

Press release December 1st 2020

Improving the Indoor Air Quality of ships :

ENGIE Solutions announces the launch of its "Healthy Ship" offering

The world continues to face the challenges relating to the COVID-19 pandemic. While the second wave we face sustainably inscribes this virus in our daily lives, ENGIE Solutions offers air treatment solutions to improve Indoor Air Quality (IAQ) in cruise and naval vessels. In order to improve the comfort, health and safety of passengers and crews in public areas and cabins, ENGIE Solutions designs, implements and maintains solutions suited to existing systems, bringing them together in a single "Healthy Ship" offering.

Nowadays, solutions exist for bio-decontamination and IAQ improvement. They require precise HVAC technical expertise in order to properly size them so that they can be modulated and adapted within a centralized installation.

Aware of the importance of the marine industry in the economic recovery and the need for vessels operators to provide a safe environment before being able to restart operations, ENGIE Solutions provides its expertise, HVAC solutions know-how¹ and overall energy management experience to the maritime sector. This system enables the vessel owners and operators to ensure the effectiveness and performance of their platforms while optimizing facilities and equipment and ensuring the safety of all those on board.

This offer may take different forms that meet the constraints of the vessel and its operation. Indeed, ENGIE Solutions provides services ranging from the disinfection of equipment (with certification by an independent laboratory) to the design and installation of new equipment and its physical integration into control/command systems.

The "Healthy Ship" offering is fully modular and fits the actual needs of vessel operators. It can include :

- The cleaning and sanitization of air handling and fan coil units

¹ HVAC is an English acronym meaning: Heating, Ventilation and Air-Conditioning. In French, this term is translated as CVC: *Chauffage, Ventilation et Climatisation.*

- Adapting the design of HVAC-R technical systems to accommodate new plug-andplay² anti-virus equipment if required. Examples of such equipment are :
 - Definition and integration of separate extraction fans to address specific pollution areas,
 - High efficiency HEPA filters identical to those used in hospital HVAC systems,
 - Integration of UV-C³ lamps in a new or existing HVAC System,
- The modification of automation programs to incorporate a virus mode.

Other solutions have been analysed (photocatalytic oxidation chambers, electrostatic filtration,...) both in terms of their effectiveness against viruses and their action on VOCs⁴.

These bio-decontamination solutions aim to provide a clean and healthy environment on board vessels by combating the spread of viruses through air conditioning. In a health emergency, these measures also allow the creation of a medical zone where the HVAC operates in "safe area" mode enabling 100% treatment of fresh air, pressure control and, if necessary, absolute filtration.

Thus, as the leading supplier of HVAC installations and refrigeration equipment, ENGIE Solutions is positioning itself as a key player in the specific treatment of the COVID-19 pandemic. ENGIE Solutions, the leader in HVAC solutions for marine vessels for over 35 years, provides tailored solutions suited to equipment already in place, meeting the requirements of shipowners and cruise companies (footprint, weight, energy consumption...).

"ENGIE Solutions is proud to be working more closely than ever with its clients to enable them to reinvent their living and working spaces. Even more, in this period of global pandemic, we are pleased to be able to help create safer and more sustainable environments and to be a direct part of the resumption of the business."- Pierre Hardouin, CEO of ENGIE Solutions for Industries.

About ENGIE Solutions

ENGIE Solutions supports cities, industries and companies in the tertiary sector, providing them with solutions to the challenges posed by the energy transition in the form of turnkey and bespoke packages.

ENGIE Solutions' experts apply all their expertise in pursuit of three aims : optimizing the use of energy and resources, greening energies and reinventing living and working environments.

ENGIE Solutions guarantees its clients a single point of contact and a combination of complementary offerings that go beyond energy. The company is committed to achieving results and its 50,000 employees who operate throughout France (900 sites) have expertise in an extremely wide range of areas, ranging from the design and operation of infrastructure & services, to funding, installation and maintenance.

ENGIE Solutions is part of the ENGIE Group, one of the world's leading low-carbon energy and services groups whose *raison d'être* is to accelerate the transition towards a carbon neutral world.

Turnover : €10 billion.

² All solutions are designed in a flexible way in order to be used only if necessary. This reduces energy and logistics surcharges.

³ This disinfection technology requires specific know-how in order to be properly dimensioned (design and sizing), installed and maintained to optimize its efficiency.

⁴ VOCs : Volatile organic compounds

To find out more, visit <u>www.engie-solutions.com</u>

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