

Title (en)

STATOR WITH INTEGRATED COOLING FUNCTION, METHOD FOR PRODUCING A STATOR, AND ELECTRIC MACHINE

Title (de)

STATOR MIT INTEGRIERTER KÜHLUNG, VERFAHREN ZUR HERSTELLUNG EINES STATORS UND ELEKTRISCHE MASCHINE

Title (fr)

STATOR À FONCTION DE REFROIDISSEMENT INTÉGRÉE, PROCÉDÉ DE FABRICATION D'UN STATOR ET MACHINE ÉLECTRIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2022079135A1] The invention relates to a stator (10) for an electric machine (40) of a motor vehicle (38), having an annular yoke (12) with an inner face (14) oriented inwards in the radial direction of the yoke (12), a plurality of pole teeth (16) being connected to the yoke (12) in a form-fitting manner on the inner face (14) of the yoke (12) and being mutually spaced in the circumferential direction of the yoke (12); a stator winding (29) which is designed as a mat and is arranged between the pole teeth (16); and a first cooling channel (34) through which a cooling medium can flow and which extends in the longitudinal direction of the stator (10), wherein the first cooling channel (34) is arranged in a recess (30) which extends outwards starting from the inner face (14) of the yoke (12) in the radial direction of the yoke (12) between two adjacent pole teeth (16), and the first cooling channel (34) lies at least partly directly against a wall (36) which defines the recess (30) and/or partly directly against the stator winding (29), and/or a second cooling channel (44) through which a cooling medium can flow, wherein the second cooling channel (44) is arranged between two adjacent pole teeth (16) between a winding inner face (46) of the stator winding (29) facing inwards in the radial direction of the stator (10) and a pole shoe (20) of the pole tooth (16), and the second cooling channel (44) lies at least partly directly against the stator winding (29) and/or the pole shoe (20).

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Citation (search report)

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