



ISO/TC 197
Hydrogen technologies

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Background: This is the CV for one of the two proposed co-conveners for the NWIP for the revision of ISO 14687.

Committee URL: <http://isotc.iso.org/livelink/livelink/open/tc197>

Osamu Tajima

Education/Professional Qualifications

- Graduated from Industrial Chemistry, Faculty of Engineering, Utsunomiya University
 - Professional Engineer, Japan (Mechanical Engineering Division)
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Professional Experience

2011-present: Adjunct professor at Fuel Cell Nanomaterials Center, University of Yamanashi

2008-2011: Leading engineer of “ENE-FARM” at Eneos Celltech Co. Ltd.

“ENE-FARM” was launched in 2009 for residential market as the common trade name for cogeneration stationary fuel cell power systems.

1997-2008:

Development engineer of polymer electrolyte fuel cell (PEFC) power systems at Sanyo Electric Co., Ltd., in charge of:

- the development of 1 kW PEFC cogeneration systems using LPG
- the development of 1 kW PEFC cogeneration systems using city gas
- the development of portable 1 kW PEFC power generation systems using hydrogen (till 1998)

1977-1997:

Development engineer of phosphoric acid fuel cell (PAFC) systems at Sanyo Electric Co., Ltd., in charge of:

- portable 1 kW PEFC power generation systems using hydrogen
- 3 kW fuel cell power systems
- golf carts with a methanol fuel cell power system
- 300 W portable power generation system using hydrogen
- 5 kW and 10 kW methanol power generation systems
- Air-cooled 200 kW cogeneration systems
- 50 kW cogeneration FC power systems
- prototyping and testing of golf carts using hydrogen FCs
- R&D of FC systems as a whole including inverters and system architecture designs
- reformers (city gas and methanol)

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- operation and control software
 - fuel cells (including electrodes, electrolyte matrix, stacks)

Codes and standards related activities

ISO through the Engineering Advancement Association of Japan (ENAA)

- Convener, ISO/TC197 WG14 from 2009 to present

Published ISO 14687-3 Hydrogen fuel – Product specification – Part 3: Proton exchange membrane (PEM) fuel cell applications for stationary appliances

IEC through the Japan Electrical Manufacturers' Association (JEMA)

- Expert for IEC/TC105 WG1, WG3, WG4, WG5, WG12 from 2001 to present
Involved in the preparation of IEC 62282-1, 62282-3-200, 62282-3-201, and 62282-3-300

JIS through the Japan Electrical Manufacturers' Association (JEMA)

- Chair, Technical Committee for FC Power Systems from April 2003 to September 2010
(Involved in the reviews of regulations, standardization, and certification)
- Leader, Systems Subgroup, Stationary PEFC Standardization Committee, Japan Industrial Standards (JIS) from April 2003 to March 2007
(Involved in the preparation of JIS C 8800, 8811, 8821, 8822, 8823, 8824, 8825, 8826, 8827, and 8851)
- Member, Strategic Council for International Standardization from August 2009 to present
- Leader, PEFC Subgroup, Fuel Cell Power Systems Technical Committee, JIS from April 2000 to March 2003
- WG Leader, Committee for the Certification Program of Small Stationary FCs from July 2004 to present
(Involved in the preparation of the Technical Standard and Inspection Method for Small Stationary Fuel Cells (Common Certification Standard))

Professional activities with other government and trade organizations

New Energy Development Organization (NEDO)

- Expert, Technical Committee for Fundamental Technologies for Cell Evaluation from

November 2010 to present

- Expert, Annex 25, Advanced Fuel Cells Implementing Agreement, IEA (stationary FC) from March 2009 to 2011

Japan Gas Association (JGA)

- Leader, WG on System Evaluation Test Methods, Research Committee on Base Technology for Wide Deployment of Stationary FCs from December 2000 to March 2005.
- Expert, Sub-Working Group for Actual Unit Test, Study Committee on the Safety Technology for Residential FCs from August 2002 to March 2004

Japan Electric Association (JEA)

- Expert, Study Group on the Safety Technology for Residential FCs and its working group from 2002 to 2003
- Expert, Conformance Evaluation Committee for Technical Standards from April 2003 to March 2004
- Expert, Study Committee on the Safety Technology for Small FCs from April 2005 to March 2007

Fire and Disaster Management Agency (FDMA), Ministry of Internal Affairs and Communications

Expert, Committee on Establishing Safety Measures for SOFCs from April 2006 to March 2007

Hazardous Materials Safety Techniques Association (KHK)

Expert, Committee on Safety Measures for Stationary FCs from April 2003 to March 2004

Fuel Cell Commercialization Conference of Japan (FCCJ)

Leader, Group 1 (stationary), Sub-Working Group on Codes and Standards, Working Group on Trailblazing Planning for Commercialization from March 2001 to July 2010

Publications

- Osamu Tajima, “Standardization trend of small stationary fuel cell power systems,” *Journal of the Japan Institute of Energy*, Vol.93, No.1, January 2014, p35-45,
- Osamu Tajima, “Safety measures and protection equipment of small stationary fuel

cell power systems,” *Denkikeisan*, Vol.2, No.2, 2014, p30-36

- Osamu Tajima, “Standardization trend of small stationary fuel cell power system,” *Clean Energy*, Vol.23, No.6, 2014, p23-32