

THE QUALITY OF WOODEN MATERIAL IN OUTDOOR FURNITURE PRESENT ON THE MARKET

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ABSTRACT

The aim of this paper is to analyze the quality of wooden material in outdoor furniture. For the purpose of this work, exterior furniture and urban equipment or a garden set, were designed.. By analyzing this type of furniture and its needs from anthropometrical point of view, there comes the need for design of several different pieces of furniture, including: chair, armchair, stool, two-person bench, 3-person bench, rectangular table, square table, swing and matching flower pots.

On the other hand, by analyzing outdoor furniture and its needs from material aspect, there are certain reasons for using thermo wood, mainly on account of the positive consequences of its use.

The ultimate goal is to get a quality seating and leaving outdoor in which the human factor is very important. Through better understanding of the parameters of ergonomics, the designer can improve health and safety in furniture. Actually, it is the planner's obligation and task to constantly monitor research in the field of ergonomics so as to implement, maintain and improve the design of furniture.

For that purpose, the anthropometric standards for this type of furniture were observed, as well as the chosen material which meets the requirements of permanent use and desired look.

REFERENCES

- Ashby, M., & Cebon, D. (2007). Teaching engineering materials: The CES EduPack. Retrieved June 1, 2015,
- Ashby, M., & Johnson, K. (2009). Materials and design. The art and science of material selection in product design (2nd ed.). Oxford, UK: Butterworth-Heinemann Elsevier.
- Dupont. (2007). Corian®: 40 years – 40 designers. Retrieved June 24, 2015.
- Karana, E., (2009). Meanings of materials (Doctoral dissertation). Delft University of Technology, Delft, the Netherlands.
- Karana, E., Hekkert, P., & Kandachar, P. (2008). Materials experience: Descriptive categories in material appraisals. In Proceedings of the Conference on Tools and Methods in Competitive Engineering (pp. 399-412). Delft, the Netherlands: Delft University of Technology.
- Laughlin, Z. (2010). Beyond the swatch: How can the science of materials be represented by the materials themselves in a materials library? (Doctoral Dissertation). King's College London, University of London, London, UK.
- Lindberg, S., Hartzén, A. S., Wodke, T., & Lindström, M. (2013). Hierarchic design and material identity. Retrieved June 1, 2015,
- Lindström, M., Gamstedt, K., Barthold, F., Varna, J., & Wickholm, K. (2008). Hierarchical design as a tool in development of wood-based composite applications. Retrieved June 24, 2015
- Löwgren, J., & Stolterman, E. (2004). Thoughtful interaction design: A design perspective on information technology. Cambridge, MA: MIT Press.

Ludden, G. D. S., Schifferstein, H. N. J., & Hekkert, P. (2008) Surprise as a design strategy. *Design Issues*, 24(2), 28-38.

Manzini, E. (1986). *The material of invention*. Milan, Italy: Arcadia Edizioni.

Manzini, E. (1989). *Artefatti. Verso una nuova ecologia dell'ambiente artificiale* [Artifacts. Towards a new ecology of the artificial environment]. Milan, Italy: Domus Academy.

Nikoljski, P.E. 2011: "Integralnost kaj nedvizniot i dvizniot mebel vo makedonskata kukja od XIX vek i moznosti za kontinuitet", UKIM - Skopje, Faculty of Forestry, Doctoral Dissertation.

Nikoljski, P.E. 2014: Semantics and significance of decoration on Macedonian traditional movable furniture from 19th century, *Wood, design and technology*, Scientific, professional and Informational Journal of Wood Science, Design and Tehnology, Vol. 3, No.1, Skopje, 2014.

Nikoljski, P.E. 2016: Semantic of symbolic decoration on Macedonian traditional movable furniture from 19th century, *Drvna Industrija*, Vol. 67 (2): 187-192.

Rognoli, V. (2010). A broad survey on expressive-sensorial characterization of materials for design education. *METU Journal of The Faculty of Architecture*, 27(2), 287-300.

Rognoli, V., & Karana, E., (2014). Towards a new materials aesthetic based on imperfection and graceful ageing. In E. Karana, O. Pedgley, & V. Rognoli (Eds.), *Materials experience: Fundamentals of materials and design* (pp. 145-154). Oxford, UK: Butterworth-Heinemann.

Rognoli, V., & Levi, M. (2004). How, what and where is it possible to learn design materials? In *Proceedings of the 7th International Conference on Engineering and Product Design Education* (pp. 647-654). Bristol, UK: The Design Society.

Rognoli, V., Salvia, G., & Levi, M. (2011). The aesthetic of interaction with materials for design: The bioplastics' identity. In *Proceeding of the Conference on Designing Pleasurable Products and Interfaces* (No. 33). New York, NY: ACM.