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CHEN et al.(10) **Pub. No.: US 2022/0377943 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **CLOSED-LOOP LIQUID COOLING SYSTEM**(52) **U.S. Cl.**(71) Applicant: **Quanta Computer Inc.**, Taoyuan City
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A closed-loop liquid cooling system includes a liquid coolant conduit, a cold plate, a pump and a heat exchanger. The liquid coolant conduit is in proximity to a heat-generating electrical component. The liquid coolant conduit allows circulation of a liquid coolant to extract heat therefrom. The liquid coolant conduit includes an inner portion that surrounds and contains the liquid coolant, and an outer portion configured to prevent or inhibit leakage of the liquid coolant from the inner portion and also detect any leakage from the inner portion. The cold plate is in thermal communication with the liquid coolant. The pump is configured to transport the liquid coolant in the liquid coolant conduit. The heat exchanger is coupled to the liquid coolant conduit to extract heat therefrom.

