

Belgium

Future Fuels in practice: Field test with low carbon liquid fuel FAME

Why?

Climate friendly liquid fuels can play a crucial role, providing heating oil systems with a perspective of reducing greenhouse gas emissions by 70 to 90% as is the ambition of Europe's climate policy.

Informazout, the Belgian information centre dealing with the rational use and saving of heating oil, set up a pilot plant with a mix of 80% heating oil and 20% FAME (Fatty Acid Methyl Esters) as low-carbon liquid fuel. The objective was to take low carbon and even carbon neutral fuels out of the laboratory and test them in real conditions.

More information about this test with FAME can be found in this video report:



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What?

In order to test a mix of 80% standard heating oil and 20% FAME, Informazout organised a collaboration between Cargill (who delivered the FAME for the test), a local heating oil dealer (who provided the fuel and a suitable heating installation) and Weishaupt (who checked the combustion parameters and the condition of the boiler).

The test began in December 2019 on a condensing oil boiler of a showroom and office building. A mix of 1600 L heating oil and 400 L FAME was used for the test. The boiler itself was not modified in any way.

Outcome

- The pilot plant driven by the mixture of heating oil and FAME is running without any problem. After the consumption of 2.000 liter of the mixture, not a single problem occurred. The combustion efficiency is higher than 99% (Hi) and thus complies with the local regulations for maintenance and inspection of central heating appliances.
- According to the supplier, FAME reduces CO₂ emissions by 70%. Because 20% FAME is used for the mixture, the CO₂ reduction is therefore a fifth of 70%. In other words: 14%.

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The condensing boiler and its owner



Heating oil filter and degasser



Combustion chamber