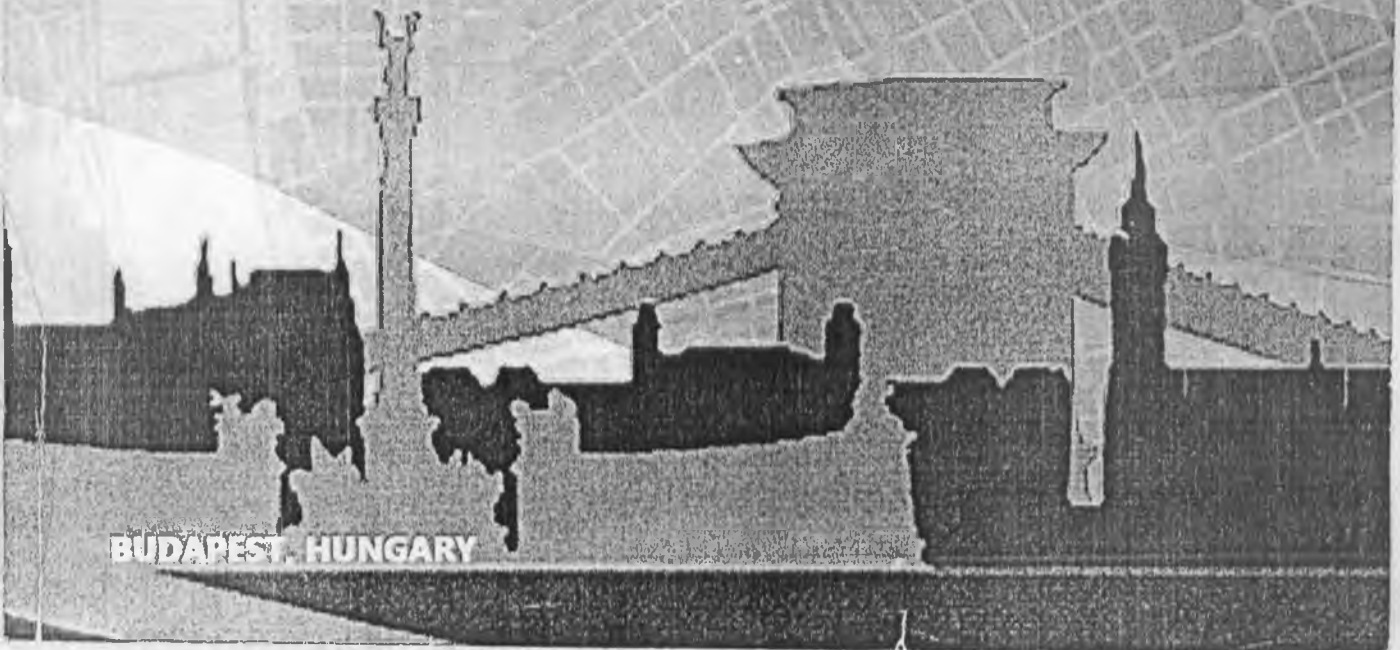


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# INTERNATIONAL JOINT CONFERENCE ON ENVIRONMENTAL AND LIGHT INDUSTRY TECHNOLOGIES

# ABSTRACTS AND PROGRAM

19-20 November, 2015



**BUDAPEST, HUNGARY**

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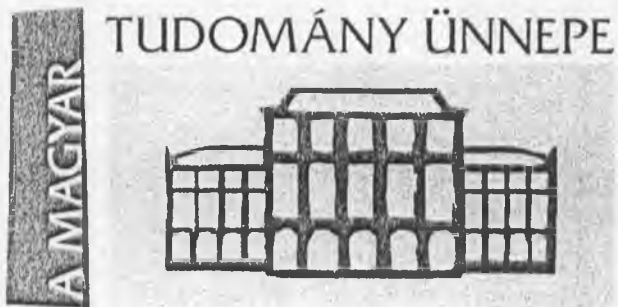
### 5TH INTERNATIONAL JOINT CONFERENCE ON ENVIRONMENTAL AND LIGHT INDUSTRY TECHNOLOGIES

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**IMPACT OF LAUNDERING ON OPERATIONAL PROPERTIES OF MATERIAL  
PACKAGES USED TO MANUFACTURE THE MEN'S JACKET  
(POSTER PRESENTATION)**

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Quality, external view as well as easy maintenance of the man's jacket during its service life depend on capability of the material package to preserve its stable shape over the long period of time. When determining operational properties of material packages, particular attention should be paid to the impact of laundering, as fabrics of different fiber composition react to this factor in different ways. During laundering of men's jackets the packet of materials is influenced by a variety of physical, physical/mechanical and mechanical factors, which, acting as a complex, destroy the structure of material packages, deteriorate their mechanical and physical properties.

In order to study the impact of multiple laundering on stiffness of material packages the author implemented theoretical as well as experimental methods of textile materials science. The investigation was based on creation of mock laundering conditions and further determination of the shape stability indices in material packages (stiffness) and comparison of the indices obtained with the ones of control samples (before and after the laundering). In order to achieve the set target the following tasks were to be solved: compilation of components for material packages which require the same maintenance procedures; obtaining packages of materials for experimental investigation; determination of shape stability indices in material packages using bending stiffness index before and after multiple laundering.

In order to determine the impact of laundering on stiffness of a material package experimental investigations were held, which proved the change in stiffness of material packages in case of five-time laundering. Having performed thorough analysis of the impact of multiple laundering cycles on stiffness indices of material packages, we arrived at the conclusion that the most significant impact is caused by the first laundry, which, in our opinion, can be explained by inevitable changes in the structure of the fabric (removal of the remnants of size, partial destruction of the substances of final decoration), whereas this process occurs during the next launderings as well, to a lesser extent, though. After the third laundry the stiffness indices are either stabilized or changed slightly.

The findings of the research showed that the optimal packages that best preserve stiffness after multiple laundering are the packages based on semi-woolen fabrics and dublerine, article 1706/991BS9. On the whole, assessing the results obtained, it should be highlighted that laundry has certain impact on structural stability of material packages resulting in deterioration of their stiffness.

Keywords: *package, men's jacket, laundering cycle*

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