Pietro Fiorentini

Hydrogen

Hydrogen Declaration

Declaration-no.: **20H2_12**
Revision: **A**

Subject: **Smart gas meters RSE series**

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 devices in subject are suitable for operations when the Hydrogen content in Natural Gas is ≤ 20 % by volume.**

List of certifications and test reports:

EU type examination certificate n. I-2142-MI002-TG007
OIML Certificate n. R137/2012-NL1-16.06
Test report TFG n. 2362
Test report TFG n. 2529

Requirements:

Maximum admissible band width of Hydrogen content in Natural Gas	[V/V -%]	0 to 20
Performance data (flow range, accuracy, repeatability, etc.) are as for operation with Natural Gas without Hydrogen content	--	Yes*
Limits of Operating Pressure / Operating Temperature for pressure resistance are as for operation with Natural Gas without Hydrogen content	--	Yes
Gas tightness of the device was tested at a test pressure of 1,5 times the max operating pressure	--	Yes
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 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.		Yes

1

Additional Information:

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

Note 1: Using 100% hydrogen, the maximum flowrate for G4 size should be at least 3 times of the maximum flowrate with natural gas to keep the same transported energy at the same operating conditions. In this condition the current meters are not capable to cover this operating range of flow rate.

Note 2: MID and European Standard for Metering do not cover 100% hydrogen as operating gas (not included in the standards scope

This declaration is based on information included in standard EN ISO/IEC 80079-20-1:2019, chapter 5.2.4, and on tests performed by Pietro Fiorentini on used materials, according to international standards available today. No liability can derive from that.

This declaration only applies to products that were produced after the creation date of this manufacturer's declaration.

The use of the product is subject to country specific regulations.

Arcugnano, 10/02/2022

PIETRO FIORENTINI S.p.A. – PIETRO FIORENTINI S.p.A.

Michele Carlet
Technical Dept.