



Form 4: New Work Item Proposal

Circulation date: 2020-05-16	Reference number: Reserved 19887 (to be given by Central Secretariat)
Closing date for voting: 2020-08-09	ISO/TC 197
Proposer (e.g. ISO member body or A liaison organization) SCC	N 1173
Secretariat SCC	

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, an organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

- The proposer has considered the guidance given in the Annex C during the preparation of the NWIP.

Resource availability

- There are resources available to allow the development of the project to start immediately after project approval (e.g. project leader, related WG or committee work programme)

Note: If resources are not available, it is recommended that the project is first registered as a preliminary work item (a Form 4 is not required for this) and when the development can start, Form 4 should be completed to initiate the NP ballot.

Proposal (to be completed by the proposer)

Title of the proposed deliverable.**English title:**

Title missing

French title:

Titre manque

(In the case of an amendment, revision or a new part of an existing document, show the reference number and current title)

Scope of the proposed deliverable.

This ISO Standard will establish minimum requirements for fuel system components intended for use on hydrogen fueled vehicles.

The scope of this document is limited to components installed on hydrogen fuel systems used with Grade D hydrogen according to SAE J2719 or ISO 14687. This document contains requirements for hydrogen components acceptable for use on-board light duty vehicles, heavy duty vehicles and industrial powered trucks such as forklifts, and other types of land vehicles.

Notes:

1. Fuel containers are not included in the scope since they are covered in ISO 19881
2. TPRDs are not included in the scope since they are covered in ISO 19882
3. Refuelling connection devices are not included in the scope since they are covered in ISO 17268
4. Primary retention components may or may not be applicable in this document (if they are included then they must be harmonized with UN GTR No. 13)

This Standard does not apply to hydrogen gas fuel system components incorporated during the manufacture of motor vehicles originally manufactured in compliance with the international regulations such as UN GTR No. 13 (Global technical regulation on hydrogen and fuel cell vehicles) or UN ECE R134.

Purpose and justification of the proposal*

This standard will cover the requirements for the various components used in gaseous (compressed) hydrogen fuel systems. It is proposed to use ANSI CSA HGV 3.1 as the seed document for harmonization. The 2013 version of HGV 3.1 has already been licensed to ISO TC 197 and CSA has indicated that they will be willing to provide an updated revision which will become a work in progress in 2020. See the attached "Proposed Outline" document that shows the proposed Table of Contents for the new standard.

Note that the Storage Container, Check valve, Automatic valve, and Pressure relief device (TPRD) are currently covered by UN GTR No. 13 (Global technical regulation on hydrogen and fuel cell vehicles) since they are part of the "primary pressure boundary". Hence, the requirements for the check valve and automatic valve will need to be harmonized the GTR 13. The storage container and TPRD will not be included since they are already covered in ISO 19881 and ISO 19882 respectively. The receptacle (refuelling connection device) will also not be included as it is covered in ISO 17268.

There is also an existing standard for compressed natural gas (CNG) fuel system components (ISO 15500) under ISO TC 22/SC 41. The types of components in hydrogen fuel systems can be similar to CNG components, so it would be advisable to review ISO 15500 and harmonize where possible.

There is a similar ISO 12619 standard under ISO TC 22/SC 41 that currently covers H2 and CNG/H2 blends. However, as agreed to between the Chairs of ISO TC 22/ SC 41 and ISO TC 197, the ISO 12619 documents will be limited to blends of natural gas and hydrogen, and the pure hydrogen components will be covered under ISO TC 197 due to the expertise within this TC on hydrogen properties. This was confirmed in ISO/TC 22/SC 41 document "N393" as resolution JWG5#1.

For Europe and other jurisdictions, this new ISO standard can be referenced in upcoming regulations. For example, the current EU regulation (EC 79 - type-approval of hydrogen-powered motor vehicles as well as EU 406 for the implementation) is planned to be repealed in June 2022. These documents currently cover the EU type-approval requirements for hydrogen fuel system components such as manual valves, regulators, pressure relief valves, etc. Once EC 79 is repealed then this will leave a big gap for these components since ECE R134 will only cover the components from the GTR as listed above. For the remaining fuel system components, regulations such as ECE R134 can point to this new ISO standard (note that R134 cannot point to HGV

3.1 since it is an industry standard for North America and not voted on by the member bodies).

Consider the following: Is there a verified market need for the proposal? What problem does this standard solve? What value will the document bring to end-users? See Annex C of the ISO/IEC Directives part 1 for more information. See the following guidance on justification statements on ISO Connect:
<https://connect.iso.org/pages/viewpage.action?pageId=27590861>

Sustainable Development Goals (SDGs)

[Goal 7: Affordable and Clean Energy](#)
[Goal 9: Industry, Innovation, and Infrastructure](#)
[Goal 11: Sustainable Cities and Communities](#)
[Goal 13: Climate Action](#)

Preparatory work (An outline should be included with the proposal)

A draft is attached An outline is attached An existing document will serve as the initial basis

The proposer or the proposer's organization is prepared to undertake the preparatory work required:

Yes No

If a draft is attached to this proposal:

Please select from one of the following options (note that if no option is selected, the default will be the first option):

- Draft document can be registered at Working Draft stage (WD - stage 20.00)
 Draft document can be registered at Committee Draft stage (CD - stage 30.00)
 Draft document can be registered at Draft International Standard stage (DIS - stage 40.00)

If the attached document is copyrighted or includes copyrighted content:

- The proposer confirms that copyright permission has been granted for ISO to use this content in compliance with the ISO/IEC Directives, Part 1 (see also the Declaration on copyright).

Is this a Management Systems Standard (MSS)?

Yes No

NOTE: if Yes, the NWIP along with the [Justification study](#) (see Annex SL of the Consolidated ISO Supplement) must be sent to the MSS Task Force secretariat (tmb@iso.org) for approval before the NWIP ballot can be launched.

Indication of the preferred type or types of deliverable to be developed

International Standard Technical Specification
 Publicly Available Specification

Proposed Standard Development Track (SDT)

18 months* 24 months 36 months 48 months

*Projects using SDT 18 are eligible for the 'Direct publication process' offered by ISO /CS which reduces publication processing time by approximately 1 month

Draft project plan (as discussed with committee leadership)

Proposed date for first meeting: [2020-12-07](#)

Dates for key milestones: 1st Working Draft (if any) circulated to experts: [2020-11-02](#)

Committee Draft ballot (if any): [2022-07-04](#)

DIS submission*: [2023-04-03](#)

Publication*: [2024-04-01](#)

*Target Dates on DIS submission and Publication should preferably be set a few weeks ahead of the limit dates (automatically given by the selected SDT).
 For guidance and support on project management; descriptions of the key milestones; and to help you define your project plan and select the appropriate development track, see:
go.iso.org/projectmanagement
 NOTE: The draft project plan is later used to create a detailed project plan, when the project is approved.

Known patented items (see ISO/IEC Directives, Part 1 for important guidance)

Yes No

If "Yes", provide full information as annex

Co-ordination of work: To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization?

Yes No

If "Yes", please specify which one(s):

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables.
The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized.

[Pure hydrogen has recently been excluded from the CNG "blends" standard \(ISO 12619 – Road vehicles - Fuel system components and refuelling connector for vehicles propelled by blends of natural gas and hydrogen\), so this new standard will focus only on pure hydrogen components.](#)

A listing of relevant existing documents at the international, regional and national levels

[UN GTR No. 13, Global technical regulation on hydrogen and fuel cell vehicles](#)
[ISO 19882 - Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers](#)
[ISO 12619 – Road vehicles - Fuel system components and refuelling connector for vehicles propelled by blends of natural gas and hydrogen](#)
[ISO 15500 - Road vehicles — Compressed natural gas \(CNG\) fuel system components](#)
[ANSI HGV 3.1-2015, Fuel system components for compressed hydrogen gas powered vehicles](#)
[ECE Regulation 134, Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen fueled vehicles \(HFCV\)](#)
[Regulation \(EC\) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC.](#)
[Commission Regulation \(EU\) No 406/2010 of 26 April 2010 implementing Regulation \(EC\) No 79/2009](#)

Please fill out the relevant parts of the table below to identify relevant affected stakeholder categories and how they will each benefit from or be impacted by the proposed deliverable(s).

Benefits/impacts	Examples of organizations / companies to be contacted

Industry and commerce large industry	Automotive, truck, and forklift manufacturers will have components that meet minimum safety requirements	Automotive OEMs
Industry and commerce SMEs	Component manufacturers will have an ISO standard to follow to ensure safety requirements are met.	Hydrogen Component Manufacturers
Government	These standards can be referenced as requirements in upcoming regulations.	European Commission
Consumers	Consumers will benefit from hydrogen vehicle components meeting minimum safety requirements (similar to CNG)	
Labour		
Academic and research bodies		
Standards application businesses		
Non-governmental organizations		
Other (please specify)		
Liaisons: A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s). ISO/TC 22/SC 41		Joint/parallel work: Possible joint/parallel work with: <input type="checkbox"/> IEC (please specify committee ID) <input type="checkbox"/> CEN (please specify committee ID) <input type="checkbox"/> Other (please specify)
A listing of relevant countries which are not already P-members of the committee. Note: The Committee Manager shall distribute this NP to the ISO members of the countries listed above to ask if they wish to participate in this work		
Proposed Project Leader (name and e-mail address) Graham Meadows Graham.Meadows@wfsinc.com		Name of the Proposer (include contact information) Graham Meadows Graham.Meadows@wfsinc.com

This proposal will be developed by:

- An existing Working Group:
- A new Working Group: (title: [Gaseous hydrogen land vehicle fuel system components](#))

(Note: establishment of a new WG must be approved by committee resolution)

- The TC/SC directly
- To be determined:

Supplementary information relating to the proposal

- This proposal relates to a new ISO document
- This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item
- This proposal relates to the re-establishment of a cancelled project as an active project

Other:

Maintenance agencies (MA) and registration authorities (RA)

- This proposal requires the service of a maintenance agency. If yes, please identify the potential candidate:

- This proposal requires the service of a registration authority. If yes, please identify the potential candidate:

NOTE: Selection and appointment of the MA or RA is subject to the procedure outlined in the ISO/IEC Directives, Annex G and Annex H, and the RA policy in the ISO Supplement, Annex SN.

- Annex(es) are included with this proposal (give details)

3 files are annexed with this submission:

- 1) A Positive TAB Recommendation after deliberation
- 2) The OUTLINE of the proposed document based on existing standards
- 3) CV of the proposed project leader.

Additional information/question(s)