent magnet products;
- the premium value of being able to demonstrate product quality through credible evidence of, for example, production with verifiable sustainability claims as provided by a trustworthy traceability system;
- to reduce and prevent pollution;
- promotion of environmentally responsible and production with verifiable sustainability claims of rare learths permanent magnet products including through the circular economy; https://doi.org/10.17887
- to align a rare earth supply chain with sustainable development goals;
- to provide better service for users and customers by supplying quality products.

This document can be used by all participants in the rare earth supply chain. However, it is not the intent of this document to specify the need for:

- complete uniformity in the structure of traceability systems for different rare earth supply chains;
- alignment of documentation to the clause structure of this document;
- use of the specific terminology of this document within the rare earth supply chain.

This document specifies factors enabling the traceability of rare earths in the supply chain between separated products to permanent magnets.

In this document:

- "shall" indicates a requirement;
- "should" indicates a recommendation;
- "may" indicates a permission;
- "can" indicates a possibility or a capability.