

November 20, 2008

To Whom It May Concern,

Mitsui Mining & Smelting Co., LTD and Gentech International Ltd Announce Collaboration ~Announce SCR Combined Quality and Level Sensor~

Mitsui Mining & Smelting Co., LTD (Headquartered in Tokyo, Japan; President: Yoshihiko Takebayashi) and Gentech International Ltd (Headquartered in Girvan, UK: Managing Director Angela Simkins) have reached an agreement to supply SCR Combined Sensors utilized in the DEF/AdBlue® tanks of diesel powered commercial vehicles with SCR emissions systems. Mitsui's urea quality sensor, named Senfoa®, has been integrated into Gentech's level sensor which is mounted in the top of the DEF/AdBlue® tanks on commercial vehicles. The relationship between Mitsui and Gentech will be advantageous to OEM's as they will be able buy a complete 1-piece module that will handle all DEF/AdBlue® tank services such as:

- DEF/AdBlue® concentration sensing
- Detection of non-DEF/AdBlue® liquids
- Level sensing
- Temperature sensing
- Suction & Return
- Filtering
- Heating
- CAN communication

Senfoa® Capabilities

The EPA 2010, JP 09, and Euro VI emission legislations all address the importance of DEF/AdBlue® with their OBD requirements. Mitsui's Senfoa® is able to satisfy all pertinent OBD requirements. Senfoa® detects and communicates the actual urea concentration percentage of the DEF/AdBlue®. This allows Senfoa® to easily discover illegally diluted DEF/AdBlue®. Senfoa® also detects and communicates instances when non-DEF/AdBlue® liquids are intentionally (or unintentionally) added to the tank.

Benefits of Senfoa®

The benefit of having Senfoa® in the DEF/AdBlue® tank of the vehicle is that it:

- Senfoa® gives confidence of emissions compliance by identifying that proper DEF/AdBlue® is being used
- Senfoa® advises the vehicle if the tank is filled with fluids that may damage the SCR dosing system and catalyst. Damage from the use of non-DEF/AdBlue® liquids will not be covered under OEM warrantees.
- Gives operators the confidence that the proper DEF/AdBlue® is in the tank so that they will not be subjected to driver inducement measures by the OBD (torque reduction, limited vehicle re-starts, etc...), which could eventually lead to late deliveries and/or government fines.

Senfoa® Technology

Senfoa® was developed using Mitsui's proprietary thin layer chip technology. The sensor uses this chip technology in its sensing elements, in conjunction with an application specific integrated circuit (ASIC), in order to communicate with the OBD via CAN. DEF/AdBlue® concentration, temperature, and foreign liquid detection, are all communicated. Senfoa® uses the principle of thermal conductivity in order to identify DEF/AdBlue® concentration as well as foreign liquids. The thermal conductivity, or the ability of a material to conduct heat, allows for the individual identification of liquids.

<u>SCR</u>

Selective Catalytic Reduction (SCR) is an exhaust aftertreatment method used with diesel engines to reduce Nitrogen Oxides (NOx) emissions. The SCR system relies on the injection of an aqueous urea solution into the exhaust stream in order to facilitate the reduction of NOx emissions. This aqueous urea solution (32.5% urea and 67.5% demineralised water by weight) is called Diesel Exhaust Fluid (DEF) in North America and is called AdBlue® in other parts of the world. The quality of DEF and AdBlue® is strictly defined by ISO and DIN standards

Mitsui Experience

Mitsui was the world's first manufacturer of urea quality sensors for heavy duty trucks, starting in 2004, with the Japanese market.

Gentech International Ltd

Gentech provides sensing solutions globally and has nearly 40 years experience in the truck, bus, and off-highway markets and relationships with many key OEM's. Head office is in the UK with sales offices and world wide distribution.

In response to customer requirements the level sensor currently supplied will now be offered with an integral quality sensor requiring no further modification of the tank, assisting customers to move forward as smoothly as possible to meet challenging deadlines.

SCR Combined Sensors Module (image)



Mitsui Urea Quality Sensor (Senfoa[®])



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