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

GB/T 8223-1987

Replacing GB/T 8223.1-2009

**Value engineering - Part 1: General terms
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 8223 Value Engineering. GB/T 8223 has been published in the following parts.

--- Part 1: General terms.

This document replaces GB/T 8223.1-2009 "Value Engineering Part 1: Basic Terms" and is consistent with GB/T 8223.1-2009.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

--- Changed the value (see 3.1, 2.3 of the 2009 edition), value engineering (see 3.2, 2.1 of the 2009 edition), value engineering objects (see 3.3, 2.2 of the 2009 edition), basic functions (see 4.2, 3.2 of the 2009 edition), auxiliary functions (see 4.3, 3.3 of the 2009 edition), Unnecessary functions (see 4.6, 3.7 of the 2009 edition), functional analysis (see 4.10, 3.10 of the 2009 edition), life cycle costs (see 5.2, 4.1 of the 2009 edition), Functional Cost (see 5.3, 4.2 of the 2009 edition), Value Engineering Working Group (see 6.4, 5.3) of the definition;

--- Changed the term "functional target cost" to "target cost" and changed the definition

accordingly (see 5.4, 4.2.2 of the 2009 edition);

--- Deleted solution innovation (see 2.4 of the 2009 edition), alternative solutions (see 2.5 of the 2009 edition), usage functions (see 3.4 of the 2009 edition), taste function (see 3.5 of the 2009 edition), necessary function (see 3.6 of the 2009 edition), insufficient function (see 3.8 of the 2009 edition), redundant functions (see 3.9 of the 2009 edition), function definitions (see 3.10.1 of the 2009 edition), function arrangements (see 3.10.2 of the 2009 edition), functional measurement (see 3.10.3 of the 2009 edition), current cost of function (see 4.2.1 of the 2009 edition), price the terms and definitions of value engineering work procedures (see 5.1 of the 2009 edition) and value engineer (see 5.2 of the 2009 edition);

--- Added undesirable functions (see 4.7), full-time functions (see 4.8), one-time functions (see 4.9), functional requirements analysis (see 4.11), Technical function analysis (see 4.12), functional structure (see 4.13), functional carrier (see 4.14), functional performance specification (see 4.15), function Energy demand expression (see 4.16), cost (see 5.1), value engineering work plan (see 6.1), value engineering objectives (see 6.2), value Engineering projects (see 6.3), value engineering project leader/host (see 6.5), design by objectives (see 6.6), design by cost (see 6.7) and their definitions.

Introduction

Value engineering is an organized and creative activity that uses functional and economic methods to maximize the value of Value engineering is usually used in the general management level of an organization and has an important impact on improving organizational efficiency and competitiveness.

In order to better promote the understanding of value engineering and technical exchange in organizations, my country has formulated GB/T 8223 "Value Engineering", which is to be it consists of two parts.

--- Part 1: General terms. The purpose is to define the general terms and definitions of value engineering.

--- Part 2: General working procedures. The purpose is to establish working procedures for the implementation of value engineering and to define the activities at each stage of the working procedures.

Provide guidance and advice.

Value engineering is based on the concept of value and a function-based approach. Therefore, it is necessary to define the general terminology and definition of value engineering.

GB/T 8223.1 has been issued and implemented for more than ten years. During this period, value engineering methods and technologies have made great progress.

The definitions of these terms have changed with the development of practice and cognition, and some new terms have been generated. In view of this, GB/T 8223.1 is revised.

In addition, to facilitate the understanding of the relationship between common value engineering terms, Appendix A of this document provides a conceptual relationship diagram.

Value engineering part 1.general terms

1 Scope

This document defines the basic terminology of value engineering as well as terms and definitions related to function, cost, and organizational management.

This document applies to value engineering activities.

2 Normative references

This document has no normative references.

3 Basic terminology

value

The ratio of the function (4.1) possessed by an object (3.3) to the cost (5.1) required to obtain that function (4.1).

Value Engineering

Organized and creative activity that maximizes the value (3.1) of an object (3.3) using functional and economic means

Note 1 to entry. Value engineering activities are carried out by the value engineering working group (6.4) and outlined in the value engineering work plan (6.1).

Note 2 to entry. The value of an object (3.3) such as a product, process or service is increased by achieving the required functionality (4.1), Reliability, safety, etc.

Object subject

Objects for which value engineering (3.2) is applied.

Note: The value engineering object (referred to as "object") mainly refers to products, processes, services, systems or their components.

4 Functional terms

Function

Object (3.3) The utility or property of an object that satisfies a need.

Note: Functions are often expressed in abstract form (e.g., as a non-specific two-word abstract expression consisting of a verb and a noun) without a solution.

basic function

Function (4.1) that realizes the purpose or intent of an object (3.3) 4.3 secondaryfunction
Supports the functions (4.1) implemented by the basic functions (4.2).