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(19) **United States**(12) **Patent Application Publication****Xing et al.**(10) **Pub. No.: US 2022/0360124 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **STATOR COOLING ARRANGEMENT**(71) Applicant: **ABB Schweiz AG**, Baden (CH)(72) Inventors: **Wei Xing**, Raleigh, NC (US);  
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**ABSTRACT**

A stator assembly for a rotating electrical machine is operatively associated with an internal cooling circuit including a plurality of cooling channels disposed through a stator core. To directed a liquid coolant medium through the stator core without leakage, the internal cooling circuit is formed from a plurality of cooling tubes including linear tubes and elbow tubes. Linear tubes are disposed in the cooling channels and can be expanded with a hydraulic expansion tool to frictionally fit the linear tube therein. The elbow tubes can fluidly couple two or more linear tubes and are disposed proximately beyond the first and second axial end faces of the stator core. To encapsulate the elbow tubes, first and second stator end castings of thermally conductive, electrically isolating material can be cast adjacent the first and second axial end faces.

