

Title (en)
BLAST PROTECTIVE BOOTS WITH OPTIMIZED DESIGN COMPONENTS

Title (de)
SPRENGSCHUTZSTIEFEL MIT OPTIMIERTEM DESIGN

Title (fr)
BOTTES DE PROTECTION CONTRE LES EXPLOSIONS DOTÉES DE COMPOSANTS À CONCEPTION OPTIMISÉE

Publication
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Application
EP 10730038 A 20100402

Priority
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• CZ 2010000038 W 20100402

Abstract (en)
[origin: WO2010130231A1] Protective boot (see fig. 1) is made up of an upper (1) with a tension insole and an attached system of bottom boot segment based on at least two middle soles and a sole. At least one layer of para-aramid fiber based reinforcing textile (2) is inserted and/or cemented between the top material (1) and the lining. The tension insole and/or at least one of the middle soles (5, 8) are based on composites of at least three layers of para-aramid fiber textile fixed in a polymer matrix and the whole bottom segment of the boot is formed by a sandwich design. The density of the individual material parts in this sandwich system of middle soles (5, 8) and the sole (9) in the bottom segment of the boot differs in a way that the difference in the density of the various composite materials used in the adjacent middle soles (5, 8), or to be more precise the sole (9), and the difference in the density of the adjacent layers in the sandwich multilayer structure of the corresponding middle sole (5, 8) must be at least 0.1 g/cm³ and the material hardness in the individual parts of the system of middle soles (5, 8) and the sole (9) in the bottom segment of the boot differ in a way that difference in the hardness of the composite materials in the adjacent middle soles (5, 8), or to be more precise sole (9), and the difference in the hardness of the adjacent layers of the sandwich multilayer structure of the corresponding middle sole (5, 8) must be at least 1 ShA. Thickness of each individual middle sole (5, 8) and the sole (9) of the sandwich system must be at least 10 mm and the total thickness of the middle soles and sole system in the bottom segment of the boot must be at least 30 mm.

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