TECHNOLOGY CERTIFICATE

Certificate no.: 10442271-FFA 24-1867
Initial date: 2024-Nov-1
Valid until: 2034-Nov-1

This is to certify that

Emerson Rosemount 8800D Vortex flow meter

as detailed in [1] has been qualified on CO_2 gases in accordance with the Joint Industry Project CO_2MET Gas test program to determine the metrological impact of CO_2-rich mixtures in the range between 95-100 % CO_2 on the Emerson 8800D Vortex meter for CCUS application as detailed in [2].

Owner: **Emerson Micromotion,** address: 12001 Technology Drive, Eden Prairie, Minnesota 55344, USA

Meter Under Test: Rosemount 8800D: Vortex volume flow meter.

Use: General purpose volume flow meter.

Conditions: The conditions for testing have been determined in the JIP CO_2MET Gas [2] consisting of the application of:

Onshore gas transport:

- Pressure range: 8 – 35 bara
- Temperature range: 18 – 30 °C
- Composition range: 95 – 99.5% CO_2

Vapor return for liquid shipping:

- Pressure range: 8 – 15 bara
- Temperature range: -38 – -25 °C
- Composition range: 99.5% CO_2

The uncertainty of the gas reference system has been evaluated and verified by Physikalisch-Technische Bundesanstalt [2].

Involvement: DNV has been involved in the testing process as required according to [2], has evaluated and provided laboratory testing evidence and has verified the results that forms the basis for this certificate.

Results: For all test conditions, the Emerson Rosemount 8800D Vortex meter qualifies within OIML R137 class 1.5 after characterization.

Reference documents:

[1] Emerson, Rosemount 8800DVortex Flowmeter: Product Data Sheet (2022)
[2] JIP CO_2MET: Gas flow metering systems, Emerson 8800D Vortex, Report 24-1495 Rev 3(2024)

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