

What is the ef-24 passenger ferry?

On schedule to hit the water in Northern Ireland in summer 2024 is a very new type of ferry. According to developer Artemis Technologies, the EF-24 Passenger is a foiling vesselthat represents a cost-effective public transportation solution to the challenges of air pollution, congestion and noise.

Can a battery hybrid ferry save fuel?

According to ,battery hybridisation (plug in hybrid) of short-range ferries could save up to 85% fuel. The fully electric high-speed ferries save 100% fuel, and as they are all battery-powered, emissions are eliminated too, on the condition that batteries are charged from the "green" electricity source.

Can a ferry run as a hybrid ship?

However, the ferry can operate as a hybrid ship too--the crossing time in this mode can be reduced to 45 min. The world's largest hybrid-electric, plug-in vessel, when delivered in 2019, was Color Hybrid. The ship measures 160 m in length and 27.1 m in the beam. The vessel can carry 2000 passengers and 500 cars.

What is the world's first electric passenger fast ferry?

The world's first fully electric passenger fast ferry was constructed in Norway. It entered service between Stavanger and surrounding islands in October 2022. The vessel is named Medstraum; it is shown in Figure 9. The superstructure and hull are built from aluminium, which is easy to recycle and has low weight for reduced energy consumption.

Are electric high-speed ferries a good idea?

The fully electric high-speed ferries save 100% fuel, and as they are all battery-powered, emissions are eliminated too, on the condition that batteries are charged from the "green" electricity source. For longer distances though, a hybrid solution is required.

What is the UK's first hybrid high-speed passenger ferry?

The UK-based Uber Boatby Thames Clipper is building the country's first hybrid high-speed passenger ferries. Two new vessels are to be launched early next year (2023). The two hybrid-electric vessels are capable of transporting 230 passengers.

Due to replace an existing diesel-powered ferry, the new vessel will demonstrate the preference of publicly funded organizations in the US for the high reliability and lower emissions achievable using hybrid-electric seagoing technology. ABB"s scope of supply covers the hybrid-electric propulsion and energy storage system.

San Francisco Bay Ferry and a group of private and public sector partners launched the MV Sea Change, the world"s first commercial passenger ferry powered 100% by zero-emission hydrogen fuel cells, the company



announced. The vessel will begin service to the public on July 19, offering free transportation between Pier 41 and the Downtown San ...

Importantly, Ingouf explains, this base design also has a longer-distance version with almost 30% more energy storage on board, enabling a 112 nautical mile lightship run. ... The first Artemis EF-24 Passenger ferry, set to launch this year, will be operated by Condor Ferries and service a route between Belfast and Bangor in Northern Ireland.

Energy Storage Energy Efficiency New Energy Vehicles Energy Economy Climate Change Biomass Energy. Video Policy & Regulation Exhibition & Forum Organization Belt and Road. ... The new 75-passenger ferry uses hydrogen fuel cells to produce electricity to power electric motors for distances up to 300 nautical miles, and speeds up to 15 knots ...

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In [3][4] [5] [6], the unit combination, generation scheduling, sizing of the energy storage system, and energy management of the ship power system have been intensively studied. As the above ...

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Since 2012, one of Scandlines" major focuses has been on using battery-based energy storage systems (ESS) to supply electrical power. ... 2013 - Prinsesse Benedikte - Scandlines" first hybrid retrofit of a 1997-built passenger and car ferry went into service on the Puttgarden-Rødby route. The 1.6 MWh Corvus battery bank on board is ...

The present work considers a 12 MW Solid Oxide Fuel Cell (SOFC) power plant integrated with a heat recovery system installed on board an LNG-fuelled cruise ship of about 175,000 gross tonnes and ...

(HSLC) illustrated in Figure 1.1 [5]. The ship is a medium sized passenger ferry with a capacity of 100 passengers, has a light weight carbon fibre hull, rated speed of 28 knots, hydrogen storage capacity of 450 kg, and installed propulsion power of ...

As part of the company"s ambitious effort to offer more environmentally friendly transportation options to water-based communities and economies worldwide, the Artemis EF-24 Passenger is a flagship project amongst several foiling vessels that operate with zero emissions while offering significant cost savings for operators over the lifespan of the vessel.



The southern hemisphere's first fully electric high speed passenger ferry, Ika Rere, was launched in December 2021 by ferry operator East by West Ferries, in Wellington, New Zealand. ... However, the onboard Energy Storage Systems (ESS) required to achieve the endurance (distance and speed) are typically heavy. This weight in turn increases ...

2 · Tom Barlow-Brown. SWITCH Maritime has announced its plans to build the first liquid hydrogen (LH2) powered ferry in the United States, following the recent launch of its hydrogen-powered passenger vessel, Sea Change. This new project, in collaboration with LH2 Shipping ...

Risk assessment of a hydrogen driven high speed passenger ferry was performed [22], with the results illustrating that the estimated risk related to hydrogen systems is relatively low and within ...

Shift"s Energy Storage System (ESS) technology is expected to reduce operational costs by 20-30 percent. April 11, 2023 (Vancouver/ Unceded Territories of the Musqueam, Squamish, and Tsleil-Waututh Nations) - Renewable energy provider, Shift Clean Energy (Shift) announces today that it has partnered with Garden Reach Shipbuilders and ...

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High energy density storage of gaseous marine fuels: An innovative concept and its application to a hydrogen powered ferry June 2020 International Shipbuilding Progress 67(13):1-24

The 75-passenger ferry was built by All American Marine shipyard for the compatriot shipowner SWITCH Maritime. The vessel, designed by Incat Crowther, is fitted with hydrogen-powered fuel cells producing electricity to power electric motors enabling the vessel to sail distances of up to 300 nautical miles and reach speeds up to 20 knots.

The Challenges The Solution The solution was the development of a first-of-its-kind, combined onboard and onshore energy storage solution enabling hybrid and fully electric vessels to recharge quicklywhen returning to port. The electrification of transportation is expanding at a fast pace and that includes the maritime sector where a growing list

It also reviews several types of energy storage and battery management systems used for ships" hybrid propulsion. The article describes different marine applications of BESS systems in relation to peak shaving, ...

The Scandlines zero direct emission freight ferry will be 147.4 meters long, 25.4 meters wide and 5.3 meters design draft. The double ended ferry"s freight capacity will be 66 freight units carrying a maximum of 140 passengers at a 10-knot service speed. As a hybrid ferry, its crossing time between the two ports will be 45



minutes.

3 · SWITCH's first hydrogen-powered vessel, the Sea Change, is a 75-passenger catamaran ferry featuring 600 kW of electric motor propulsion, powered by 360 kW of fuel cells ...

Designed to transport passengers along central waterways, the ferry has capacity for up to 150 passengers and will make around 40 trips each day along its route. "India"s inland waterways provide hugely valuable routes for both passengers and trade," explained Brent Perry, CEO of Shift Clean Energy.

This paper introduces an energy management strategy (EMS) for a hybrid energy system (HES) of a ferry boat with the goal to optimize the performance and reduce the ...

This paper presents review of recent studies of electrification or hybridisation, different aspects of using the marine BESS and classes of hybrid propulsion vessels. It also ...

It also reviews several types of energy storage and battery management systems used for ships" hybrid propulsion. The article describes different marine applications of BESS systems in relation to peak shaving, load levelling, spinning reserve and load response. ... She is a small-medium sized car and passenger ferry, designed to meet the ...

The Mercury-2 freight and passenger ferry drowned on the way from Aktau (Kazakhstan) to Baku in October 2002 in stormy weather. All vessels are in operation under the flag of Azerbaijan. Each ferry capacitates 27 railcars and 200 passengers. The cities lay practically on the same parallel at the distance 306 km. Time on the route is 12 around ...

98 F.G. Aarskog et al. / Energy and cost analysis of hydrogen driven passenger ferry Table 1 Norwegian GHG emissions 2017 [26] Sector GHG emissions (Mill. tons CO2 equiv.) Transport (road, aviation, maritime) 15.8 Oil and gas extraction 14.7 Manufacturing industries and mining 12.1 Agriculture 4.5 Electrical energy supply 1.9 Heating 1.0 Other 2.9 transport (road traffic, ...

Throughout the cruise, the ferries will maintain a constant speed and even energy consumption. The assumed speed of the passenger ferry is 30 km/h, and the energy consumption is 23.22 ...

Structure of the energy storage unit. The ferry is designed like a catamaran and for safety and redundancy, a power electronics converter with its supercapacitors is implemented per ferry hull. ... as the prime mover for a case study of a 800 kW ferry with a total length of 50.8 m to transport 780 passengers for a distance of 24 km in 70 min ...

2 · In addition to the Sea Change, SWITCH is also working on a 150-passenger, 25-knot catamaran to build for the SF Bay Ferry service, using the same gaseous H2 (GH2) storage ...



Energy Storage in Railroad Applications Battery 1K Workshop Bob Ledoux, ARPA-E Program Director July 13, 2023. July 13, 2023 ... Passenger Rail Water Ferry Tesla S: 300 kW 100 kWh. Trains Are Efficient! July 13, 2023 6. The Way We Are...Were? July 13, 2023 7. ...

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