Hannover Fair: a review of the group exhibit Hydrogen + Fuel Cells

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Description: This year's Hannover Fair in northern Germany, the world's largest industrial technology tradeshow, has seen a record number of exhibits from organisations involved in the emerging hydrogen and fuel cell industry.

Ninety-six exhibitors took part in the Hydrogen + Fuel Cells section of the fair, taking up a total exhibition area of 3000 square metres. This is ten times the number of organisations who came together for the first group exhibit of its kind in 1995. According to Arno Evers FAIR-PR, the group exhibit is the world's largest exhibition of hydrogen and fuel cell technologies.

Exhibitors covered the whole supply chain in the emerging hydrogen and fuel cell industry, from material and components suppliers to automotive companies, end-users and media. Fuel Cell Today and The Hydrogen & Fuel Cell Letter were both present.

General Motors and DaimlerChrysler both displayed fuel cell vehicles (cut away to display compact fuel cell systems) as did H Power, which showcased the Peugeot hybrid battery-fuel cell taxi it helped develop in 2001. End-users included EWE, the German utility that is beginning to install Sulzer Hexis systems in customers' homes this year.

Other companies included the world's leading fuel cell system manufacturers (Ballard, H Power, Hydrogenics, Nuvera, Plug Power, Sulzer Hexis and many others), and companies involved in hydrogen generation technology (HyRadix, HERA, Hydrogen Systems, Norsk Hydro Electrolysers). Most of these companies exhibited complete systems.

In addition, there was representation from leading fuel cell components suppliers, including Johnson Matthey, W.L.Gore, Dupont and OM Group (all manufacturers of MEAs), Morgan Fuel Cell, SGL Technologies and Porvair.

As it has been before, the Hannover Fair was the setting for several new announcements from fuel cell companies. Highlights included:

- A prototype notebook computer powered by an integrated fuel cell system was on show for the first time (see picture below). It was developed by LG-Caltex Oil of Korea, in conjunction with the Korean-American joint venture Clean Energy Technologies Inc. (CETI), and Germany's Fraunhofer Institute.

- W.L.Gore displayed the second generation prototype fuel cell scooter developed by Manhattan Scientifics (see below). It is powered by a compact 3kW PEMFC developed by MHTX subsidiary Novars, and follows the much more basic prototype unveiled by MHTX in late 2001.

- Smart Fuel Cell GmbH displayed its first commercial product, an 80W direct methanol fuel cell power module, series production of which begins this year. It also displayed a prototype 40W DMFC unit powering a laptop computer, printer and cellphone. With one 125ml cartridge of methanol, this system can power a laptop computer for a day.

However, perhaps the most interesting items on show – especially to those who follow the progress of the fuel cell industry closely – were the Coleman Powermate metal hydride canisters exhibited by Chevron Texaco Ovonic Hydrogen Systems, manufacturers of the units (see image below).

Coleman Powermate had planned to launch a 1kW fuel cell generator for premium and back up power by the end of 2001, branded the AirGen. The launch, however, was delayed. It is believed that one cause for this delay was that the metal hydride hydrogen storage canisters had not received the necessary certification for distribution.

US Department of Transportation certification has now been granted, and this was clearly visible on the canisters,

which were on show for the first time at the Hannover fair.

An official announcement from Coleman Powermate is expected shortly, and it is hoped that the certification will soon lead to an official launch of the world's first fully available commercial fuel cell system. One note of caution: a distribution network for the refilling of these canisters is only in its infancy.

More images from Hannover can be seen in the Fuel Cell Today image gallery at Fuel Cell Today image gallery.

If you wish to find out more information about some of the companies mentioned in this article, please use our search engine at Fuel Cell Today search engine.