BS ISO 23273:2013

BSI Standards Publication

Fuel cell road vehicles — Safety specifications — Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen

This British Standard is the UK implementation of ISO 23273:2013. It supersedes BS ISO 23273-2:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/69, Electric vehicles.

A list of organizations represented on this committee can be obtained on request to its secretary.

ISBN 978 0 580 83387 8

ICS 43.120

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2013.

Amendments issued since publication

Date	Text affected

INTERNATIONAL ISO

First edition
2013-06-15

Fuel cell road vehicles — Safety specifications — Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen

Véhicules routiers alimentés par pile à combustible — Spécifications de sécurité — Protection contre les dangers de l'hydrogène pour les véhicules utilisant de l'hydrogène comprimé

Reference number
ISO 23273:2013(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 21, *Electrically propelled road vehicles*.

This first edition of ISO 23273 cancels and replaces ISO 23273-2:2006, of which it constitutes a minor revision.

INTERNATIONAL STANDARD ISO 23273:2013(E)

Fuel cell road vehicles — Safety specifications — Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen

1 Scope

This International Standard specifies the essential requirements for fuel cell vehicles (FCV) with respect to the protection of persons and the environment inside and outside the vehicle against hydrogen-related hazards.

It applies only to such FCV where compressed hydrogen is used as fuel for the fuel cell system.

This International Standard does not apply to manufacturing, maintenance, and repair.

The requirements of this International Standard address both normal operating (fault-free) and single-fault conditions of the vehicles.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17268, *Gaseous hydrogen land vehicle refuelling connection devices*

ISO 6469-2, *Electrically propelled road vehicles — Safety specifications — Part 2: Vehicle operational safety means and protection against failures*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
air processing system
system that processes (i.e. that filters, meters, conditions, and pressurizes) the incoming air for the fuel cell system

3.2
contaminant
substances within raw fuel, such as sulphur, that, at or above a specified concentration level, may poison reaction catalysts

3.3
electric chassis
conductive mechanical structure of the vehicle, including all associated electric and electronic components, whose parts are electrically connected and whose potential is taken as reference

3.4
excess flow valve
valve which automatically shuts off or limits the gas flow when the flow exceeds a set design value