

# CatGuard® 2020 from Nanonord

CatGuard® 2020 is the unique cat fines measurement equipment based on NMR technology. This new robust and compact device at a significantly lower total cost of ownership is even simpler to install.

## The CatGuard® technology solution to cat fine damage

CatGuard® technology from Nanonord enables near-real time measurement of cat fines in fuel. Cat fines are extremely abrasive residues of silicon and aluminium oxide retained in Heavy Fuel Oil (HFO).

Separators (centrifuges) used in an optimal way are capable of cleaning HFO. In practice however, given the previous absence of any direct measurement of what is happening in the separator, the average efficiency of the separator is often too low to be reliable and does not systematically reduce the cat fines to an optimal level.

The integration of CatGuard® for the crew transforms the management of purifiers from a black magic art to a scientific process control. This generally enables to reduce the average levels of cat fines, in the fuel that enters in the engine, from 15 to 20 ppm to between 3 and 7 ppm. The crew are encouraged and empowered to better control the purifier temperature, the flow rate and the capacity, as required due to different sizes of cat fine particles and type of HFO. The purifier is cleaned only when necessary.



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Better overall management of the purifiers reduces wear on the combustion chamber by up to 50%. Catfines are an insidious invisible threat that severely damages the engines of heavy fuel oil ships. If the catfines are under control, the engine is better protected.

## CatGuard® System specification

- Cat fines precision: 5ppm @ 6 hours
- Cat fine spike detection in 5-25 minutes
- Power usage: 85-260 VAC/320 Watt peak
- Ethernet, 1 piece output 4-20 mA
- Relays for exceeded limits and system diagnostics
- Size: 53,5 x 65,5 x 25,2 cm
- Weight: 37,5 KG

“New technologies have just been introduced in the market and we in CIMAC Working Group, Fuels Group, are convinced that this new method of measuring cat fines in the cleaning process will revolutionise the operation of the engines in the future.”

Kjeld Aabo CHAIRMAN, CIMAC WORKING GROUP, FUELS GROUP



## Fuel cleaning checklist

