

Research Article:

**EVALUAREA CALITĂȚII SUPRAFETEI
PANOURILOR DIN FIBRE (MDF) ȘI
AȘCHII DE LEMN SUPUSE LA TESTE
CLIMATICE**

**EVALUATION OF SURFACE QUALITY OF
MEDIUM DENSITY FIBERBOARDS (MDF)
AND PARTICLEBOARDS AS FUNCTION
OF WEATHERING**

Aniela GARCIA PEREZ

Polytechnic University of Madrid - Department of Forest Engineering
Adresa/Address: Ciudad Universitaria 28040, Madrid, Spain
E-mail: aniela_88@hotmail.com

Emilia – Adela SALCĂ

Lecturer, dr.eng. – TRANSILVANIA University in Brasov – Faculty of Wood Engineering
Adresa/Address: B-dul Eroilor nr. 29, 50036 Brasov, Romania
E-mail: emilia.salca@unitbv.ro

Ignacio-Bobadilla MALDONADO

Polytechnic University of Madrid - Department of Forest Engineering
Adresa/Address: Ciudad Universitaria 28040, Madrid, Spain
E-mail: i.bobadilla@upm.es

Salim HIZIROGLU

Prof. Ph.D – Oklahoma State University – Department of Natural Resource, Ecology and Management
Adresa/Address: Stillwater, OK 74078-6013
E-mail: salim.hiziroglu@okstate.edu

BIBLIOGRAFIE / REFERENCES

Aguilera A (2008) Roughness profile and cutting energy in MDF rip sawing. In: Proceedings of the 51st International Convention of Society of Wood Science and Technology, November 10-12, Concepcion, Chile.

ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) (1985) Surface Texture (Surface Roughness, Waviness, And Lay) B46.1. The American Society of Mechanical Engineers, New York.

Csiha Cs, Gurău L (2011) Study on the influence of surface roughness on the adhesion of water based PVAC. In: Proceedings of International Conference „Wood Science and Engineering”, ICWSE 2011, Braşov, România, 2 - 4 November 2011, pp. 411-419.

Faust TD (1987) Real time measurement of veneer surface roughness by image analysis. Forest Products Journal (37):34-40.

Feist WC, Hon DNS (1984) Chemistry of weathering and protection. The Chemistry of Solid Wood. Advances in Chemistry Series. 207 Rowell R.M. (Ed) American Chemical Society. pp. 401-451.

Fujiwara Y (2004) Evaluation of wood surface roughness as related to tactile roughness. Ph.D. thesis. Graduate School of Agriculture, Kyoto University, Kyoto.

Funck JW, Forrer JB, Butler DA, Bruner CC, Maristany AG (1992) Measuring surface roughness of wood: a comparison of laser scatter and stylus tracing approaches. In: Proceedings of the Society of Photo-Optical Instrumentation Engineers. Bellingham, Washington (182):73-183.

Gurău L, Mansfield-William H, Irle M (2005) Processing roughness of sanded wood surface. Holz als Roh- und Werkstoff (63):43-52.

Hiziroglu S (1996) Surface roughness analysis of wood composites: a stylus method. Forest Products Journal 46(7/8):67-72.

Hiziroglu S, Jarusombuti S, Fueanvivat V (2004) Surface characteristics of wood composites manufactured in Thailand. Journal of Building and Environment (39):1359-1364.

- Hiziroglu S, Suzuki S (2009) Surface characteristics of overlaid wood composites. *Journal of Tropical Forest Science* 21(3):272-276.
- Hiziroglu S, Jarusombuti S, Fueanvivat V, Bauchongkol P, Soontonbura W, Darapak T (2005) Some important properties of bamboo-rice straw-eucalyptus composite panels. *Forest Products Journal* (55):221-225.
- Lemaster RL, Beall FC (1996) The use of an optical profilometer to measure surface roughness in medium density fiberboard. *Forest Products Journal*, 46(11/12):73-78.
- Lemaster RL, Beal FC (1993) The use of dual sensors to measure surface roughness of wood-based composites. In: *Proceedings of the 9th International Symposium on Non-destructive Testing of Wood*. Forest Products Society Madison. pp.123-130.
- Mitchell P, Lemaster RL (2002) Investigation of machine parameters on the surface quality in routing soft maple. *Forest Products Journal* (52):85-90.
- Mummery L (1993) Surface texture analysis. *The Handbook*. Hommelwerke, Muhlhausen.
- Poncsak S, Shi S, Kocaefe D, Miller G (2007) Effect of thermal treatment of wood lumber on their adhesive strength and durability. *Journal of Adhesion Science Technology* 21(8):745-754.
- Richter K, Feist WC, Knaebe M (1995) The effect of surface roughness of the performance of finishes. Part 1. Roughness characterization and stain performance. *Forest Prod. Journal* 45(7/8):91-97.
- Salcă E, Cismaru I (2011) Colour changes evaluation of freshly cut alder veneers under the influence of indoor sunlight. *PRO LIGNO*, ISSN 1841-4737, 7(1):15-24.
- Temiz A, Yildiz UC, Aydin I, Eikenes M, Alfredsen G, Colakoglu G (2005) Surface roughness and color characteristics of wood treated with preservatives after accelerated weathering test. *Applied Surface Science* (250):35-42.
- Williams S, Feist WC (1994) Effect of pre-weathering surface roughness and wood species on the performance of paint and stains. *Journal of Coatings Technology* 66(828):109-121.
- Williams RS (2005) *Handbook of wood chemistry and wood composites*. Chapter 7: Weathering of wood. CRC Press, pp. 50.