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The long Covid-19 winter has given us all plenty of time to think. What about a cargo ship made mainly of wood, with sails, solar panels, an electric drive and lithium-ion batteries? With underwater propellers that can convert kinetic energy into electricity when the ship is under sail, a planned service life of 100 years and a net zero carbon footprint, thanks to a reforestation scheme? This may sound like an idea dreamed up after a good bottle of wine, but in fact the ship is currently being built in the Sailcargo shipyard in Costa Rica. In just two to three years, the three-masted schooner the Ceiba will be demonstrating her suitability for scheduled operation.

With a cargo capacity of 250 t, space for just nine 20-ft containers and a maximum speed of 16 kn, the Ceiba is only a drop in the ocean when it comes to the international shipping industry and not a solution for the growing demand for maritime freight transport. But the ideas behind it could represent a step toward carbon-neutral shipping.

Energy conversion and electrification are also two of themes on the following pages of the special feature on industrial and large engines. AVL reports on a fuel cell concept for the decentralized, stationary generation of hydrogen and electricity. FEV and RWTH Aachen University have developed a platform for a test rig that can be used to evaluate hybrid-electric fuel cell drives long before they are installed in rail vehicles.

Two further articles illustrate the fact that combustion engines will still play a major role in the move toward a zero carbon society, if only because of their long service life. ABB highlights ways in which turbocharging combined with synthetic fuels can improve combustion and power characteristics. The Institute of Technical Combustion at the University of Hanover has worked with MTU to develop a hone for cylinder bores that results in less friction and lower oil emissions in engines. I hope you enjoy your voyage of discovery in this issue.

Hartmut Hammer