

MULTICENTRIC COMPARATIVE STUDY REGARDING THE CHARACTERISTICS OF THE MATERIALS USED IN THE MANUFACTURE OF MORTARS

Elena MARICA¹

Adina SÂRB², ORCID: 0000-0002-5742-8425

Maria POPA³, ORCID: 0000-0002-9899-4423

Abstract: *Starting from the most common cause of building degradation, the humidity of the masonry which is actually the support of water migration in the form of salt solutions, in this paper, we set to approach two important topics that will be reflected in a multicentric comparative study on characteristics of mortars. We will pay attention to the possibility of obtaining mortars with high-performance characteristics in terms of combating moisture in buildings and, on the other hand, we will pursue the recovery of waste, by introducing them in the manufacturing technology of mortars. The management of the generated waste represents a major problem of mankind, taking into account the large quantities of generated waste, the lack of storage spaces, respectively the insufficiency of recovery operations. The aim of this paper is to carry out a multicentric comparative study on the possibility of identifying several categories of mortars that are obtained through a technology that involves waste recovery. In the experimental part we analyzed four types of ecological mortars that contain various wastes: sawdust mortars, rubber granule mortars, PVC mortars, respectively glass mortars. Using the comparative method, the most efficient types of ecological mortars were identified taking into account their characteristics. The results of the study highlight the characteristics of mortars obtained from the related technological processes, in which waste was included.*

Keywords: *multicentric study, ecological mortars, waste, construction materials*

JEL Classification: L61, L74

¹ Lucian Blaga University of Sibiu, Doctoral School, Faculty of Engineering, Sibiu, România, E-mail: elenamarica93@yahoo.com

² Lucian Blaga University of Sibiu, Doctoral School, Faculty of Engineering, Sibiu, România, E-mail: sarb.adina92@yahoo.com

³ 1 Decembrie 1918 University of Alba Iulia, Faculty of Economic Science, Alba Iulia, România, E-mail: mariapopa2010@yahoo.com