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IDEALFUEL -

Lignin as a feedstock for renewable marine fuels

GRANT AGREEMENT No. 883753

HORIZON 2020 PROGRAMME - TOPIC LC-SC3-RES-23-2019
"Development of next generation Bio-Fuel and alternative renewable fuel technologies for aviation and shipping"

Deliverable Report

D4.5 – Final report on technical benchmarking of Bio-HFO for ship engines

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Publishable summary

IDEALFUEL aims to develop an efficient and low-cost chemical pathway to convert lignocellulosic biomass into a Biogenic Heavy Fuel Oil (Bio-HFO) with ultra-low sulphur levels that can be used as drop-in fuel in the existing maritime fleet. It is also very important for any fuel to be drop-in capable so that the functionality of the current technology is not affected, and the fuel can be easily introduced into the market. In this regard, Tec4Fuels benchmarked technically different Bio-HFO for ship engines and compare with fossil HFO fuel. Aim of the comparison is the definition of potential harmful ingredients of Bio-HFO fuels, which can lead to several damage in the marine engine.

The lack of sufficient amounts of Bio-HFO makes it difficult to achieve a clear benchmark of Bio-HFO versus fossil HFO. The available data set in combination with Hardware-in-the-loop test runs show a high potential of the Bio-HFO as a drop in fuel. Nevertheless, further investigations, especially of relevant data (lubricity, cold flow properties etc.) has to be done.

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Project partners:

#	Partner short name	Partner Full Name
1	TUE	Technische Universiteit Eindhoven
2	VERT	Vertoro BV
3	T4F	Tec4Fuels
4	BLOOM	Bloom Biorenewables Ltd
5	UNR	Uniresearch B.V.
6	WinGD	Winterthur Gas & Diesel AG
7		(Formerly SeaNRG, is now GOODFUELS #12)
8	TKMS	Thyssenkrupp Marine Systems GMBH
9	OWI	OWI – Science for Fuels gGmbH
10	CSIC	Agencia Estatal Consejo Superior De Investigaciones Cientificas
11	VARO	Varo Energy Netherlands BV
12	GOOD	GoodFuels B.V.

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