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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Environmental management - Material flow cost accounting -
General framework**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this standard is equivalent to the adoption of ISO 14051:2011 "General Framework for Cost Accounting of Environmental Management Material Flows".

This standard was proposed and managed by the National Environmental Management Standardization Technical Committee (SAC/TC207).

This standard was drafted by: China National Institute of Standardization, Beijing Chuangyuan Xincheng Management System Certification Co., Ltd., and Fangyuan Mark Certification Group.

Limited company, Beijing Banknote Printing Co., Ltd., Haitian Water Group Co., Ltd., Zhejiang Zhongxin Wool Textile Co., Ltd.

Introduction

The purpose of this standard is to provide a common framework for material flow cost accounting (MFCA). MFCA is a management tool that can help the group

Organizations to better understand the potential environmental and economic benefits of materials and energy use, and seek to improve the environment and finance by changing the way of operation

Opportunities.

MFCA traces and quantifies the material transfer and storage within an organization in the form of physical units by establishing a set of material flow models.

To improve the transparency of materials and energy use. In MFCA, energy can be classified as one of the materials, or it can be quantified separately. For any

The costs arising from material flows and energy use, and/or related costs, are quantified and attributed. MFCA puts special emphasis on product-related

Cost and material loss (for example, waste, waste gas, wastewater, etc.) related costs.

Many organizations fail to fully realize the actual cost of all material losses, because data on material losses and related costs are often

It is difficult to obtain from conventional information, traditional accounting and environmental management systems. However, if these data are obtained through MFCA, they can

To be used to seek opportunities to reduce material use and/or material loss, improve material and energy use efficiency, and reduce adverse environmental impacts

And related costs.

MFCA can be applied to all industries that use materials and energy, including extractive industries, manufacturing, service industries and other industries. any

Organizations of all types and sizes can use MFCA, regardless of whether the organization has implemented an environmental management system or whether it is in an emerging economy

The economy is still in an industrial country. MFCA is one of the main tools for environmental management accounting, originally for application to a single facility or organization

Designed. However, MFCA can also be extended to multiple organizations within a supply chain to help them develop a more effective use of materials

Integration of materials and energy.

This standard provides.

---General terminology;

---Purpose and principles;

---essential elements;

--- Implementation steps.

In addition, the appendix explains some of the differences between MFCA and traditional cost accounting and cost assessment methods.

A case of implementing MFCA in a supply chain.

General Framework for Cost Accounting of Environmental Management Material Flow

1 Scope

This standard provides a common framework for material flow cost accounting (MFCA). Under MFCA, track the materials within an organization

Transfer and store and quantify in physical units (eg mass, volume). MFCA results can be used as an incentive factor for the group

Organizers and managers seek opportunities that produce both economic benefits and reduce negative environmental impacts. MFCA applies to all materials and energy

Organization, regardless of its products, services, scale, structure, geography or existing management and accounting system.

MFCA can be extended to other organizations in the supply chain, including its upstream and downstream, which helps to build a complete material and

Energy efficiency improvement program. This expansion is beneficial because the waste generation of an organization often comes from the nature of the materials provided by the supplier

Or quality, or product characteristics required by customers.

According to the definition, management accounting and environmental management accounting (EMA) are dedicated to providing information for internal decision-making of the organization. MFCA, as a

Although the main EMA tools can also provide information for internal decision-making, they tend to establish a complete set of environmental management and management accounting models

formula. Although the organization can incorporate external costs into the MFCA analysis, the scope of this standard does not include external costs.

The MFCA framework provided by this standard includes general terminology, purpose and principles, basic elements and implementation steps. But the specific calculation procedure

Or technical information to improve materials and energy efficiency is not within the scope of this standard.

This standard is not intended for third-party certification.

2 Normative references

The following documents are essential for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments)

applies to this document.

ISO 14050.2009 Environmental Management Vocabulary
(Environmentalmanagement-Vocabulary)

3 Terms and definitions

The terms and definitions defined in ISO 14050 and the following apply to this document.

3.1

Cost

The monetary value of the resources consumed by the activities.

3.2

Cost allocation

According to an appropriate allocation basis, a certain cost is indirectly allocated among different objects (such as products or processes).

Note. In this standard, the object can be the process, quantification center, product and material loss.

3.3

Cost allocation

The direct allocation of a certain cost to a specific object (for example. product or process).

3.4

Energy cost

The cost of electricity, fuel, steam, heat, compressed air and other similar media.

Note. The organization decides whether the energy cost is included in the material cost or is calculated separately.