

Title (en)

KNITTING MACHINE WITH A GUIDE CHANNEL AND A KNITTING ELEMENT GUIDED THEREIN

Title (de)

STRICKMASCHINE MIT EINEM FÜHRUNGSKANAL UND EINEM DARIN GEFÜHRTEN STRICKELEMENT

Title (fr)

MACHINE À TRICOTER COMPORTANT UN CANAL DE GUIDAGE DANS LEQUEL EST GUIDÉ UN ÉLÉMENT DE TRICOTAGE

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Application

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Abstract (en)

[origin: WO2017071801A1] The invention relates to a knitting machine with a guide channel and a knitting element guided therein, wherein the knitting element is accommodated and guided in the guide channel in a substantially moveable and interlocking manner. In addition, when viewed in the manufacturing state or in the production and output state, the knitting element (3) is designed with a surface structure at least in sections on at least one opposing knitting element side flank (3a, 3b) when viewed in cross-section and/or the guide channel (4) is formed with a surface structure at least in sections on at least one channel side wall (4a, 4b) facing the knitting element side flanks (3a, 3b), wherein the surface structure has a plurality of elevations (1) spaced apart from one another, which are arranged and designed so that they contact punctiformly and/or linearly on the respective facing area of the knitting element side flanks (3a, 3b) and/or the channel side walls (4a, 4b) during operation, and wherein the surface structure additionally has a plurality of depressions (2) spaced apart from one another which are arranged and designed so that they form a plurality of lubricant reservoirs spaced apart from one another, in which a part of a fluid lubricant, in particular a lubricant oil, introduced into the guide channel (4) is accommodated, and thus forms a lubricant film in the area between the knitting element side flanks (3a, 3b) and the channel side walls (4a, 4b) during operation. According to the invention, the surface structure has a material ratio (Rmr) of 50% at a cutting height (c) of 0.4 µm to 3 µm, preferably only at a cutting height (c) of 0.6 µm to 1.6 µm, according to DIN EN ISO 4287.

IPC 8 full level

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Citation (opposition)

Opponent : Groz-Beckert

- DE 102011119335 B3 20130404 - LIEBERS THOMAS [DE], et al
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- US 6298692 B1 20011009 - KURODA KAZUAKI [JP], et al
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- "Tribologie-Handbuch: Tribometrie, Tribomaterialien, Tribotechnik", 27 April 2010, SPRINGER VIEWEG, ISBN: 978-3-8348-0017-6, article CZICHOS HORST, KARL-HEINZ HABIG, JEAN-PIERRE CELIS, RICHARD S. COWAN, ALFONS FISCHER, THOMAS GRADT, PETER GROCHE, ERICH KLEINLEIN: "2. Tribologische Systeme // 3.1 Technische Oberflächen", pages: 8 - 28, XP055947234
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