

HORIBA's Analysis Technology Expanding in Shipping Industry

Nagato UEDA

International transportation is essential for Japan's development and future, and marine transportation has been important for overwhelming transport capacity where air pollution by ships exhaust gas attracts attention with the upsizing of ships and vessels. HORIBA has engaged in various analyzers and is currently supplying to shipping industry such as exhaust gas analyzer for NOx identification, NOx sensor for SCR control, analyzer for sulfur in fuel oil, oil-in-water concentration analyzer, water quality analyzer for exhaust gas purifier, and SCR urea water deterioration inspection kit etc.

Introduction

Japan is surrounded by the sea and her conventional and future prosperity cannot be discussed without referring marine and air transportation. Especially marine transportation have developed as important import and export means because of its overwhelming transporting power, where some types of vessels such as container carriers, tankers and car carriers have advanced in their size to carry more amount of cargo at once. On the other hand, environmental problems such as air pollution have been discussed mainly on land because they are arisen by fixed or mobile exhaust sources. But now we are comprehensively examining air and marine environment, and marine water and air pollution caused by marine transportation have recently attracted more attention especially on the emissions from ships to the sea or the atmosphere.

HORIBA Analyzers in Marine Industry

HORIBA's exhaust gas analyzer started from the medical breath analyzer and evolved into an exhaust gas analyzer emitted from vehicle engines. In addition, HORIBA, as a comprehensive manufacturer of analysis and measurement instruments, has core technologies that can be applied to all fields of solid, liquid and gas materials, starting with the oil-in-water concentration analyzer (OCMA series) in the 1980's, we have been involved in many analyzers also to the marine industry.

Currently, the exhaust gas analyzer for onshore nitrogen oxide (NOx) identification (MEXA-1700DS) and the NOx sensor for SCR control (MEXA-820NOx) to the field of gas analysis, the sulfur analyzer for fuel oil (SLFA-60M) to the field of scientific instrumentation, and in addition to the above-mentioned oil-in-water concentration analyzer, water quality analyzer for exhaust gas purifier (EG-100), and urea water deterioration inspection kit for marine Selective Catalytic Reduction (SCR) etc. to the field of ship industrial water quality analysis.

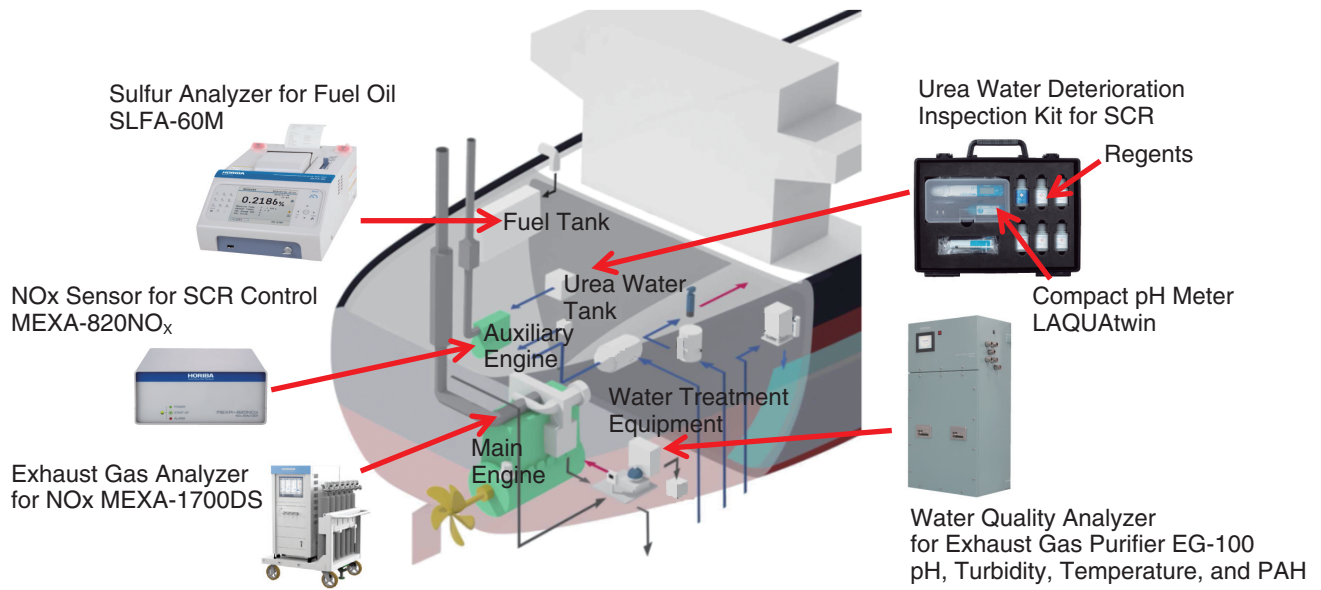


Figure 1 HORIBA's analyzers for ships

The Role of HORIBA in Energy Industry

The global field of energy has changed dramatically in recent years. Although energy sources are and will be diversifying due to concerns about nuclear power plants and the development of renewable energies, it is considered that internal combustion engines will be still used in parallel. Even for the electric propulsion ship with little exhaust gas, it consumes some energy created somewhere in some way. And the battery technology for temporary accumulation necessary for electric propulsion ship is becoming more important, and new proposals such as fuel cell ships etc. have been presented recently.

As a result, instrumentation systems for air and water environment analysis are becoming more and more important in order to achieve efficient use of various power sources. Moreover, we have to respond to various requests such

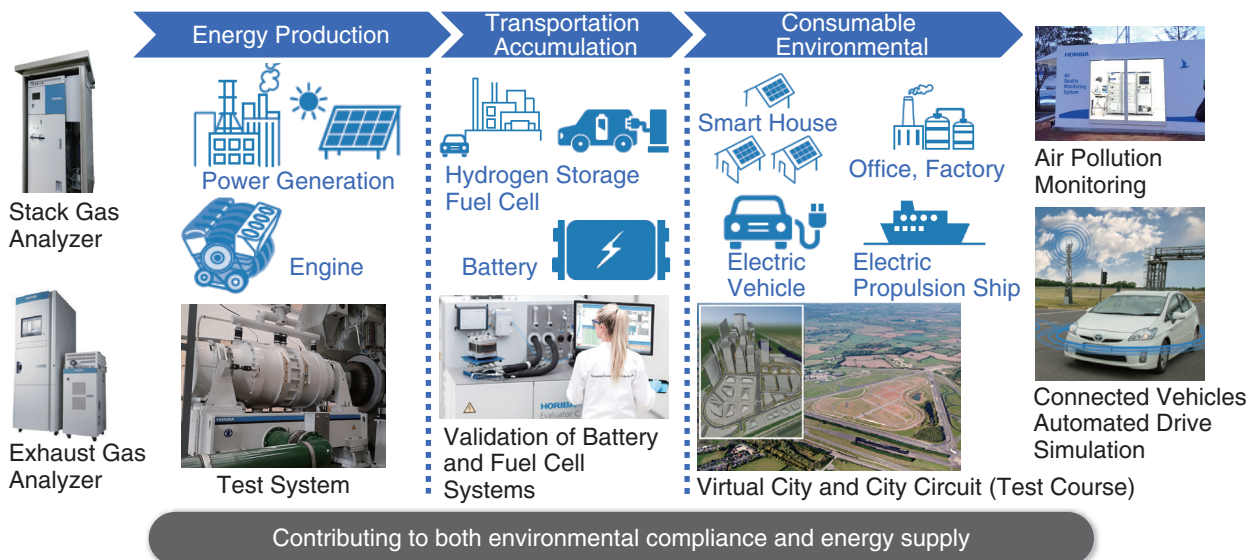


Figure 2 HORIBA's technology expanding in whole energy industry



Figure 3 HORIBA's business expansion

as alternative fuel application or new regulatory compliance. As shown in Figure 2, HORIBA Group offers various solutions even suitable for the form changes of energy production, energy storage, and energy consumption.

Conclusion

HORIBA Group's business (Figure 3) is expanding from nanometer-sized to global-sized field anticipating future human prosperity and subject to be achieved on global scale. We will continue to make continuous efforts as a company contributing to customers with better environmental improvement, and as a good partner in the industries.

* This content is based on our investigation at this publish unless otherwise stated.



Nagato UEDA

Sales Division
 ATS Sales Promotion Dept.
 Manager
 Marine Business Development
 HORIBA, Ltd.