

Title (en)
METHOD FOR KNITTING AND FORMING WEFT-KNITTED FABRIC WITH VARYING THICKNESS BY FLAT KNITTING MACHINE AND WEFT-KNITTED FABRIC THEREOF

Title (de)
VERFAHREN ZUM STRICKEN UND FORMEN VON GESTRICKEN MIT UNTERSCHIEDLICHER DICKE DURCH FLACHSTRICKMASCHINE UND GESTRICKE DAVON

Title (fr)
PROCÉDÉ DE TRICOTAGE ET DE FORMATION DE TRICOT À MAILLES CUEILLIES D'ÉPAISSEUR VARIABLE PAR UNE TRICOTEUSE RECTILIGNE ET TRICOT À MAILLES CUEILLIES CORRESPONDANT

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Application
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Abstract (en)
The invention provides a method (20) for knitting and forming a weft-knitted fabric (10) with varying thickness by a flat knitting machine (30) and a weft-knitted fabric (10) thereof. The method (20) is implemented in at least one knitting process of the weft-knitted fabric (10), comprising steps of: driving the flat knitting machine (30) to knit a basic structure (11) by at least one of two needle beds (31, 32) of the flat knitting machine (30), and controlling the two needle beds (31, 32) on the flat knitting machine (30) to knit a three-dimensional structure (12) connected with the basic structure (11). A thickness of the three-dimensional structure (12) is greater than a thickness of the basic structure (11), the three-dimensional structure (12) comprises two surface layer portions (121, 122) and a supporting portion (123) connected with the two surface layer portions and located between the two surface layer portions (121, 122). A junction (13) between the three-dimensional structure (12) and the basic structure (11) is without the supporting portion (123).

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Citation (applicant)
• CN 102978823 A 20130320 - FUJIAN FULIAN WARP KNITTING CO LTD
• TW 202028555 A 20200801 - PAI LUNG MACHINERY MILL CO LTD [TW]
• TW 202028557 A 20200801 - PAI LUNG MACHINERY MILL CO LTD [TW]
• TW 202028558 A 20200801 - PAI LUNG MACHINERY MILL CO LTD [TW]
• TW I707074 B 20201011 - PAI LUNG MACHINERY MILL CO LTD [TW]

Citation (search report)
• [Y] US 2020181813 A1 20200611 - MEIR ADRIAN [US]
• [Y] DE 102014008725 A1 20150903 - JOHNSON CONTROLS GMBH [DE]
• [Y] US 2016353810 A1 20161208 - BARNES KRISTEN ELIZABETH [CA], et al
• [Y] EP 3702501 A1 20200902 - PAI LUNG MACHINERY MILL CO LTD [TW]
• [A] WO 8903759 A1 19890505 - COURTAULDS PLC [GB]
• [A] ES 2019788 A6 19910701 - JORDA PERA VICENTE [ES]

Citation (examination)
• CN 102560840 A 20120711 - SHIMA SEIKI MFG
• JP 2002020950 A 20020123 - YOOKUSU KK

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