

# **INFLUENCE OF MANUFACTURE OF THE WINDOW AND THE FITTINGS USED ON THE FINAL QUALITY OF THE WINDOW**

*Elena Jevtoska*

## **ABSTRACT**

*The window as a product used in construction aims to provide natural light and the possibility for ventilation in the building where it is placed, but at the same time to protect the room from external influences such as wind and rain and to prevent uncontrolled cooling or heating of the building it is built-in. Given the purpose, a quality window is one that protects against air penetration, water penetration and it ensures wind resistance. The window is a complex product that is composed of different parts that can be made of different materials. As part of this research, windows made by different manufacturers and made from different materials will be tested, but they are with profile identical to the profile used for the frame and the window sash. The main goal is to prove whether the construction of the window and the fittings used have an impact on the final quality of the window. In order to do the research, ten windows will be tested in accordance with the European norms EN 1026: 2016 (test method for air permeability), EN 1027: 2016 (test method for water permeability), EN 12211: 2016 (test method for wind resistance).*

## **REFERENCES**

Gruevski, T., Simakoski, N. (2002): Elementi na drvnite konstrukcii, Skopje: UKIM Shumarski fakultet, (in Macedonian).

Gruevski, T., Simakoski, N. (2003): Konstruiranje na mebel, Skopje: UKIM Shumarski fakultet, (in Macedonian).

Zakon za energetska efikasnost (2020): Sluzben vesnik na Republika Makedonija, br.32/2020 od 09-02-2020 god., (in Macedonian).

Zakon za gradezni proizvodi (2015): Sluzben vesnik na Republika Makedonija, br.104/2015 od 24-06-2020 god., (in Macedonian).

N 1026:2016– Prozori i vrati – Prodor na vazduh – Test metodi, Institut za standardizacija na Republika Severna Makedonija. (in Macedonian).

N 1027:2016– Prozori i vrati – Prodor na voda – Test metodi Institut za standardizacija na Republika Severna Makedonija, (in Macedonian).

N 12211:2016 – Prozori i vrati – Otpornost na udar na veter – Test metodi, Institut za standardizacija na Republika Severna Makedonija, (in Macedonian).

EN 12179:2000 – Stakleni fasadi – Otpornost na pritisok od veter – Metodi na ispitivanje Institut za standardizacija na Republika Severna Makedonija, (in Macedonian).

EN 12153:2000 – Stakleni fasadi – Propustljivost na vazduh – Metodi na ispitivanje - Institut za standardizacija na Republika Severna Makedonija, (in Macedonian).

EN 12155:2000 – Stakleni fasadi – Vodonepropustljivost– Laboratorisko ispitivanje pod statičen pritisok, Institut za standardizacija na Republika Severna Makedonija, (in Macedonian).

Ibrahimovic, E., Kljuno, H.A. Window frame materials and window size: parameters that influence energy efficiency in buildings. Technics technologies education management

Kralj, A., Znidarsic, M., Fir, J.M., Lampic, P. Five and more – chamber, transparent, insulated panel Qbiss air. Znanstveni clanak

Ma, L., Shao, N., Zhang, J., Zhao, T. The influence of Doors and Windows on the Indoor Temperature in Rural House. 9<sup>th</sup> International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC) and the 3<sup>rd</sup> International Conference on Building Energy and Environment (COBEE)