

Foreword

Solutions for Automotive Testing



Takashi Nagano

A stylized, handwritten signature in black ink, consisting of several fluid, overlapping strokes.

HORIBA Europe GmbH
President

In recent years, the field of research, development and testing of vehicles has created a need for integrated testing systems which cover the entire vehicle including engine and driveline. These systems also need to be capable of being deployed globally in a supportive structure. As a means of responding to these market requirements, building on our strengths in vehicle emissions measurement technology, since the 1990s HORIBA has moved to strengthen its relationship with Ricardo plc of the United Kingdom as a part of a long-term strategy. In 2001 HORIBA participated in the creation of SRH Systems Ltd.¹⁾, with an eye to joint development of an integrated automation software platform focusing on engine testing. In October 2005 HORIBA took another step forward with the acquisition of SCHENCK-Development Test Systems (DTS) of Carl Schenck AG. This acquisition added to HORIBA Group's technologies the DTS hardware technology required for integrated systems, in addition to the software being developed by SRH Systems. With the result that we were able to surpass our previous framework for business development focused on vehicle emissions measurement, and build a business environment that could provide a broad range of solutions for the whole range of automotive research, development and testing. Needless to say, these activities are an extension of the business track forged and expanded by the HORIBA Automotive Test Systems segment over the course of 40 years, starting with gas

analyzers and moving on to sampling equipment, chassis dynamometers, and automation systems. This business track is what underpins our consistent policy of "providing solutions to our customers."

There are some key themes in the environment surrounding the automotive industry today. One of the largest of such themes is reducing the environmental burden, and over the course of 30 years great efforts have been made to conform to emissions regulations that become more stringent as each year passes. Conformity with emissions regulations is still one of the critical themes for vehicle development. Additionally, with the recent heightened need to control CO₂ emissions as a means of preventing global warming, greater weight has also come to be placed on improving fuel efficiency. The background to the need for improved fuel efficiency is a complex and interwoven web of factors, including, in addition to environmental issues, others such as energy concerns and surging fuel prices. A response to this important theme requires incredibly advanced and complex R&D efforts, starting with further improvements to the internal combustion engine itself, and also including advancements in exhaust after-treatment devices, a response to alternative fuels, and development of advanced powertrains for hybrid vehicles and others. Testing and trials, which account for a very important part of the R&D process, have also increased not merely in quantitative terms, but also in terms of their incredible complexity, in stark contrast to testing in earlier years. Greater and greater advancements are also required for hardware and software employed in testing equipment and system integration is now a prerequisite. At the same time, a further important condition is that the investment costs associated with the introduction of new and integrated testing systems can be recouped.

In this issue, we will be introducing a number of items, focusing on the Mechatronics product range that has been added to the HORIBA line-up following the acquisition of the automotive division of Carl Schenck AG (including engine, driveline, vehicle and brake test systems, and wind tunnel balances), and the STARS Test Automation System, which integrates all these testing equipments. Our product strategy is to combine the pillars of our core emissions measurement products and Mechatronics products with either of the two automation systems of STARS and the Vehicle Emissions Test System (VETS) to form an integrated system that will provide advanced solutions. To this end, we continue to monitor closely global trends in the automotive industry, and will listen earnestly and attentively to the requirements of each and every one of our customers.

*1 : SRH Systems Ltd. is a joint venture company established by Schenck, Ricardo and HORIBA. Following the acquisition of SCHENCK-Development Test Systems (DTS) by HORIBA, the company became a joint venture between Ricardo and HORIBA.