



ICHS 2015

International Conference
on Hydrogen Safety

October 14-17, 2015 - Tokyo - Japan

International Conference on Hydrogen Safety (ICHS)

HySafe invites you to the unique Hydrogen Safety Conference

With the endorsement of:



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ICHS 2015 CONFERENCE SCOPE

The 6th International Conference on Hydrogen Safety (ICHS 2015) will be held in Tokyo, Japan on October 14-17, 2015 under the auspices of the International Association for Hydrogen Safety (HySafe). The first five biennial conferences since 2005 succeeded in attracting the most relevant experts from all over the world, by providing an open platform for the presentation and discussion of new findings, information and data on hydrogen safety – covering the wide range of areas from basic research to applied research and development to standardization and regulations. As commercialization of hydrogen fuel cell electric vehicles is imminent and other hydrogen applications are being increasingly deployed globally, ICHS 2015 will focus on progress in safety of hydrogen technologies and infrastructure, as crucial/essential means to enable smart hydrogen solutions for global energy challenges. Therefore, the conference seeks papers in a wide range of hydrogen safety topics like (but not limited to) Regulations Codes and Standards, safety in H₂ infrastructure, safety solutions for the implementation of H₂ technologies, hydrogen and hydrogen blends behavior, physical effects, consequence analysis, incidents, accidents and near misses, hydrogen effects on materials and components, safety of energy storage, risk management and fuel cells related safety issues. A detailed list of ICHS 2015 Themes and Topics is shown below. All contributions to ICHS 2015 will be evaluated exclusively in the light of their scientific content and relevance to hydrogen safety.

ICHS 2015 CONFERENCE STRUCTURE

ICHS 2015 will include thematic plenary sessions, topical lectures, and parallel oral and poster sessions. The conference seeks to facilitate (enable/strengthen) the near term introduction of hydrogen technologies in the market place.

CONFERENCE ORGANIZING COMMITTEE

Akiteru Maruta, Marco Carcassi, Andrei Tchouvelev, Marc Steen, Iñaki Azkarate, Thomas Jordan, Jay Keller, Suguru Oyama, Antonio Ruiz.

CONFERENCE SCIENTIFIC COMMITTEE

Iñaki Azkarate, Daniele Baraldi, Herve Barthelemy, Luc Bauwens, Pierre Benard, Gilles Bernard-Michel, Dag Bjerketvedt, Marco Carcassi, Fabio Dattilo, Sergey Dorofeev, Vasco Ferreira, Marco Frezza, Javier Garcia, Oliver Gentilhomme, Stuart Hawksworth, Olaf Jedicke, Thomas Jordan, Shoji Kamiya, Jay Keller, Armin Keßler, Alexei Kotchourko, Frank Markert, Akiteru Maruta, Ad Matthijssen, Vladimir Molokov, Pietro Moretto, Ernst-Arndt Reinecke, Antonio Ruiz, Ulrich Schmidtchen, Trygve Skjold, Marc Steen, Andrei Tchouvelev, Andrzej Teodoreczyk, Alexandros Venetsanos, Franck Verbecke, Steven Weiner, Jennifer Wen, Jinyang Zheng.

ICHS 2015 THEMES AND TOPICS

Safety in H₂ infrastructure

- Production
- Distribution and transport (pipelines, gaseous and liquid)
- Storage
- Handling and Use

H₂ fueling stations deployment experience

- Safe design
- Indoor / outdoor fueling
- Permitting
- Public acceptance
- Mitigation practices
- Co-location with other fueling options

Mixed / blended H₂ fueling stations and vehicles

- HCNG

Safety in H₂ vehicle /station interface

Safety in H₂ vehicles

- On-board storage
- Vehicle operation in tunnels and garages
- Public acceptance
- Material handling and operations in warehouses

H₂ Safety aspects in other applications/industries/technologies

- Chemical plants
- Oil refinery
- Space-aircrafts- Unmanned Aerial Vehicles (drones)
- Nuclear
- Maritime applications e.g boats, submarines
- Mining industry
- Semiconductor/electronic industries, electrical generators, neutron beams and other fundamental experiments
- Other applications

Safety of energy storage

- H₂ solid-storage materials
- Grid scale storage
- Power-to-gas / power-to-hydrogen

Fuel cells and electrolyzers related safety issues

- Risk Assessment
- Safety of material
- Normative or Pre-normative

Behavior of Gaseous and Liquid Hydrogen and hydrogen mixtures

- Release, dispersion
- Ignition and auto-ignition
- Combustion: fire, deflagration, detonation, transitional effects

Physical effects, consequence analysis

- Thermal, overpressure, missile effects
- Effects on humans and environments
- Incidents, accidents and near misses

Hydrogen effects on materials and components

- Embrittlement
- Permeation/blistering

Risk/safety management

- Hazard identification and analysis
- Risk assessment (cost-benefit analysis, safety perception, acceptance and harm criteria, uncertainties, decision making, human factor)
- Risk-informed safety engineering
- Prevention and Mitigation (active, passive, sensors, safety distances)
- Insurance
- Safety solutions and implementation of H₂ technologies
- "Outside-the-box" safety

Regulations Codes and Standard (RCS)

- Pre-normative research (needs, approaches, incorporation of QRA)
- Post normative experience (case studies)
- Comparison/compatibility with other fuels

Education, training, lessons learned and best practices

- First responders training
- Databases

CONTRIBUTED PAPERS

Conference attendees who wish to present a paper are required to submit a short abstract (up to 100 words). When submitting the abstract/paper, authors can express a preference for presenting their work in an oral session or in the poster session or no preference. Authors whose abstract has been accepted will be asked to submit a full paper which will be peer-reviewed. The evaluation will be forwarded to the Authors by e-mail. All accepted papers (oral and poster) will be published with exactly the same format in the proceedings of the conference. Abstract submission instructions will be available on the Conference website from June 1, 2014: www.ICHS2015.com

Key deadlines for contributed papers are detailed below.

- Conference website open for abstracts submission: **June 1, 2014** • Abstracts deadline: **December 31, 2014** • Abstracts acceptance notification: **January 31, 2015** • Full papers submission: **March 31, 2015** • Paper acceptance notification: **June 1, 2015**
- Submission of papers final versions and payment of conference fees: **July 15, 2015** • ICHS Conference: **October 14-17, 2015**

CONFERENCE LANGUAGE

The conference language is English.
Translation to Japanese option to be announced later.

REGISTRATION/INFORMATION FORM

Registration will be accepted only in electronic form on the conference website: www.ICHS2015.com

CONFERENCE INFO

For more information, contact: Dania Del Corso: email: ichs@hysafe.org
Conference Website: www.ICHS2015.com