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

GB/T 38852.2-2020

**Industrial-process measurement, control and
automation--Evaluation of system properties for the purpose of
system assessment - Part 2: Assessment methodology**

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Foreword

The GB/T 38852 "Assessment of System Characteristics in the Evaluation of Industrial Process Measurement Control and Automation Systems" plan is divided into 8 parts.

---Part 1.Terminology and basic concepts;

---Part 2.Evaluation Methodology;

---Part 3.System functional assessment;

---Part 4.System performance evaluation;

---Part 5.System credibility assessment;

---Part 6.System operability evaluation;

---Part 7.System Security Assessment;

---Part 8.Evaluation of other system characteristics.

This part is Part 2 of GB/T 38852.

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

The translation method used in this part is equivalent to the IEC 61069-2:2016 "System characteristics in the evaluation of industrial process measurement control and automation systems"

Evaluation of Sexuality Part 2.Evaluation Methodology.

This part was proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Industrial Process Measurement Control and Automation Standardization Technical Committee (SAC/TC124).

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Introduction

This part of GB/T 38852 discusses the methods that should be used when evaluating the system characteristics of BCS.

System evaluation refers to the judgment that the system is suitable for a specific mission or a type of mission based on evidence.

In order to obtain all the evidence, a complete assessment of all system characteristics related to a specific mission or a

Factor).

Since it is difficult to achieve a complete evaluation of all system characteristics, the principles behind the system evaluation are.

---Identification of the importance of each relevant system characteristic;

---Relevant system characteristics evaluation plan, which should show good cost-effectiveness in the evaluation of multiple system characteristics.

In the implementation of system evaluation, the key is to obtain the greatest increase in the credibility of the applicability of the system under the actual cost and time constraints.

Evaluation can only be carried out when a mission has been declared (or given) or any mission has been assumed. When there is no mission, no evaluation is made. but

Yes, the system can be checked to collect and organize data for future evaluations. In these cases, since the assessment is the assessed group

Into a part, this part can be used as a guide for the evaluation plan and provide methods for performing the evaluation.

When preparing for the assessment, you will find that the definition of the system is too narrow. For example, a control system with two or more versions of shared resources

Facilities (such as networks) should consider version coexistence and interoperability. In this case, the system being evaluated should not be limited to "new"

BCS, but should include these two versions. In other words, the boundary of the system should be changed to include all systems to solve these problems.

The structure of this part and the relationship with other parts expected in GB/T 38852 are shown in Figure 1.

Figure 1 The overall design of GB/T 38852

Industrial process measurement control and automation

Evaluation of system characteristics in system evaluation

Part 2.Evaluation Methodology

1 Scope

This part of GB/T 38852 gives the evaluation method of the basic control system (BCS) based on the basic concept of GB/T 38852.1

Jurisprudence.

This section describes various methods for analyzing and measuring the relative importance of various system characteristics and influencing conditions, as well as determining evaluation procedures.

2 Normative references

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

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 38852.1-2020 Evaluation of system characteristics in the evaluation of industrial process measurement control and automation systems Part 1. Techniques

Language and basic concepts (IEC 61069-1.2016, IDT)

3.1 Terms and definitions

The terms and definitions defined in GB/T 38852.1-2020 apply to this document.

3.2 Abbreviations

The abbreviations given in GB/T 38852.1-2020 apply to this document.

4 Evaluation method

Due to the complexity of BCS, a comprehensive and comprehensive evaluation of BCS is bound to invest a lot of manpower and time, which is neither practical nor practical.

economic. Therefore, it is very important to carefully analyze and specify the purpose of the evaluation before planning the evaluation process.

The mission or mission type of the system is broken down into tasks.

The tasks performed by the system should be determined based on the selected BCS and its characteristics, as well as the required functions. In this way, the system

System functions required to achieve its mission.

The mission of the system usually requires several system features that are not directly