

SAE International Honors 11 Mobility Engineering Professionals with Isbrandt Automotive Safety Award

During the SAE 2016 Government/Industry Meeting at the Washington, DC Convention Center today, authors of the SAE World Congress Technical Paper on Hydrogen Fueling, were honored for this year's Ralph H. Isbrandt Automotive Safety Engineering Award. The technical paper being honored is titled: "Validation and Sensitivity Studies for SAE J2601, the Light Duty Vehicle Hydrogen Fueling Standard" (SAE 2014-01-1990)

Warrendale, Pa. ([PRWEB](#)) January 25, 2016 -- During the SAE 2016 Government/Industry Meeting at the Washington, DC Convention Center today, authors of the SAE World Congress Technical Paper on Hydrogen Fueling, were honored for this year's Ralph H. Isbrandt Automotive Safety Engineering Award. The technical paper being honored is titled: "Validation and Sensitivity Studies for SAE J2601, the Light Duty Vehicle Hydrogen Fueling Standard" (SAE 2014-01-1990)

This SAE technical paper was an industry-led effort evaluating the safety and performance of hydrogen fueling for Fuel Cell Electric Vehicles. For the first time multiple automakers collaborated together for hydrogen fueling and released their onboard and lab data into one report in order to support international standardization. The testing ranged from the laboratory to real public hydrogen fueling stations and was done in three continents. In addition, "extreme case simulations" or sensitivity studies evaluated the limits of hydrogen fueling with vehicle and station designs. The simulations were combined with real fueling data from onboard the vehicle in the field to extreme laboratory trials in order to give the confidence to implementation of the SAE J2601 standard.

The lead author, Mr. Jesse Schneider, of BMW was recognized along with co-authors Jihyun Shim (Hyundai), Graham Meadows (IMPCO), Steven R. Mathison (Honda), Michael J. Veenstra (Ford), Rainer Immel (Opel), Morten Wistoft-Ibsen (H2 Logic), Manfred Greisel (Wenger Engineering), Spencer Quong (SQI), Timothy McGuire (MB RDNA), and Peter Potzel (Daimler).

"The SAE J2601 standard enables commercial fueling which gives a 'same-as-today's' duration of 3-5 minutes and enables a range driving, similar to conventional vehicles at 300 miles (500km). This technical paper (SAE 2014-01-1990) documents the more than a decade worth of testing and simulation to confirm the hydrogen fueling protocols targets and limits. Validating safety for commercial hydrogen fueling protocol is a high priority as well as confirming its performance and that is what was documented in this report." stated Mr. Schneider.

Obtaining extended driving ranges in FCEVs with hydrogen fueling is accomplished by compressing hydrogen to 70MPa (or H70). The speed of hydrogen fueling is directly related to the amount of cooling that the dispenser allows, to offset the heat of compression. Therefore, a H70-T40 fueling dispenser enables this fast-fueling by providing hydrogen fuel at -40C to the fuel cell vehicle.

The figures below show an example of fueling in the laboratory (at Powertech in Canada) and in the field at a Shell Station with H2Logic Technology in Denmark. The data confirms that the fueling does not exceed the temperature, pressure or density limits under extreme and ambient conditions.

SAE J2601 -utilizing this report- is reference in the upcoming international Standard ISO TS 19880-1 as well as the North American CSA 4.3 Standard. This data (documented and evaluated in the SAE report 2014-01-1990) has also been posted on the www.h2protocols.com website so that all can download for free in the public domain.

The Isbrandt Award (<http://awards.sae.org/isbrandt/>) recognizes individuals for their outstanding contribution to SAE literature, which advances the field of automotive safety engineering. Established in 1972, this award is funded through an endowment established by several automotive companies and honors the memory of Ralph H. Isbrandt and the enormous impact he had on automotive safety engineering as well as inspiring young engineers to seek and follow a mobility engineering career.

SAE International is a global association committed to being the ultimate knowledge source for the engineering profession. By uniting over 137,000 engineers and technical experts, we drive knowledge and expertise across a broad spectrum of industries. We act on two priorities: encouraging a lifetime of learning for mobility engineering professionals and setting the standards for industry engineering. We strive for a better world through the work of our philanthropic SAE Foundation, including programs like A World in Motion® and the Collegiate Design Series™.

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