

Title (en)

SOLE STRUCTURE WITH HOLES ARRANGED TO FORM AN AUXETIC STRUCTURE

Title (de)

SOHLENSTRUKTUR MIT LOCHANORDNUNG ZUR BILDUNG EINER AUXETISCHEN STRUKTUR

Title (fr)

STRUCTURE DE SEMELLE COMPORTANT DES TROUS AGENCÉS POUR FORMER UNE STRUCTURE AUXÉTIQUE

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Application

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Abstract (en)

[origin: WO2018217614A1] A sole structure (103) includes a sole component, which has an inner surface (132, 150, 170) and an outer surface (134, 152, 172) opposite the inner surface (132, 150, 170). The sole component has a length and a thickness. The sole component includes a sole material, and the sole material has a density. At least one of the thickness or the density varies along the length of the sole component. The sole component defines a plurality of holes (200) extending from at least one of the inner surface (132, 150, 170) and the outer surface (134, 152, 172) and arranged to form an auxetic structure. The auxetic structure is configured such that, when the sole component is tensioned in a first direction (410, 412), the sole component expands in both the first direction (410, 412) and in a second direction (410, 412) orthogonal to the first direction (410, 412). A property of the auxetic structure varies as a function of the density or the thickness of the sole component. A sole structure (103) includes a sole component, which has an inner surface (132, 150, 170) and an outer surface (134, 152, 172) opposite the inner surface (132, 150, 170). The sole component has a length and a thickness. The sole component includes a sole material, and the sole material has a density. At least one of the thickness or the density varies along the length of the sole component. The sole component defines a plurality of holes (200) extending from at least one of the inner surface (132, 150, 170) and the outer surface (134, 152, 172) and arranged to form an auxetic structure. The auxetic structure is configured such that, when the sole component is tensioned in a first direction (410, 412), the sole component expands in both the first direction (410, 412) and in a second direction (410, 412) orthogonal to the first direction (410, 412). A property of the auxetic structure varies as a function of the density or the thickness of the sole component.

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