Overview

The Technology

The technology developed by CAEM - California (US) for the treatment of polluting emissions from maritime transport corresponds to the environmental protection requirements defined as part of the European "Green Deal".

Some figures and information:

Total CO2 emissions from ships in EU waters (In millions of tonnes, 2018 - fleet monitored by THETIS MRV):

138 million tonnes of CO2, more than 3% of the EU's total CO2 emissions.

Overview

The Market

Based on the total CO2 emissions reported to the EU via THETIS MRV for 2018 (142.5 million tonnes) and 2019 (135.7 million tonnes) and based on the current price of € 25 per unit (price per tonne of CO2 emissions):

the total cost of penalties for ships calling at EU ports could reach up to € 3.5 billion per year, with a significant additional cost for ships making long links

ESPO (Green Deal - Guidelines)

A phased approach should be developed to reduce emissions at berths, with an initial focus on berths close to urban areas and with an emphasis on particular segments such as cruise ships and ferries.
But such a standard for reducing emissions at the berth is not in itself sufficient to achieve the decarbonisation of navigation.
Over time, the goal of zero emissions at anchorages is achievable. By 2030, CO2 emissions from ships docked and arriving in ports are expected to be reduced by 50%, on average and in all segments of shipping.

Why now CAEM Europe?

The Strategy

More than 18 months of analyzes and meetings with operators of the maritime sector in Italy and in Europe, have made possible to define the parameters of a successful strategy for the European development of CAEM Technology (California - US).

1. The European law framework is favorable to environmental technologies. (Green Deal)

2. Following the COVID-19 crisis, European economic recovery requires investment mainly in infrastructures with a budget, already approved, of around € 250 billion (15 % dedicated to port infrastructure) for their adaptation to new standards of respect for the environment.

3. In the event of pollution, the introduction of penalties for maritime traffic, encourages all operators in the maritime sector to seek short-term technological solutions. (see figures from THETIS MRV, above)

Gas Emission Reduction

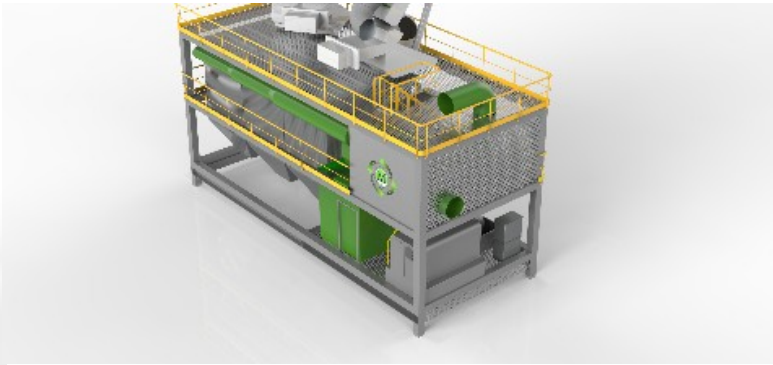
The Mission

The proven reductions in gas emission from CAEM's technology are the following:

99%
PM Reduction
(CARB certified)

95%
NOx reduction
(CARB certified)

85%
SO2 reduction
(USEPA certified)



CAEM's technological process

The Key Points

- an industrial process for reducing the emission of polluting gases from ships, either at the port entrance or at the dock.
- an industrial process that has already been operational for 4 years with a database of proven emissions reduction results.
- an industrial process in which more than 65% of the components can be produced in Europe.
- a mobile technology which allows the use in various locations of the port and a simplified installation when the ship is at the dock, without civil works and / or modifications of the existing infrastructures.
- a technology that can be operated by professional categories already present in the port such as dockers, etc ...

Cleaner air, one ship at a time.