**SICK Maritime Suite: SICK, DNV, and CPO Containerschiffreederei show how digital maritime is.**

From emissions measurement on the ship with digital on premise solutions to the cloud: digital solutions for transparency, cost optimization, and increased availability.

Waldkirch - Sensor solutions provider SICK and CPO Containerschiffreederei announce their cooperation. Since 2020, both companies have been working on digital solutions for the maritime industry, which has now also been technically evaluated by the classification society DNV. The SICK Maritime Suite, provides CPO Containerschiffreederei with a holistic view of the emissions and performance of the exhaust gas cleaning system on the ship, the condition monitoring of the emission measuring device, and the compliance status of the ship - while also using intelligence through trained machine learning models

Ever stricter laws and regulations for emissions monitoring are presenting shipping companies with increasing challenges. Digital solutions can help to better meet these. In addition, trained specialists must regularly service emission measuring devices. Service of the equipment must be tailored to international routes and limited lay times in port. Now, the CPO Containerschiffreederei has teamed up with SICK to bring a solution for these tasks on board a ship. This makes it possible to generate operator-independent data evaluations on various emission indicators and reporting that meets current standards, such as general readability.

**Digital solution portfolio from SICK - SICK Maritime Suite**

The SICK Maritime Suite includes several Digital Services: with MARtracker, shipowners can load data on the scrubber's operation from the cloud at headquarters and monitor compliance with guidelines for reducing ship emissions through exhaust gas cleaning deposition, such as MARPOL Annex VI and the MEPC.340(77), regardless of the manufacturer.

SICK's MARpems digital service simultaneously increases the availability of the scrubber and maintains the compliance status in the event of a gas analyzer failure, and the ship is still allowed to sail into port without manual effort. MARpems is, so to speak, the digital twin of the MARSIC emission analyzer. If no data from the MARSIC300 is available, the digital twin takes over. The machine learning model is trained with the existing operating values of the scrubber.

In the future, MARdiagnostics will make it possible to view the data on the status of the MARSIC marine emission measuring device online and in real time.

The aim is to decisively increase the transparency of the condition of the emission measuring devices and thus enable meaningful forward-looking service planning. This means that multiple service visits can be avoided, faults can be rectified more quickly, and conformity can be maintained based on validated data models. Ultimately, time and costs can be saved or used sensibly.

**Prototype successfully installed – and recognized by the German flag**

In the port of Long Beach/California, the CPO Containerschiffreederei installed the SICK Maritime Suite together with SICK on the MSC LA SPEZIA. As part of the development of MARpems, there was close cooperation with the classification society DNV. The data model behind MARpems was evaluated by DNV Service in Høvik and a declaration of performance, a so-called "Statement of Product Capability" was issued for MARpems. DNV Maritime in Hamburg has technically assessed the function of MARpems for scrubber applications and has declared the technical applicability towards the German flag state.

This has resulted in an endorsement of MARpems for the MSC LA SPEZIA by the German flag. An USP as MARpems is now a system recognized by flag states that ensures temporary emissions compliance in the event of prolonged failures.

**Quote CPO Containerschiffreederei**

“The capabilities we get from SICK Maritime Suite supports our quality approach in operating our container ships and allows us to provide better support to our crews from the office, while being more independent of service calls.” Christoph Gessner, Managing Director, CPO Containerschiffreederei

Quote DNV Maritime

“The maritime industry is experiencing an accelerated shift towards digitalization and automation. Employing digital technologies and solutions aims to boost competitiveness and improve operational efficiency significantly. MARpems is an excellent example how digitalization can support ship operators keeping its vessels in compliance even in case of failure of “traditional” physical sensors.” Fabian Kock, Head of Section Environmental Technologies Air, DNV

Quote SICK

SICK already has an extensive portfolio in the maritime industry and is expanding this further with the SICK Maritime Suite: "With the SICK Maritime Suite, we have successfully demonstrated how we can combine our products and service for the maritime industries with our digital expertise. This project shows once again how important people and direct exchange with leading players are in the face of all digitalization. We are pleased that together we have created a solution from which other market participants can also benefit. We increase customer satisfaction and can save costs," explains Christian Lohne, Product Manager of SIC

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SICK is one of the world’s leading solutions providers for sensor-based applications in the industrial sector. Founded in 1946 by Dr.-Ing. e. h. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence around the globe. SICK has almost 12,000 employees worldwide and generated a group revenue of around EUR 2.2 billion in the 2022 fiscal year. Additional information about SICK is available at www.sick.com

The Offen Group ist a Hamburg based shipping company and the biggest German Non-Operating Owner for Postpanamax container vessels. 1.500 seafarers and about 115 colleagues in the office are employed in the company. CPO Containerschiffreederei (GmbH & Co.) KG is a subsidiary of the Offen Group offering full service Shipmanagement for own and third party vessels.