Maritime Emissions Monitoring

SHIPS CAN CONTINUE SAILING INTO EMISSION CONTROL AREAS – RIGHT INTO THE FUTURE

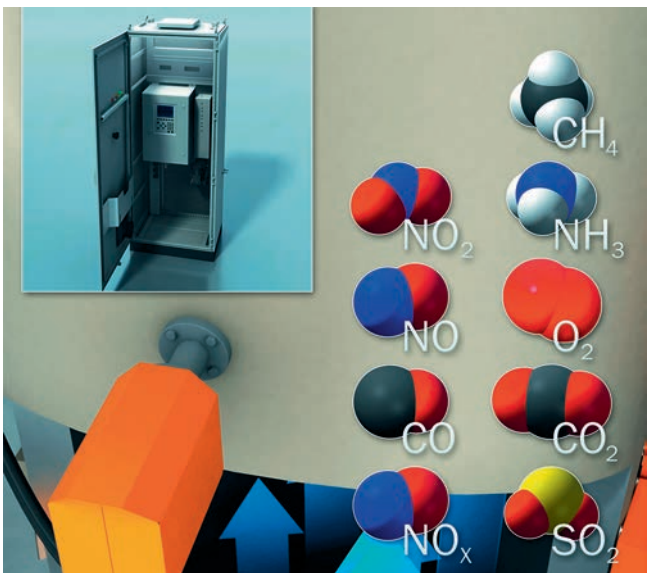
SICK
Sensor Intelligence.

Measurement solution according to MARPOL regulations

The International Maritime Organization (IMO) is enforcing new regulations in order to reduce emissions. Although scrubbers and catalyzers are able to reduce SO_2 and NOx emissions, even the best cleaning process is worthless without emission monitoring that is 100% reliable. SICK is providing assistance with proven measuring technology. Now it‘s your turn.

Are you in the know? The new regulation

- MARPOL Regulation 14 of Annex VI requires ships to use fuel oil with low sulphur content when sailing in ECAs (emission control areas). Alternatively a sulphur reducing exhaust gas cleaning system can be installed on board.
- MARPOL Regulation 13 of Annex VI and NOx-Technical Code 2008 defines limits for NOx emissions for fuel engines on board. Industry is working on new technologies to lower NOx emissions. Alternatively a catalytic gas cleaning system to reduce NOx can be used.



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You can see the opportunity: protection of the environment with potential for savings

- It doesn't have to cost a fortune to show your commitment to protecting the environment. Compare the cost of marine diesel oil with that of heavy fuel oil together with modern technology for cleaning and monitoring waste gases. With the latter, you will see a return on your investment within two years.
- Arrive at any port or sail the high seas without fear of penalty payments.
- Optimize the control of the ship's motors in the interest of energy management.
- Low emission values will also score points with the public, investors, and shareholders alike. Whether you are just catching the green wave or have been riding it for some time, it is certainly worth the effort.

Now it's your turn: Taking measurements where it matters

Continuously measuring and checking emission values to ensure compliance with the new IMO specifications can be very easy. You can rely upon SICK's measuring technology to check SO_2, CO_2, and NOx. SICK can step up to the plate with a measuring solution that is just right for you where the monitoring of CO, H_2O, NH_3, O_2, and CH_4 for internal combustion engines or scrubbers is concerned, too. There are so many components to measure. The rugged and reliable MCS100E Marsic measuring system supplies accurate values and automatically transmits all data directly to a ship's control system. Established for decades and having already earned a respectable reputation for measuring emissions in incineration plants, the measuring technology is crucial for constant measuring performance combined with high availability. Leading shipping companies acknowledge their satisfaction with SICK's measuring system. The future is also secure, since the multicomponent analyzer system already has the necessary components for measuring methane slip on LNG tankers.

Certified for all applications

SICK is certified according to German Lloyds (12764-10 HH), the MCS100E can be used for all applications stated in the NOx Technical Code Pt. 2.1.2.

- Pre-certification of marine diesel engines on a test bed (NTC 2008, Chapter 5)
- On-board testing for engines, which have no pre-certification
- On-board simplified measurement method (NTC 2008, Chapter 6.3)
- On-board direct measurement and monitoring (NTC 2008, Chapter 6.4)
- Control of exhaust gas cleaning systems according Scheme A and B of MEPC.184(59)

Safe and secure while on the move: worldwide service

Asia, America, Europe: SICK has service resources available wherever you are in the world and is able to provide qualified support whenever it is needed. Maintenance, spare parts supply, remote service – we can be at your side quickly, because we know that your idle periods are short. The intelligent service and replacement concept to safeguard high operational safety will certainly not fall short of your expectations.

SICK – having almost 6,500 employees in more than 80 countries – delivers the equipment for measuring tasks, provides structured documentation and high quality training. Service staff offers support during installation, commissioning and maintenance.

The perfect basis

SICK is a leader in emission monitoring worldwide and the MCS100E has been used in more than 2,000 installations – in power plants, waste incinerators and in the cement industry. This valued analyzer is also tested and certified for use on-board ships. Positive responses from customers like Norwegian Cruise Lines, MAN and Shell inspire SICK to continue solving emission monitoring needs.

In addition to gas measurement, SICK also has experience with on-board dust monitoring, flow measurement in stack gases and high accuracy volume flow measurement for custody transfer of natural gas.

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