

Abstract**SHIP'S PROPULSION UNIT**

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The invention relates to a ship's propulsion unit comprising a shell structure (1) arranged below a hull (2) of the ship and an electric motor (3) for rotating a propeller (4). The propulsion unit comprising a closed gas circulation cooling system (12) containing gas (13) and comprising
10 gas circulation means (14) for circulating gas (13) through channels (23) in the electric motor (3), a closed liquid cooling system (15) having an inner space containing liquid (16), and a gas-liquid-heat exchanger (17) in fluid connection with the closed gas circulation cooling system (12) and with the closed liquid cooling system (15) for exchanging thermal
15 energy between gas (13) circulating in the closed gas circulation cooling system (12) and liquid (16) in the closed liquid cooling system (15). The closed gas circulation cooling system (12), the closed liquid cooling system (15), and the gas-liquid-heat exchanger (17) being parts of the propulsion unit.

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(FIG 22)