FOR IMMEDIATE RELEASE

A compact prototype of a steering-wheel mounted breath alcohol detection system

-- Separation of the breath alcohol detector from the breath intake port to enable installation in the dashboard --

Tokyo, December 26, 2011 – Hitachi, Ltd. (NYSE: HIT/TSE: 6501, "Hitachi") and Hitachi Engineering & Services Co., Ltd., today announced the prototype of a compact breath alcohol detection system composed of a compact mass spectrometer and an alcohol gas sensor for in-car use. In this system, the breath intake port was separated from the breath alcohol detector to enable it to be installed close to the steering wheel, allowing breath alcohol detection to be conducted in the driving position. The system will contribute to driving/operation management by preventing drink driving in automotive and other transportation systems.

In recent years, to increase safe driving, there has been a greater enforcement worldwide of measures to eliminate drink driving. In Japan, a law came into effect on the 1 May 2011 which requires bus, taxi and trucking companies to check whether drivers are under the influence of alcohol or not at roll call, using an alcohol sensor. Overseas, some countries have begun considering or have already implemented the mandatory installation of an alcohol interlock device[*1] for convicted offenders or drivers of school buses and business vehicles.

Until now, Hitachi had already developed a compact mass spectrometry system to detect small water clusters in exhaled breath, and in combination with an alcohol sensor, technology, to confirm that the sample being measured was actually "breath" and at the same time, detect alcohol. With this earlier model, it was confirmed that "breath" could be detected from a distance of 50 cm. In targeting installation in vehicles however, as the breath intake port and alcohol detection sensor were combined, the total size of the system, including a control unit and a power-supply unit, was too large for in-car use. Further, there was a general need for alcohol detection systems to be able to measure the breath-alcohol levels of drivers in the driving position without having to conduct any special operation. In order to meet these needs, Hitachi developed a prototype compact breath-alcohol detection system by designing a dashboard-installable size breath alcohol detection unit (total volume approx. 540cc) and a breath intake port

which could be set-up close to the steering wheel so that no special operation was required to accurately measure the breath alcohol level of a driver.

This system was developed jointly by Hitachi and Hitachi Engineering & Services Co., Ltd. Major technical features of the system are summarized below.

*1. Alcohol interlock device: A device which sets off an alarm or immobilizes the engine when a driver blows into the unit and a breath alcohol level greater than a predetermined level is detected.

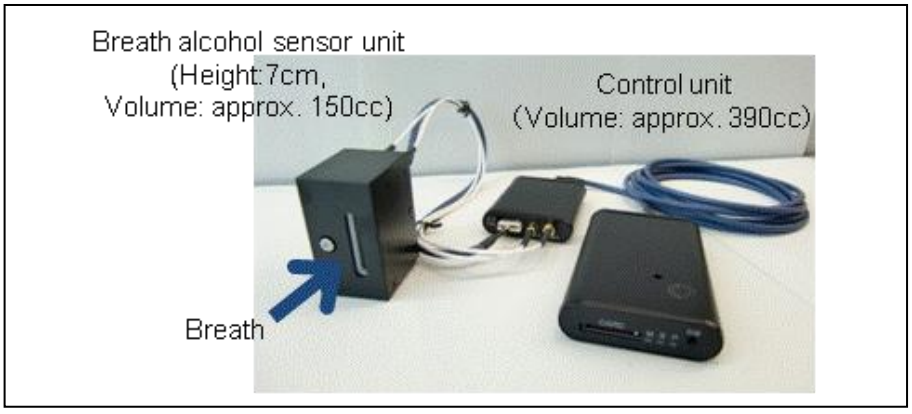
System Features

(1) Breath alcohol detection system with separated breath intake port

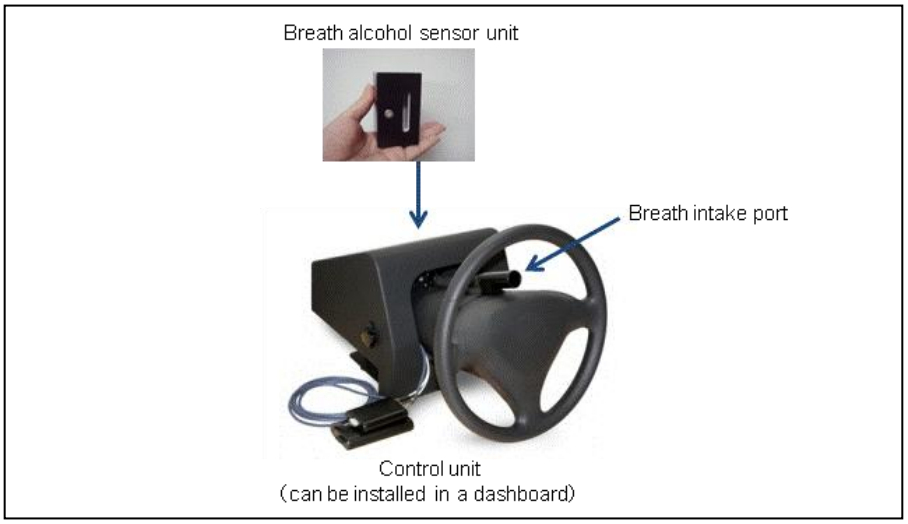
The propagation characteristics of exhaled breath in atmosphere were studied in details. While the temperature and humidity of exhaled breath collected through a tube was found to disperse while travelling from the intake port to the end of the tube, water clusters were found to propagate as a compressional wave through the tube. Based on the finding that water clusters propagate to an alcohol sensor through several tens of centimeters-long tube without diffusion, a prototype breath alcohol detection system with a separated breath intake port was developed. This configuration allows the breath intake port to be set-up close to the steering wheel and the breath alcohol sensor unit to be installed in the dashboard.

(2) Downsizing of breath alcohol detector and its controller

Using microprocessors, the total size of the breath alcohol detector and its controller was reduced to that which allowed installation in a car dashboard (breath alcohol detector approx. 150cc; controller approx. 390cc).



Prototype breath alcohol detection system



Steering wheel installation example

About Hitachi, Ltd.

Hitachi, Ltd., (NYSE: HIT / TSE: 6501), headquartered in Tokyo, Japan, is a leading global electronics company with approximately 360,000 employees worldwide. Fiscal 2010 (ended March 31, 2011) consolidated revenues totaled 9,315 billion yen ($112.2 billion). Hitachi will focus more than ever on the Social Innovation Business, which includes information and telecommunication systems, power systems, environmental, industrial and transportation systems, and social and urban systems, as well as the sophisticated materials and key devices that support them. For more information on Hitachi, please visit the company's website at http://www.hitachi.com.

About Hitachi Engineering & Services Co., Ltd.

Since its establishment in 1960 as a member of the Hitachi Group, Hitachi Engineering & Services Co., Ltd. has been providing various technologies, products, systems, and services to meet customer requests and the demands of society in such social infrastructure fields as energy, industry, and information systems. Fiscal 2010 revenues totaled 1,017 billion yen. For more information on Hitachi Engineering & Services Co., Ltd., please visit the company's website at http://www.hitachi-hes.com/en/index.html.

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