

# ENVIRONMENTAL MONITORING

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## CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)



# MEASURING WITH THE SPEED OF LIGHT. **NO SAMPLING. NO CONTACT.**

Consilium OPSIS M800 is a unique solution for **emission monitoring**, measuring with the speed of light, **no contact with the gas** and uses optical technique (DOAS). Together with fiber optic instead of heated sampling pipes, it offers a **highly reliable** and **cost effective** system, with proven performance and high uptime.

The continuous emission monitoring system (CEMS) measures all relevant gases, such as NO, NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub>, CO, NH<sub>3</sub>, CH<sub>4</sub>, with just **one analyser** and is easily updated to additional gases by a simple software upgrade. Thanks to the **cross-stack method**, the system is perfect for the harsh environments after a scrubber as it doesn't require any contact at all with the gas. **No sampling** is required, simplifying operation and maintenance.

## NON-CONTACT MEASURING **IN THE BLINK OF AN EYE**

Consilium Opsis M800 measures all relevant gases with an optical, non-contact method, monitoring all scrubber systems on a ship with just one analyser.



## MONITORING SYSTEMS FOR A BETTER PLACE



The global environmental impact from ship emissions is significant and the International Maritime Organization (IMO) is enforcing new regulations in order to reduce the emissions.

Ships passing through Environmental Control Areas (ECA) must use low sulfur fuel (0.1% S) or install scrubbers to reduce the SO<sub>2</sub> emissions. Ship owners using scrubbers must monitor SO<sub>2</sub> and CO<sub>2</sub> in the scrubber exhaust. Our CEMS monitors the emissions with the speed of light and gives you a trustworthy products that is in it for the long run.

## TROUBLE FREE MONITORING SYSTEM



Our monitoring systems have been installed all over the world, many of them with more than 15 years trouble free operation. The system has proven to be the most reliable and cost efficient solution possible for continuous emission monitoring.

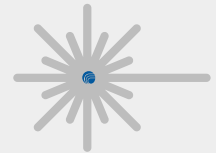
## LOW MAINTENANCE, LOW LIFETIME COST



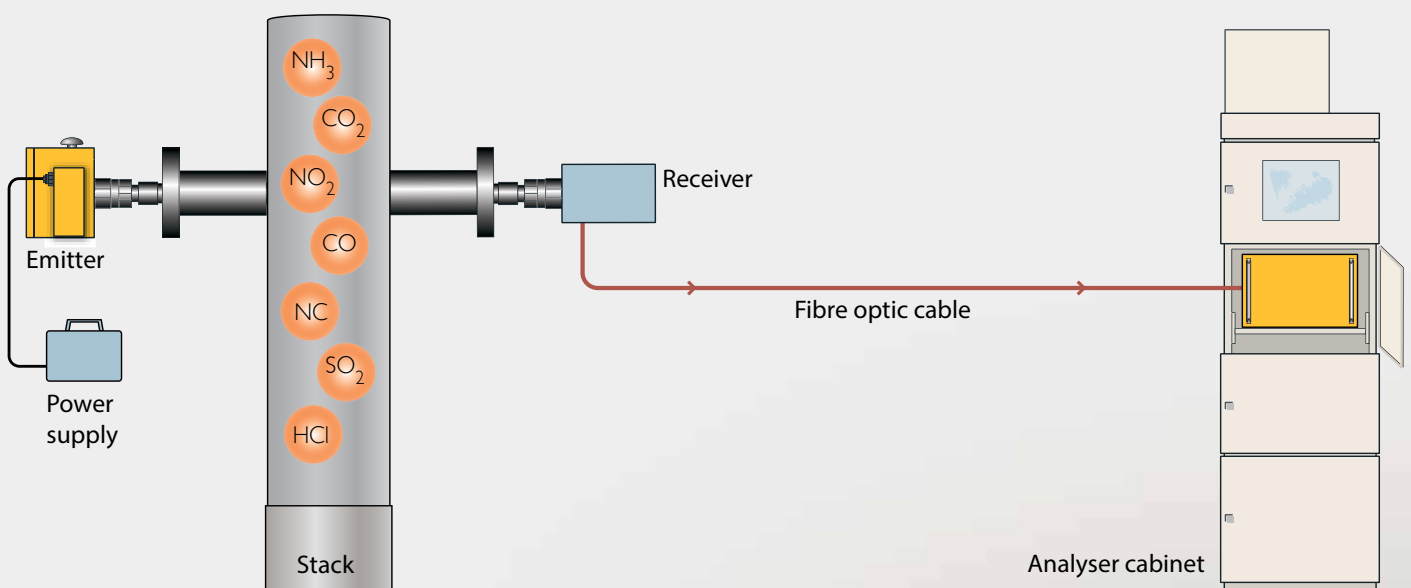
Thanks to the non-sampling method and the optical monitoring technique, installation is easy, the energy consumption is low and the maintenance minimal. In addition to this, the system is self operating, with a high reliability, ensuring a very low lifetime cost.

## OPTICAL MEASURING AT THE SPEED OF LIGHT

As the OPSIS M800 is an optical measuring system, no pumps, filters or heated lines are required. A light beam is sent across the duct or stack and the captured light is sent to an analyser through an optical fibre cable.



The response time is very fast, enabling monitoring each measuring point accurately within seconds, meeting and exceeding the requirements stipulated.



# FOR ALL THOSE MOMENTS **WHEN SAFETY MATTERS**

Consilium is a producer of safety technologies for the marine, oil and gas, transport and building sectors. Our commitment goes beyond the products:

We protect the lives of mothers and fathers, sisters and brothers, colleagues and friends. With representation in more than 55 countries in all time zones, we are always close to you.



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