

# CENTRAL DREDGING ASSOCIATION



## LNG Retrofit for Dragages Ports' TSHD Samuel de Champlain

**8,500m<sup>3</sup> Trailing Suction Hopper Dredger (TSHD), Samuel de Champlain, is to be converted from Marine Gas Oil (MGO) to a dual-fuel Liquefied Natural Gas (LNG) engine as part of an EU-funded project which started in December 2016. The LNG retrofit of the Dragages Ports (DP) owned vessel is an essential part of the project named Spanish/French Sustainable Atlantic Motorways of the seas Using as fuel for Engine LNG, or S/F SamueLNG for short.**

S/F SamueLNG is the first phase of the Global Project 'Towards a Blue Atlantic Arch by 2025' which aims to improve the sustainability of marine traffic by using marine LNG as an environmentally friendly, and cost-effective, alternative to conventional fuels for small vessels. [The S/F SamueLNG Project is coordinated by DP and supported by a consortium of 12 partners, including CEDA, which are based along the Atlantic Arch, and represent France, Spain and the Netherlands.]

According to the 'Third IMO Greenhouse Gas Study 2014', maritime transport is responsible for about 2.50 per cent of global greenhouse gas emissions annually. Shipping emissions are predicted to increase by between 50 per cent and 250 per cent by 2050 – depending on future economic and energy developments. Such increases are clearly incompatible with the internationally agreed goal of keeping the global temperature increase below two degrees Celsius, compared to pre-industrial levels. The current goals require worldwide emissions to be at least halved, from 1990 levels, by 2050.

Subsequently, the IMO's Marine Environment Protection Committee (MEPC) has agreed that implementation of a 0.50 per cent global sulphur cap on marine fuel will be brought forward

to 2020, from the originally proposed 2025. The S/F SamueLNG Project will contribute to this by helping to achieve the objectives of two key EU Directives: Directive 2014/94/EU on the sustainability of the European maritime transport and Directive 2012/33/EU on reduction in the sulphur content of marine fuels.

The Samuel de Champlain Trailing Suction Hopper Dredger is the DP's flagship vessel. Built in 2002 in Gijón, northern Spain, it was originally designed to run on MGO and was fully compliant with SECA Regulations. The dredger has been in operation mainly on the Loire and the Seine rivers and in both the Le Havre and Rouen ports.

The Samuel de Champlain will be the first LNG/MGO dual-fuel Trailing Suction Hopper Dredger in Europe. The retrofit will involve:

- structural modifications to make room for the installation of the two LNG tanks;
- modifying the existing propulsion engine, and its auxiliaries, with new dual-fuel engines that can use both LNG and Marine Gas Oil with their auxiliaries;
- installing onboard LNG dedicated bunker stations;
- updating the electric distribution, control and security systems;
- modifying the machinery housings, cooling systems and pipework.

## THE S/F SAMUELNG CONSORTIUM

The partners working alongside DP are:

- five public port authorities: Nantes Saint-Nazaire [GPMNSN], Le Havre [GPMH], Rouen [GPMR], Port Authority of Gijon [APG], Port Authority of Vigo [APV];
- two ship engineering and design companies: Inova, Ghenova;
- two energy supply companies: Energias de Portugal [EDP], Gas Natural Fenosa [GNF];
- a short sea shipping company: Suardiaz [VN];
- an international dredging association: CEDA.

Following an EU tender for the works in the first half of 2017, the retrofit itself is due to be

carried out in the second half of 2018. Samuel de Champlain is scheduled to be back in action at the end of December 2018.



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