

ICS 43.080.01
CCS T 47



中华人民共和国国家标准
NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 26990-2023
Replaces GB/T 26990-2011 and GB/T 29126-2012

Fuel Cell Electric Vehicles-Onboard Hydrogen System
Technical Specifications
燃料电池电动汽车 车载氢系统技术条件

(English Translation)

Issued on 2023-11-27

Implemented on 2023-11-27

Jointly Issued by
State Administration for Market Regulation of the People's Republic of China &
Standardization Administration of the People's Republic of China

CONTENTS

Foreword	1
1 Scope	1
2 Normative References	1
3 Terms and Definitions.....	1
4 Measurement Parameters, and Their Units, Accuracies and Resolutions.....	1
5 Requirements.....	2
5.1 General Requirements	2
5.2 Requirements for Safety Protection	2
5.3 Requirements for Mounting Strength	2
5.4 Requirements for Gas Tightness.....	2
5.5 Requirements for Environmental Adaptability	2
6 Test Conditions	3
7 Test Methods	3
7.1 Test Method for Main Shutoff Valve	3
7.2 Test Method for Mounting Strength.....	4
7.3 Test Method for Gas Tightness	5
7.4 Test Method for Environmental Adaptability.....	6
Annex A (Informative) Diagram of Onboard Hydrogen System	12
Annex B (Informative) Conversion Between Hydrogen and Helium Leakage Rates	13

Fuel Cell Electric Vehicles-Onboard Hydrogen System Technical Specifications

1 SCOPE

This document specifies the technical requirements and test methods of the onboard hydrogen system of fuel cell electric vehicles (FCEV).

This document is applicable to the fuel cell electric vehicles, fueled with compressed gaseous hydrogen, of which the working pressure does not exceed 70 MPa at an ambient temperature of 15°C.

2 NORMATIVE REFERENCES

The following normative documents contain provisions which, through normative reference in this text, constitute essential provision of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

GB/T 2423.4 Environmental testing for electric and electronic products - Part 2: Test method - Test Db: Damp heat, cyclic (12h+12h cycle)

GB/T 2423.17 Environmental testing for electric and electronic products - Part 2: Test method - Test Ka: Salt mist

GB/T 2423.43 Environmental testing for electric and electronic products - Part 2: Test methods - Mounting of specimens for vibration, impact and similar dynamic tests

GB/T 2423.56 Environmental testing - Part 2: Test methods - Test Fh: Vibration, broadband random and guidance

GB/T 24548 Fuel Cell Electric Vehicles - Terminology

GB/T 24549 Fuel cell electric vehicles - Safety requirements

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions given in GB/T 24548 and GB/T 24549, as well as the following apply.

3.1 onboard hydrogen system

the device from hydrogen fueling receptacle to pressure regulator of the FCEV, which is related to hydrogen refueling, storage, transportation, supply and control

Note: See Annex A for the diagram of onboard hydrogen system.

3.2 hydrogen storage cylinder

a device in the FCEV, intended for storing high pressure hydrogen

3.3 check valve

a valve intended for preventing backflow of gas medium

3.4 pressure regulator

a valve that reduces the pressure to a value required for operation

4 MEASUREMENT PARAMETERS, AND THEIR UNITS, ACCURACIES AND RESOLUTIONS

Table 1 specifies the parameters to be measured during test, and their units, accuracies and resolutions.

Table 1 Requirements for measurement parameters, and their units, accuracies and resolutions

Measurement parameter	Unit	Accuracy	Resolution
Time	s	± 0.1	0.1
Temperature	°C	± 1	1



ChinaAutoRegs

中国汽车标准译文库

The following pages are left blank intentionally.

- 现成译文，到款即发。
 - 下单前可任取样页验证译文质量。
 - 免费提供正规普通增值税数电发票。
 - 请联系手机/微信: [13306496964](tel:13306496964)/Email: standardtrans@foxmail.com 获取完整译文。
 - 本英文译本为纯人工专业精翻版本，保证语法术语准确率和专业度！
 - 专业源于专注|ChinaAutoRegs 始终专注于汽车标准翻译领域！
 - 「中国汽车标准译文库」已收录上千个现行汽车国家标准和行业标准的英文版译本，涵盖传统燃油车、新能源汽车和摩托车标准化体系！独家打造千万级汽车专业术语库和记忆库。
-
- ◆ The English Translation of this document (GB, GB/T, QC/T, CNCA, CQC, CAV, etc.) is readily available, and delivered immediately upon payment.
 - ◆ You may request for sample pages to your preference before placing an order.
 - ◆ Please contact standardtrans@foxmail.com for the complete PDF version in English.
 - ◆ Almost all of Chinese automotive/automobile standards, regulations and norms in effect have been included in our well-established database, providing one-stop, up-to-date, efficient and professional solution.
-