

Mass Customization of Chemical Protective Clothing

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Abstract : The object of the investigation is the suit for chemical protection, which totally covers human body together with breathing apparatus, breathing mask and helmet (JSC Ansell Protective Solutions Lithuania). The end users of such clothing are the members of rescue team - firefighters. During the presentation, the results of 3D scanning with stationary Human Solutions scanner and portable Artec Eva scanner will be compared on the basis of the efficiency of scanning procedure and scanning accuracy. Also, the possibilities to exporting scanned bodies into specialized CAD systems for suit design development and material consumption calculation will be analyzed. The necessity to understand and to implement corresponding clothing material properties during 3D visualization of garment on CAD systems will be presented. During the presentation, the outcomes of the project 'Smart and Safe Work Wear Clothing SWW' will be discussed. The project is carried out under the Interreg Baltic Sea Region Program as 2014-2020 European territorial cooperation objective. Thematic priority is Capacity for Innovation. The main goal of the project is to improve competitiveness and to increase business possibilities for work wear enterprises in the Baltic Sea Region. The project focuses on mass customization of products for various end users. It engages textile and clothing manufacturing technology researchers, work wear producers, end users, as well as national textile and clothing branch organizations in Finland, Lithuania, Latvia, Estonia and Poland.

Keywords : CAD systems, mass customization, 3D scanning, safe work wear

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