Safety Fuel-Oil Homogenizer

- for fuel quality improvement
- combustion improvement for better energy efficiency
- reduce wear and tear

Type Approved by DNV GL
The LEMAG Fuel Quality Improver (FQI) is designed to solve the problems ship owners and operators face when running on heavy fuel oil. The homogenizer reduces the size of asphaltenes in the fuel, creating a consistently fine fuel-oil structure that enables a more stable combustion, which increases efficiency and can extend equipment life.

The homogenizer is based on the stator-rotor principle. The rotor with a highly efficient grinding profile runs at high speed against the stator, causing the long carbon chains in the fuel to break up.

Due to the conical design of the stator and rotor, the clearance between the two can easily be adjusted with a very high accuracy.

The LEMAG FQI is equipped with the following safety features:

- integrated magnetic coupling to seal the mixing chamber hermetically
- integrated temperature sensor to prevent the unit from overheating
- rotation speed monitor to ensure the homogenizer is functioning correctly
- internal heat pockets for steam or thermal oil to protect the bearings and to extend the product's lifetime and to reduce installation costs
- electronic cabinet with PLC (programmable logic controller), digital temp. display, hour meter, ampere meter, indicating lamps, push buttons

The majority of particles is less than 5µm in size after treatment. Approx. 50% of the particles are shredded to just 1µm or less.
However, the LEMAG FQI is not shredding cat fines.

The LEMAG Fuel Quality Improver is suitable for both, new buildings as well as retrofit installations and easily implemented in fuel systems.
For improved combustion we recommend installing the homogenizer between the final pre-heater and the viscosimeter. (please see fig. below)

The LEMAG FQI can also be used for other applications, e.g. blending fuel oil or boiler applications. Special types for extreme fuel qualities e.g. 1,000 cS. are also available on request, as well as pipe class 1 for > 150°C. It is also possible to test the effect of the homogenizer on special fuels in advance on our R&D test unit. Please contact us directly for further details.

** FQI-1
** FQI-3
** FQI-5
** FQI-8
** FQI-10
** FQI-12
** FQI-15**

<table>
<thead>
<tr>
<th>item no.</th>
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<td>12,0t/h</td>
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</table>

* other connections on request
** larger sizes on request

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** FQI 1

** FQI 3–10

** FQI 12–15

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** LEMAG FQI

** pressure reg. valve

** viscosity

** Ampere meter

** Stator and rotor separate

** Stator and rotor

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