INTERNATIONAL STANDARD ISO 14687:1999
TECHNICAL CORRIGENDUM 2

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Hydrogen fuel — Product specification

TECHNICAL CORRIGENDUM 2

Carburant hydrogène — Spécification de produit

RECTIFICATIF TECHNIQUE 2

Technical Corrigendum 2 to International Standard ISO 14687:1999 was prepared by Technical Committee ISO/TC 197, *Hydrogen technologies*.

Cover page and the headers of each page

Change the number of the standard and its reference number as follows.

ISO 14687-1 *in place of* ISO 14687

ISO 14687-1:1999(E) *in place of* ISO 14687:1999(E)

Cover page and page 1

Change the title of the standard to read as follows.

Hydrogen fuel — Product specification —
Part 1:
All applications except proton exchange membrane (PEM) fuel cells for road vehicles

ICS 71.100.20 **Ref. No. ISO 14687:1999/Cor.2:2008(E)**

Change the French title of the standard to read as follows.

ISO 14687-1: Carburant hydrogène — Spécification de produit —

Partie 1: Toutes applications à l'exception des piles à combustible à membrane d'échange de protons (MEP) pour les véhicules routiers

Foreword

Following the existing text, add the following paragraph.

ISO 14687 consists of the following parts, under the general title *Hydrogen fuel — Product specification*:

— *Part 1: All applications except proton exchange membrane (PEM) fuel cells for road vehicles*

— *Part 2: Proton exchange membrane (PEM) fuel cell applications for road vehicles* [Technical Specification]

Introduction

Add the following introduction.

ISO 14687 was published in 1999 to define the quality characteristics of hydrogen fuel to be used in all applications.

ISO/TS 14687-2 was subsequently prepared as a separate document to address the immediate needs of PEM fuel cells for road vehicles. ISO/TS 14687-2 defines the requirements applicable to two new grades of hydrogen fuel, intended to be used in the pre-commercial demonstration of PEM fuel cell vehicles on a limited scale only. More stringent requirements for hydrogen fuel were defined for these applications to ensure that the presence of specific non-hydrogen constituents does not adversely affect the fuel cell system and/or on-board hydrogen storage system performance.

Technical Corrigendum 2 to ISO 14687 removes the PEM fuel cell applications for road vehicles from the scope of the published standard and renumbers the standard as ISO 14687-1. To address concerns that hydrogen fuel complying with ISO 14687-1 may also not be adequate for other types of fuel cells or fuel cell applications than those for road vehicles, the requirements in ISO/TS 14687-2 may be considered if agreed upon between the supplier and customer.

Page 1, Clause 1

Replace the existing text with:

"This International Standard specifies the quality characteristics of hydrogen fuel in order to assure uniformity of the hydrogen product as produced and distributed for utilization in vehicular, appliance or other fueling applications (ground, water, air and space) except PEM fuel cell applications in road vehicles."

Page 1, 3.1

Replace the list with:

a) Type I (grade A, B and C): Gaseous hydrogen

b) Type II (grade C): Liquid hydrogen

c) Type III: Slush hydrogen

Page 2, 3.2

Replace the description of the types and grades of fuels with:

Type I, grade A	internal combustion engines for transportation; residential/commercial appliances;
Type I, grade B	industrial fuel, for use e.g. in power generation or as a heat energy source;
Type I, grade C	aircraft and space-vehicle ground support systems;
Type II, grade C	aircraft and space-vehicle onboard propulsion and electrical energy requirements; off-road vehicles;
Type III	aircraft and space-vehicle onboard propulsion.

Note 1 Type 1, Grade D and Type II, Grade D, which are applicable for fuel cell applications in road vehicles, are defined in ISO/TS 14687-2.

Note 2 There is no equivalent for Grade A and B for Type II fuels.

Page 3, 4.2.2, Table 1, 6th column

Replace “Type II” *with* “Type II, Grade C”.

Page 8, 7.2

Replace the third sentence with:

“The introduction of impurities in hydrogen for purposes of detection may not be compatible with some storage and utilization equipment.”