

**TECHNICAL BOARD****CEN/BT by correspondence****For vote in line with IR2 Clause 6.1.4****Issue date:**

2023-03-22

**Deadline:**

2023-06-13

**SUBJECT****New CEN/TC on 'Rare Earth'****BACKGROUND**

On 2023-03-14, DIN submitted a proposal to CCMC for the creation of a new Technical Committee in the field of Rare Earth (see Annex 1).

The proposed Technical Committee would be responsible for standardization deliverables in the field of rare earth mining, concentration, extraction, separation, and conversion to useful rare earth compounds/materials (including oxides, salts, metals, master alloys, etc.) which are key inputs to manufacturing and further production process. In addition to test methods and terminology, aspects such as sustainability, traceability and recycling are covered.

The main purpose of the proposed CEN/TC is to mirror the activities of ISO/TC 298 on rare earth. ISO/TC 298 has so far mainly developed test method standards. The creation of new CEN/TC would allow European experts to establish an official European platform for exchange on standardization on rare earth. In the view of European experts, the new CEN/TC should mainly mirror current ISO/TC 298 standards and decide on their potential adoption as European standards, either of published ISO standards or by joint development under VA. Additionally, the European Commission presented the [Critical Raw Materials Act](#) and rare earth elements are included in the list of critical raw materials.

A proposal for the initial work programme and structure of the new CEN/TC is presented in Annex 1.

By Decision BT 65/2017, BT decided that the following criteria are to be met for acceptance of such a proposal for new work (in a new area):

- Vote according to Internal Regulations Part 2 clause 6.1.4;

*Note: Possible votes are 'Agrees', 'Disagrees with comments' and 'Abstains'. Any vote indicating 'Deferred decision' will be counted as 'Disagrees with comments'.*

- At least 5 Members express commitment to participate.

Consequently, BT members are requested to state explicitly, by means of the commenting field provided in the BT-balloting tool, whether or not they are committed to participate in the work.

**PROPOSAL(S)**

BT,

- having considered the proposal for a new field of technical activity submitted by DIN as included in Annex 1;
- considering that the following Members have expressed commitment to participate:

•<Members>

- decides to create a new CEN/TC xxx with the following preliminary title and scope:

Title: Rare Earth

Scope: Standardization in the field of rare earth mining, concentration, extraction, separation and conversion to useful rare earth compounds/materials (including oxides, salts, metals, master alloys, etc.) which are key inputs to manufacturing and further production process. In addition to test methods and terminology, aspects such as sustainability, traceability and recycling are covered.

- allocates the secretariat of CEN/TC xxx to DIN;
- asks the new CEN/TC xxx to submit its final title and scope for BT approval after its first meeting.

2023-03-17 – HD/NUP



PROPOSAL for a NEW FIELD OF TECHNICAL ACTIVITY	
Date of circulation ..... .....	<b>CEN/TC / SC N</b> .....  (where appropriate)
Secretariat ..... .....	<b>CENELEC/TC / SC (Sec)</b> .....  (where appropriate)
Type of technical body proposed (TC / SC / BTF)	<b>CEN/TC</b> .....

**IMPORTANT NOTE: Incomplete proposals risk rejection or referral to originator.**

The proposer has considered the guidance given in Annexes 1 and 2 during the preparation

**Proposal** (to be completed by the proposer)

<p><b>Title of the proposed new subject</b> (The title shall indicate clearly and unambiguously, yet concisely, the new field of technical activity which the proposal is intended to cover.)</p> <p><b>Rare Earth</b></p>
<p><b>Scope statement of the proposed new subject</b> (The scope shall precisely define the limits of the new field of technical activity. Scopes shall not repeat general aims and principles governing the work of the organization but shall indicate the specific area concerned.)</p> <p>Standardization in the field of rare earth mining, concentration, extraction, separation and conversion to useful rare earth compounds/materials (including oxides, salts, metals, master alloys, etc.) which are key inputs to manufacturing and further production process. In addition to test methods and terminology, aspects such as sustainability, traceability and recycling are covered.</p>
<p><b>Purpose and justification for the proposal.</b></p> <p>Rare earth elements are a group of 17 metals used in various high-tech applications including, smartphones, wind turbines, MRIs, hard disk drives, LEDs, electric motors and more. Whilst the European economy is a global manufacturing leader for products like automotive traction motors and wind turbines, rare earth elements are not extracted in Europe. Of Europe's total rare earth magnet demand, 98% is met by Chinese imports.<sup>1</sup></p> <p>The urgency to develop a European strategy for a resilient and sustainable raw material supply, including critical raw materials, has increased. Against the background of the already existing and increasing shortage of resources and dependence on petrochemical raw materials, increasing energy, material and resource efficiency is becoming increasingly important. The economic symptom of the shortage of raw materials is a rise in prices, which can lead not only to purely economic conflicts but also to social conflicts and even military conflicts over strategically important sources of raw materials. The insecurity of supply chains is a central topic of current debates in Europe.</p> <p>For these reasons, the European Commission is currently developing a Critical Raw Materials Act to regulate strategic topics along the supply chain, from extraction to refining, from processing to recycling.<sup>2</sup> Rare earth elements are included in the list of critical raw materials<sup>3</sup> of the European Commission. In its communication on the Critical Raw Materials Act the European Commission refers to standards as means to ensure a strong and sustainable level playing field<sup>4</sup>.</p> <p>ISO/TC 298 "Rare Earth" currently develops standards on a matching scope. So far, mainly test method standards have been developed. As the ISO/TC is led by China, several European experts have expressed an interested to establish an official European platform for exchange on standardization on rare earth. In the experts' view, the new CEN/TC should mainly mirror current ISO/TC 298 standards and decide on their potential adoption as European standards, either of published ISO standards or by joint development under</p>

<sup>1</sup> [https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/rare-earth-elements-permanent-magnets-and-motors\\_en](https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/rare-earth-elements-permanent-magnets-and-motors_en) , 28.02.2023

<sup>2</sup> [https://ec.europa.eu/commission/presscorner/detail/en/speech\\_22\\_5493](https://ec.europa.eu/commission/presscorner/detail/en/speech_22_5493)

<sup>3</sup> [https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials\\_en](https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en)

<sup>4</sup> [https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT\\_22\\_5523](https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_22_5523)

the Vienna Agreement. The new CEN/TC should also serve as an exchange platform for discussion on ISO/TC 298 projects and their potential impact on European countries and stakeholders.

**Is the proposed new subject actively, or probably, in support of European legislation or established public policy?**

Yes     No

**If Yes, indicate if the proposal is**

- in relation to EC mandate(s): .....(which one(s))
- in relation to EC Directive(s)/Regulation(s): .....(which one(s))
- in relation to other legislation or established public policy: **foreseen Critical Raw materials Act**

### **Proposed initial programme of work**

The proposed programme of work shall correspond to and clearly reflect the aims of the standardization activities and shall therefore show the relationship between the subject proposed.

Each item on the programme of work shall be defined by both the subject aspect(s) to be standardized (for products, for example, the items would be the types of products, terminology, characteristics, other requirements, data to be supplied, test methods, performance requirements, etc.). Supplementary justification may be combined with particular items in the programme of work (e.g. output from a research project).

The proposed programme of work shall also suggest priorities, target dates and the most appropriate type of deliverable (e.g. EN, TS) for each item

The main purpose of the proposed CEN/TC is mirroring the activities of ISO/TC 298 on rare earth.

For the start, the adoption of 3-4 existing ISO standards as EN ISOs is proposed. Subsequently, another 3-4 projects could be developed jointly under the Vienna Agreement or as homegrown EN if no consensus can be reached internationally. New proposals could also be developed as CEN/TS as a first step to reach agreement at European level before submitting contents to a wider audience at international level.

The current structure of ISO/TC 298 would be roughly adopted, yielding the following proposed CEN Working Groups as a sub-structure to a new CEN/TC:

#### **WG 1: Testing and Analysis**

- Sampling requirements for ore, intermediate mixed concentrates, precipitates, and refined and separated products
- Chemical and radionuclide analysis of rare earth concentrates, metals and materials, and waste products
- Determination of particle size and specific surface area of rare earth compounds
- Determination of moisture content/loss of ignition.

#### **WG 2: Elements Recycling**

- Recycling indications on rare earth elements in by-products and industrial wastes
- Secondary rare earth products.

#### **WG 3: Sustainability and Traceability**

- Naturally Occurring Radioactive Materials (NORM) management
- Hazardous waste (solid, liquid and gas) energy efficiency
- Transportation, packaging, handling, labelling and storage of rare earth containing materials

Emphasis would be put on the discussion and development of recycling, sustainability and traceability standards as these topics are currently heavily debated.

### **A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing CEN, CENELEC, ISO and IEC deliverables.**

The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized. If seemingly similar or related work is already in the scope of other committees of the organization, or in other organizations, the proposed scope shall distinguish between the proposed work and the other work. The proposer shall indicate whether his or her proposal could be dealt with by widening the scope of an existing committee or by establishing a new committee.)

Existing standards from ISO/TC 298 "*Rare Earth*" and other relevant TCs such as ISO/TC 82 "*Mining*" (especially ISO/TC 82 SC 7 "*Mine closure and reclamation management*"), ISO/TC 85 "*Nuclear Energy, nuclear technologies, and radiological protection*", ISO/TC 147/SC 2 "*Physical, chemical and biochemical methods*", ISO/TC 182 "*Geotechnics*", ISO/TC 207 "*Environmental Management*", ISO/TC 308 "*Chain of Custody*", ISO/TC

323 “Circular Economy” and ISO/IEC 111 “Environmental standardization for electrical and electronic products and systems” will be taken into account and potentially referred to.

Liaison with ISO/TC 298 will be proposed.

The direct impact of rare earth standards on existing standards from committees other than ISO/TC 298 or vice versa is not foreseen at the moment as rare earth are a distinguishable matter.

**A listing of relevant existing documents at the international, regional and national levels.**

Any known relevant documents (such as standards and regulations) shall be listed, regardless of their source, and should be accompanied by an indication of their significance.

EN 45558:2019, General method to declare the use of critical raw materials in energy-related products;

ISO 22453:2021, Exchange of information on rare earth elements in industrial wastes and end-of-life cycled products

ISO 22450:2020, Recycling of rare earth elements — Requirements for providing information on industrial waste and end-of-life products

ISO 22444-1:2020, Rare earth — Vocabulary — Part 1: Minerals, oxides and other compounds

ISO 22444-2:2020, Rare earth — Vocabulary — Part 2: Metals and their alloys

ISO/TS 22451:2021, Recycling of rare earth elements — Methods for the measurement of rare earth elements in industrial waste and end-of-life products

ISO 22927:2021, Rare earth — Packaging and labelling

ISO 23664:2021, Traceability of rare earths in the supply chain from mine to separated products

ISO/DIS 24544, Rare earth - Recyclable Neodymium iron boron (NdFeB) resources - Classification, general requirements and acceptance conditions

ISO/DIS 22928-1, Rare earth - Analysis by wavelength dispersive x-ray fluorescence spectrometry (WD-XRFS) - Part 1: Determination of composition of rare earth magnet scraps using standardless XRF commercial packages

ISO/DIS 23596, Rare earth - Determination of rare earth content in individual rare earth metal and their compounds - Gravimetric method

ISO/DIS 23597, Rare earth - Determination of rare earth content in individual rare earth metal and their oxides - Titration method

**Known patented items**

Yes  No If "Yes", see CEN-CENELEC Guide 8 and provide full information in an annex

**A simple and concise statement identifying and describing relevant affected stakeholder categories (including small and medium sized enterprises) in particular those who are immediately affected from the proposal (see Annexes 1 and 2) and how they will each benefit from or be impacted by the proposed deliverable(s)**

1. **Consumers:** European standards will ensure that the products containing rare earth elements meet highest requirements for quality and safety and can be safely used.

2. **Businesses** (incl. SME): European standards will help to reduce costs associated with manufacturing products containing rare earth elements while also meeting regulatory requirements.

3. **Governments:** European standards will provide a tool to comply with regulatory requirements and will ensure that the extraction and processing of rare earth elements is done in an environmentally friendly way.

5. **Academic and research bodies:** European Standards will provide them with a framework for conducting research, allowing them to collaborate more effectively with other institutions. The CEN/TC will also provide a platform for sharing and exchanging research results, which would help to accelerate the development of new technologies.

6. **Non-governmental organisations (NGOs):** European standards will ensure that the extraction and processing of rare earth elements is done in an ethical and environmentally friendly manner and that their use is sustainable.

**Liaisons:**

**A listing of relevant external European or international organizations or internal parties (other CEN, CENELEC, ETSI, ISO and/or IEC committees) to which a liaison should be established (in the case of ISO and IEC committees via the Vienna or Dresden Agreements).**

ISO/TC 298 “Rare Earth”

ISO/SAG Critical Minerals

**Joint/parallel work:**

**Possible joint/parallel work with:**

CEN (please specify committee ID)

CENELEC (please specify committee ID)

ISO (please specify committee ID) ISO/TC 298

IEC (please specify committee ID)

Other (please specify)

**Name of the Proposer**

*(include contact details)*

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**An expression of commitment from the proposer to provide the committee secretariat if the proposal succeeds.**

If the proposal is accepted, DIN is committed to provide the secretariat of the new CEN/TC and all resources necessary to successfully run the secretariat.

**Signature of the proposer**



German CEN/BT member

**Annex(es) are included with this proposal** (give details)

## **Informative Annex 1 "Principal categories of market needs"**

- Consumer protection and welfare
- Environment
- Innovation
- Support to:
  - public policy
  - European legislation/regulation
- Market access/barriers to trade, i.e. enhancing the free movement of:
  - services
  - goods
  - people
- Interoperability
- Health/Safety
- Terminology

## **Informative Annex 2 "Principal categories of stakeholders"**

- Industry and commerce,
  - where particularly appropriate, to be identified separately as
    - Large enterprises (those employing 250 staff or more)
    - Small and medium sized enterprises (SME), (those employing 250 staff or fewer)
- Government
- Consumers
  - including those organizations representing interests of specific societal groups, e.g. people with disabilities or those needing other particular consideration)
- Labour
- Academic and research bodies
- Non-governmental organisations (NGO),
  - including organizations representing broad or specific environmental interests
- Standards application business (e.g. testing laboratories, certification bodies)

Sometimes it is valuable also identify the immediate affected stakeholders from industry and commerce in terms of their position in a product value chain, as follows:

- Supplier
- Manufacturer
- Intermediary (e.g. warehousing, transport, sales)
- Service provider
- User of the product or service
- Maintenance / disposal

NOTE: 'Immediately affected stakeholders' are considered to be those who, within the context of the proposal, would be in a position to implement the provisions of the intended standard(s) into their products, services or management practices.