

Feadship achieves major milestone on roadmap towards carbon neutrality

Sustainability is a key issue for the yachting industry and the world at large, which is why Feadship is driving research into how to design and build yachts in the most eco-friendly way possible.

Feadship's 81.75-metre *Pure* concept in 2021 synthesised the very latest thinking on how owners and their guests enjoy their time on superyachts. It was also conceived from the outset to be fully future-compatible in terms of likely developments over the next decade in propulsion and efficiency.

Fuel for change

The progressive thinking that lies at its heart of the *Pure* concept is now a significant step closer to becoming reality with the news that Feadship has passed a major milestone by receiving approval-in-principle from Lloyds Registry for an 'agnostic' fuel system. This represents the second stage of its roadmap to building a carbon-neutral superyacht by 2030.

Mandatory Tier III measures such as exhaust gas after-treatment, but also waste heat generation and DC electric systems for propulsion and hotel loads, are now all mature technologies and have been installed on numerous superyachts.

"The crucial next step is that we need a flexible or agnostic fuel system, meaning it has to work with the fuels of today but also those of tomorrow, as we're not yet talking of just fuel cells for propulsion purposes," says Giedo Loeff, head of R&D at Feadship.

The fully integrated system that will underpin the next generation of Feadship yachts is able to store both non-fossil paraffinic fuels (eg. HVO, SAF and e-diesel) and alcoholic fuels (eg. bio- and e-methanol or ethanol) at full capacity. Production of these alternative fuels is being rapidly scaled up worldwide.

Built-in flexibility

The flexible system will allow an owner to make maximum use of these fuels as they become increasingly available in the near future. While research is ongoing in collaboration with key partners, Feadship is integrating dual- and single-fuel engines and fuel cell solutions into its new-build projects, as well as for refits and conversions. These will be assessed using the Yacht Environmental Transparency Index (YETI) tool for insight into overall efficiency, fuel consumption, shore power use and annual emissions.

The reason this is such a vital step forward is because the fuel storage systems are an integral part of the structure of a vessel. Moreover, to fill a tank with alcoholic fuel as well as diesel requires a different design/layout. The third step in Feadship's journey towards net-zero carbon is to integrate fuel cell technology expected at the of this decade.

"Our announcement is significant because as of now Feadship plans to build yachts with tanks and systems that are certified for a whole array of non-fossil fuels," says Giedo Loeff. "Besides meeting the growing desire of our clients for carbon neutrality, it will help to minimise the environmental impact of our yachts wherever they may cruise in the world."