



Hydrogen

Hydrogen Declaration

Declaration-no.: 20H2_15
Revision: B

Subject: SSM-ICON smart gas meter family of products

We, Pietro Fiorentini S.p.A. with registered office in Arcugnano (VI) – Italy – Via E. Fermi n. 8/10, declare under our sole responsibility that **the products in the subject above are suitable for operation when the content of hydrogen in natural gas is \leq 20% by volume.**

List of relevant certificates and test reports:

EU type examination certificate n. I-2142-MI002-TG0037
Test report TFG n. 2832
Test report TFG n. 2915
Test report TFG n. 2968

Product Requirements & Performances/Results:

Admissible range of Hydrogen content in Natural Gas	[V/V -%]	from 0 to 20%
Performance data (flow range, accuracy, repeatability, etc.) is as for operations with Natural Gas with no Hydrogen content	--	Yes
Performance data (flow range, accuracy, repeatability, etc.) after endurance test are as for operation with Natural Gas without Hydrogen content	--	Yes
Limits of Operating Pressure / Operating Temperature for pressure resistance are as for operations with Natural Gas with no Hydrogen content	--	Yes
Gas tightness of the device verified at 150% of the max operating pressure	--	Passed
The standard configuration of the device is approved for use in potentially explosive atmospheres acc. to ATEX-Directive 2014/34/EU minimum for gas group (minimum): IIB		Yes
Note: The suitability of the device for use in gas mixtures with up to 20 vol-% Hydrogen content has to be verified by a risk assessment performed by the operating company.		

Additional Information and notes:

*** Meters were preliminary tested up to 20% with positive results. Further tests to confirm suitability are running. Materials compatibility and main functionalities with hydrogen are under evaluation.**

In presence of a 100% hydrogen gas flow and in order to guarantee the same level of transported energy of the Natural gas, the maximum flowrate for a G4 equivalent meter caliber should be at least 3 times higher at the same operating conditions. The current design of the meters won't allow to reach the extreme operating range.

MID and European Standards for Metering do not include in their scope the scenario of 100% of hydrogen as operating gas.

This declaration is based on the information included in the standard EN ISO/IEC 80079-20-1:2019, chapter 5.2.4, as well as on the tests performed by Pietro Fiorentini on the product materials used, in accordance with international standards currently available.

Not liability can derive from that.

This declaration only refers to products that were manufactured after the issue date of this declaration.

The use of smart meter products is always subject to country specific regulations.

Arcugnano, 20/04/2023

Pietro Fiorentini S.p.A.

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