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Fuel cell road vehicles — Performance measurement — Vehicles fuelled with compressed hydrogen

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National foreword

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Parameters, units and accuracy of measurements **3**
5 Test conditions **3**
5.1 Vehicle conditions 3
5.2 Atmospheric conditions 4
5.2.1 Ambient temperature and atmospheric pressure 4
5.2.2 Air density 4
5.2.3 Wind speed 4
5.2.4 Relative humidity 4
5.3 Track conditions 4
5.3.1 General conditions 4
5.3.2 Straight track 4
5.3.3 Loop track 5
5.3.4 Single direction test 5
6 Preconditioning of the vehicle **5**
6.1 Hydrogen refuelling 5
6.2 RESS state of charge preconditioning of externally chargeable FCHEV 5
6.3 Warming up 6
6.4 Selection of driving mode 6
7 Test sequence **6**
7.1 Test sequence for non-externally chargeable FCHEV 6
7.2 Test sequence for externally chargeable FCHEV 6
8 Test procedure **7**
8.1 Maximum speed 7
8.1.1 Standard test procedure 7
8.1.2 Single direction test procedure 7
8.2 Maximum thirty minutes speed 8
8.3 Acceleration ability (v_1 to v_2) 8
8.3.1 Acceleration ability 0 km/h to 50 km/h 8
8.3.2 Acceleration ability 50 km/h to 80 km/h 9
8.4 Speed uphill 9
8.5 Hill starting ability 9
8.5.1 Principle 9
8.5.2 Procedure 9
8.5.3 Evaluation of α_0 10
Annex A (informative) **Test results of performance measurements** **11**
Annex B (informative) **Quantity of electricity measurement of the RESS** **13**
Bibliography **15**

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Foreword

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This document was prepared by Technical Committee ISO/TC *22*, *Road vehicles*, Subcommittee SC 37, *Electrically propelled vehicles.*

This second edition cancels and replaces the first edition (ISO/TR 11954:2008), which has been technically revised.

The main changes compared to the previous edition are as follows:

— revision of the scope;

— addition of normative references;

— addition of terms and definitions, e.g. complete vehicle kerb mass, maximum thirty minutes speed, acceleration, speed uphill and hill starting performance;

— addition of driving performance tests, e.g. maximum thirty minutes speed, acceleration, speed uphill and hill starting performance;

— revision of the method for adjusting the RESS SOC;

— addition of driving mode setting method.

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Technical Report **ISO/TR 11954:2024(en)**

Fuel cell road vehicles — Performance measurement — Vehicles fuelled with compressed hydrogen

1 Scope

This document specifies test methods for the measurement of performance, such as acceleration, maximum speed and hill climbing ability, of fuel cell hybrid electric vehicles (FCHEV) as passenger cars and light duty trucks with a maximum authorized total mass of 3 500 kg and fuelled with compressed hydrogen.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TR 8713:2019, *Electrically propelled road vehicles — Vocabulary*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in ISO/TR 8713 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
acceleration ability
shortest time required to accelerate the vehicle from speed v_1 to speed v_2

[SOURCE: ISO 8715:2001, 3.7, modified — Note 1 to entry was removed.]

3.2
complete vehicle kerb mass
mass of the vehicle including batteries, without occupants but with fuel, cooling liquid, window washer fluid, lubricating oil, tools and spare wheel, on-board charger, portable charger or part of it, if provided as standard equipment by the vehicle manufacturer

[SOURCE: ISO 8715:2001, 3.1]

3.3
dynamic loaded radius
effective radius of a tyre when it is deformed by the mass of the vehicle loaded to its *test mass* (3.14)

[SOURCE: ISO 8715:2001, 3.4]

3.4
FCHEV operation mode
fuel cell hybrid electric vehicle operation mode
mode of a *fuel cell hybrid electric vehicle (FCHEV)* (3.5) in which both a *rechargeable energy storage system (RESS)* (3.10) and fuel cell system are used sequentially or simultaneously for vehicle propulsion

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