



LA MÉRIDIONALE

Marseille, France

The International Maritime Organization wanted to regulate the sulphur content of heavy fuel oils used by ships early in the 2000s. The objective was then to reduce SO_x emissions at the exhaust.

La Méridionale wanted to evaluate the **XBEE Enzyme Fuel Technology** in order to verify its capacity to reduce pollutant gas emissions. It commissioned the Ascal laboratory which went on board the ferry *Giolata* to measure her atmospheric emissions at the chimney of its main engine n°4, a MAN-B&W engine, model 8L48/60 developing 7,800 kW, and powered by heavy fuel oil 380 LS.



All the measurement campaigns took place during the regular crossings of the ship between Marseille in France and Porto-Vecchio in Corsica. The first campaign dated on Wednesday, July 26, 2006. From the beginning of August 2006, the crew treated the fuel during each bunkering at the recommended dosage of 1 litre of XBEE for 4 m³ of fuel oil.

Results analysis

The ship was equipped with a dosing pump to treat the fuel oil during the bunkering operation before it flowed into the main storage tanks.

The next measurement campaigns were carried out respectively on Wednesday, September 6, 2006 and Thursday, April 19, 2007, i.e. one month, and six and a half months after starting using **XBEE**.

Parameters	Without XBEE	With XBEE	Diff.
Temperature (°C)	440	426	-3.23%
Gas flow (m ³ /h)	Nd	24,463.50	
O ₂ (%)	12.03	8.07	-32.94%
CO ₂ (%)	6.90	3.89	-43.57%
CO (mg/m ³)	278.90	105.51	-62.17%
NO _x (mg/m ³)	2,291.47	1,818.20	-20.65%

Annexes

Fuel treatment



GHG analyzers

