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**CERTIFICATION AND ACCREDITATION INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

RB/T 245-2025

**Guidelines for Validation and Evaluation of Domestically
Produced Testing Instruments and Equipment - Tire-Coupled
Road Simulation Test Machine
(English Translation)**

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the Certification and Accreditation Administration of the People's Republic of China.

Introduction

This document adheres to a problem-oriented approach, focusing on the technical specifications, verification methods, and evaluation of domestically produced tire-coupled road simulation testing machines.

The verification and evaluation requirements for the pricing system should be clarified, specifying its verification and evaluation indicators, key points, and evaluation methods, with the aim of establishing a unified and standardized system.

Verification and evaluation mechanism. By promoting the deep integration of product research and development, manufacturing, and quality verification and evaluation, this document can provide a basis for tire-coupled road simulation.

This provides technical support and practical reference for the manufacturing, performance verification, and industry application of testing equipment, thereby promoting the development of domestically produced testing instruments and equipment.

Standardization, serialization, and industrialization will help improve the quality and upgrade the industry of domestically produced testing and inspection instruments and equipment, and will also help enhance...

my country's independent and controllable capabilities in the field of vehicle testing equipment.

Validation and Evaluation Guidelines for Domestically Produced Testing Instruments and Equipment Tire-coupled road simulation test machine

1 Scope

This document provides the verification and evaluation indicators, key points and methods for tire-coupled road simulation testing machines, and their domestic application.

Guidelines for rating assessment.

This document applies to the verification and evaluation of the localization of tire-coupled road simulation test machines.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB 2894 Safety Colors and Safety Signs GB/T 3766-2015 General rules and safety requirements for hydraulic transmission systems and their components GB/T 15623.1-2018 Hydraulic transmission electro-modulated hydraulic control valves - Part 1: Test methods for four-way directional flow control valves GB/T 16855.1-2025 Mechanical Safety - Safety Control Systems - Part 1: General Design Principles GB 19517 National Technical Specification for Safety of Electrical Equipment

3 Terms and Definitions

The following terms and definitions apply to this document.

road load spectrum

The time history of the generalized loads (such as force, acceleration, displacement, etc.) generated by the test vehicle under actual road surface excitation.

actuator

The actuator drives and controls the movement of the test bench to simulate road loads.

Note: The actuator is usually an electro-hydraulic servo type, which can convert the electrical signals of the control system into mechanical displacement, speed or acceleration output.

control bandwidth

Test the control frequency range of the system's input and output.

Desired signal

The road load spectrum obtained through editing is used to generate the driving file for the bench system within the control bandwidth.

response signal

The time history of the generalized loads (such as force, acceleration, displacement, etc.) generated by the test vehicle under the excitation of the test bench system.