# MINUTES OF MEETING



# Hydrogen Working Group Teams Meeting Minutes

07.11.2023, 15.00 h (CET)

# **Participants:**

Stefano Arrigoni, Idex Corporation Roger Bengtsson, DensiQ Dr. Anna Berger, Frenzelit Daniel Bissett, WL Gore Thomas Böhm, EagleBurgmann Peter Bowden, ESA Hans Dekker, Chesterton Andrew Douglas, James Walker Mohammed Fiaz, Idex Corporation Graham Fowler, Clifford Springs Didier Fribourg, Cetim Maria Garcia, Montero Bastien Gomis, Eynard Robin Stephane Guignard, Technetics Stephen Hindmarsh, Idex Corporation Jean-Luc Matoux, DuPont Kamesh Narayaraswamy, John Crane Holly Nichols, Idex Corporation Benoit Omnes, Cetim Martin Pettersson, DensiQ Danny Squire, Cross Manufacturing Ralf Vogel, ESA Jas Walia, Cross Manufacturing Rainer Zeuss, SGL

# 1. Apologies:

Apologies of absence were received from Sandy van den Broeck, Christian Geubert, Emmanuel Sauger and Francesca Torriani.

# 2. Standards and guidelines for Hydrogen

Ralf welcomed the participants from all Divisions. He showed a presentation with information about legislation, standards and regulations for hydrogen applications. The presentation information is based on web research and will be available in the Hydrogen Working Group folder in the members area. He asked all participants if they had additional information that can be added. Thomas Böhm mentioned a DIN database for standards related to Hydrogen Technology and he will send the link to Ralf. The database is in German and Ralf will check it and add relevant information to the presentation.

Jas Walia also mentioned some Indian standards for hydrogen and information from the UK welding institute. This will be also added to the presentation. If anybody has more information please send it to Ralf so that the presentation can be amended.

## 3. Low temperature testing

Ralf asked if this topic is still of interest for the members. Colin Zegers of ITIS in the Netherlands performed tests with LNG at -196 °C. He mentioned that testing at lower temperatures of -253 °C is difficult and costly. Only small valves could be tested. Didier Fribourg stated that Cetim is also performing tests with liquid nitrogen and hydrogen. They also plan to produce their own liquid hydrogen and helium on site. Also valve tests according to API 622 and ISO 15848 have been performed. Ralf asked Didier to present information about the tests at Cetim at the next meeting.

Bastien Gomis stated that he worked on a customer project testing PTFCE gasket material with liquid hydrogen. Ralf ask him also to share some of the test results at the next meeting.

## 4. Suggestions and ideas from members

Ralf asked for additional suggestions and ideas from the participants. But there was no specific feedback. Thomas mentioned that Hydrogen Europe published a position paper regarding PFAS. He will send it to Ralf so that it can be added to the PFAS folder in the members area.

## 5. Any other Business

Ralf informed the participants that the ESA newsletter was issued today. The next AGM will be in Prague from 22.-24.04.24.

## Date, time, and venue of the next meeting

06.02.24 15.00 h (CET)

Ralf Vogel 08.11.2023