



ISO/TC 197
Hydrogen technologies

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Activities of IEC/TC105 Fuel Cell Technologies

December, 2016

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Liaison officer

Working Groups of TC105

WG	Theme	Convener
<u>WG 1</u>	Terminology	USA
<u>WG 2</u>	Fuel cell modules	Germany
<u>WG 3</u>	Stationary fuel cell power systems - Safety	USA
<u>WG 4</u>	Stationary fuel cell power systems - Performance	Japan
	Stationary fuel cell power systems –Performance for small FC	
<u>WG 5</u>	Stationary Fuel Cell Power Systems - Installation	Germany
<u>WG 6</u>	Fuel cell system for electrically powered industrial trucks	JRC
<u>WG 7</u>	Portable fuel cell power systems - Safety	USA
<u>WG 8</u>	Micro fuel cell power systems - Safety	USA
<u>WG 9</u>	Micro fuel cell power systems - Performance	Japan
<u>WG 10</u>	Micro fuel cell power systems – Cartridge interchangeability	Japan
	Micro fuel cell power systems – Data interchangeability	Korea
<u>WG 11</u>	Single cell test methods for PEFC	Japan
	Single cell & stack test methods for SOFC	
<u>WG 12</u>	Small stationary fuel cell power systems with CHP	Germany
WG13	Energy storage systems using fuel cell modules in reverse mode	Italy
<u>AHG4</u>	Monitoring the smart grid	Japan

TC105 Scope (approved by SMB)

To prepare international standards regarding fuel cell (FC) technologies for all FC and associated applications such as stationary FC power systems, FC for transportation such as propulsion systems and auxiliary power units, portable FC power systems, micro FC power systems, reverse operating FCs such as SOEC (Solid Oxide Electrolyzer Cells), and general electrochemical flow systems and processes.

NOTE: Standards on flow batteries are developed jointly with TC 21, under administrative leadership of TC 21.

Chairman: Mr Fumio Ueno (JP)

Secretary: Mr Wolfgang Winkler (DE)

Assistant Secretary: Mr Gerhard Imgrund (DE)

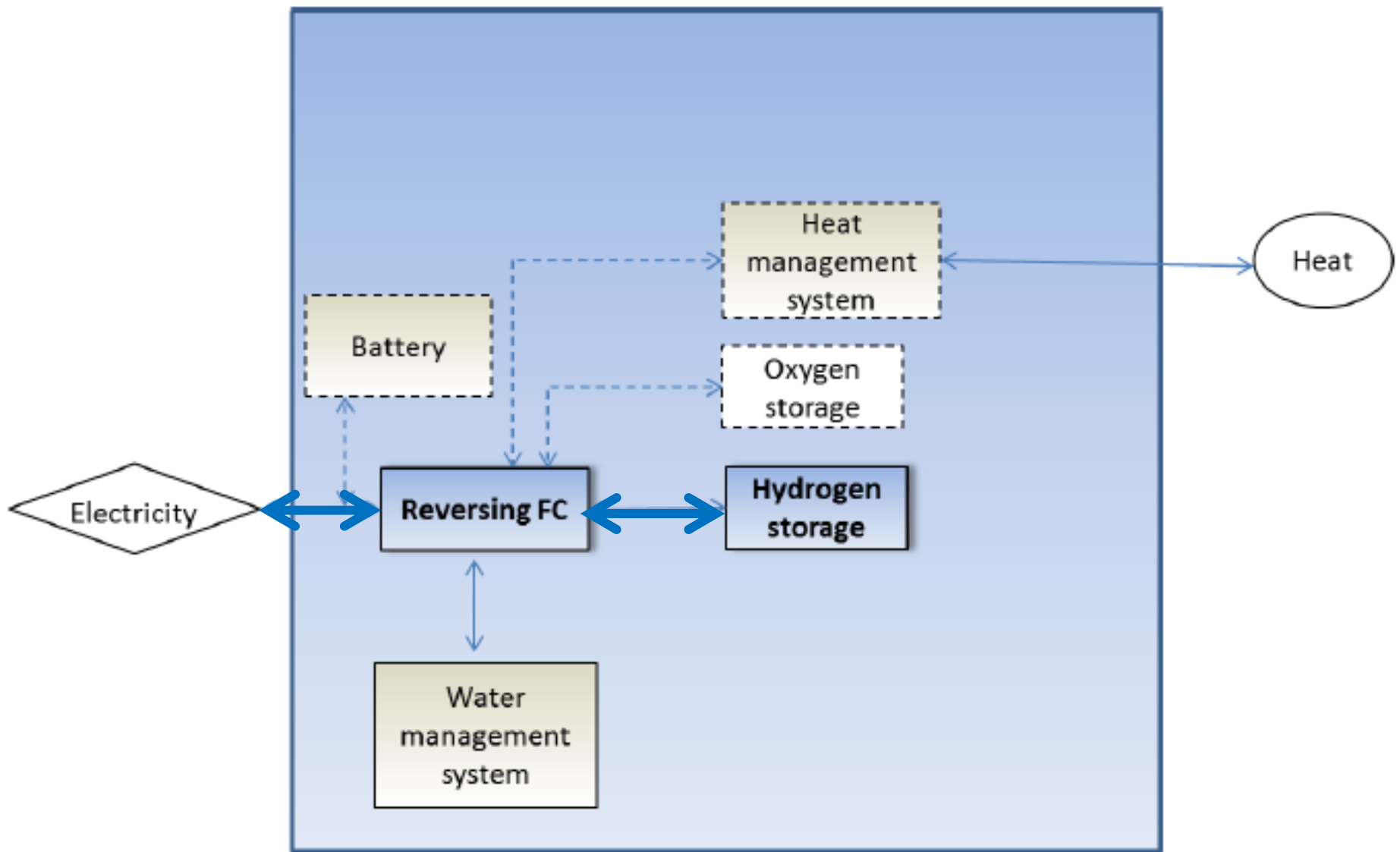


Figure 2. Reversing fuel cell

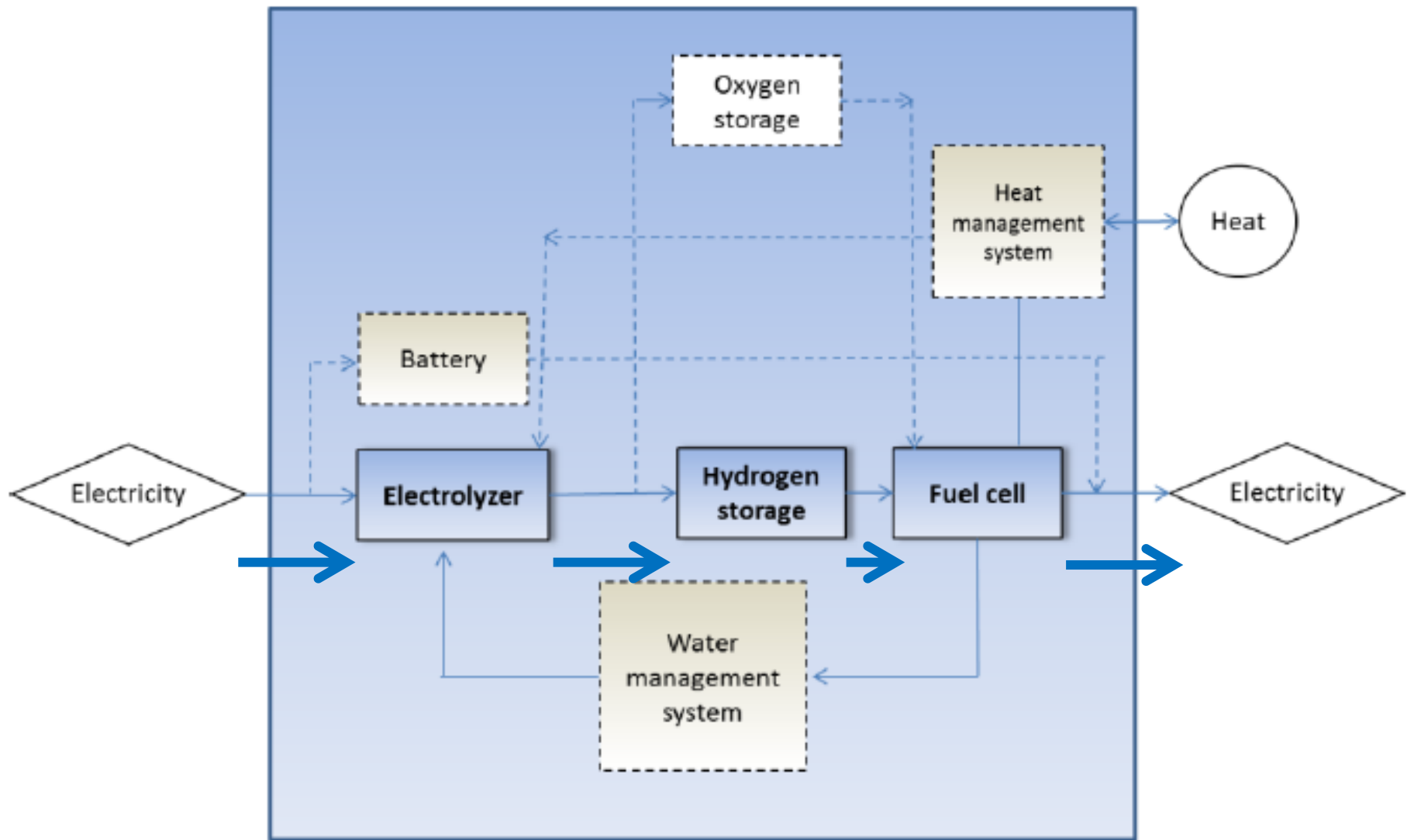


Figure 1. Electrolyzer and fuel cell

IEC 62282-8 consists of the following parts, under the general title:

Fuel cell technologies –

Part 8: Energy Storage Systems using Fuel cell Modules **in Reverse Mode**

Part 8-100: Single cell and stack performance **including reversing operation**

8-101 **SOC**

8-102 PEM

8-103 Alkaline

Part 8-200: Power-to-power systems

8-201 **Performance**

8-202 Safety

Part 8-300: Power-to-substance systems

IEC62282-8-101

Test procedures for **SOC** single cell and stack performance **including** operation in reverse mode

(Convener: Stephen J. McPhail ENEA Italy)

Definition of SOC:

Cell composed of three functional elements (negative electrode, electrolyte and positive electrode) based on ceramic oxide materials.

This standard deals with the performance tests methods of **SOC** which are applicable to **SOFC, SOE and Re-SOFC**

IEC62282-8-201:

Energy storage systems using fuel cell modules in reverse mode -Power-to-power systems – performance

(Convener: Tsuneji Kameda, Japan)

This standard recommends to use **suitable standards** for the performance evaluation of electrolyzers,.

issue

Does **SOC** test methods invade the territory of ISO/TC197 or not?

Does TC197 need to develop a suitable standard for performance evaluation of electrolyzers?