BARILLEC MARINE: PEAK SHAVING FOR ENERGY EFFICIENCY

One of the major challenges of maritime transport is to reduce the emission of polluting gases and the consumption of fossil fuels, in order to control the impact of activities on the environment and protect the planet.

23 MAY 2019

future for electric boats. However, despite growing interest in electric propulsion, it is not well-suited to all activities at sea or on water. Barillec Marine's solutions include technologies that offer alternatives to the operating constraints of small maritime or river links, for purposes such as passenger transport and coastal navigation.

Diesel-electric propulsion is suitable for ships that require several operating points (speed variations) or that need acoustic discretion in the water (navigation in sensitive environments, on urban waterways, etc.), for ships using dynamic positioning systems, and for ships providing short river or maritime connections. However, it is not always the most efficient solution. By combining diesel-electric propulsion with an energy storage system, it can be made more efficient.

Peak shaving, a technology offered by Barillec Marine, is used by energy suppliers and distributors in terrestrial networks. It allows load peaks to be absorbed and the necessary power to be released when required. In order to avoid oversized diesel engines, Barillec Marine advises the installation of a storage system that optimises the energy production necessary for very short timeframes. The solution is adapted for managing highly variable load peaks, without polluting emissions (CO_2, NOx, SOx...). Reducing the installed capacity also reduces fuel costs, operating costs and maintenance costs (interval).

Peak shaving allows energy production to be scaled according to the ship's nominal operating needs, and not to the worst-case operating scenario.

Thanks to the solutions proposed by Barillec Marine, the installed diesel power can be as much as halved, energy

efficiency is improved and maintenance costs reduced. For a ship refit, integrating peak shaving into the existing installation optimises the efficacy of a hybrid fossil/electric propulsion system.

For a ship that makes 4-minute trips every quarter of an hour up to 30 times a day , the estimated fuel saving is around 20%. “This capital expenditure can be made for new or existing boats, as the fuel savings alone justify the cost. There are also benefits in terms of navigating comfort, noise reduction and the nuisances associated with the smell of diesel!

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