A.A. Volkov, R.N. Yarulin

COMPUTER-AIDED DESIGN OF REPAIRS OF BUILDINGS AND THE ENGINEERING INFRASTRUCTURE

The authors argue that the design development procedure and the technology-based preparation for the renovation of buildings and the engineering infrastructure are to be considered as a comprehensive process to be automated. One of the main problems that accompany the process of budgeting and scheduling of renovation projects consists in incidental expenses for extra repairs, as they are difficult to project. The authors suggest developing a specialized computer aided design system capable of simulating the building renovation procedure. This methodology is available in the Russian legislation dealing with the renovation activities; it covers supplementary activities and helps experts make efficient decisions aimed at saving construction materials, time and human resources.

The subsystems of the CAD software facility responsible for the planning of renovation works include a database, a database management system, a decision making subsystem, a decision synthesis subsystem, a decision analysis system (decision retrospection), a decision evaluation system and other subsystems.

Key words: CAD, repair work, technical operation of buildings, unscheduled maintenance activities, schedule.

References


About the authors: Volkov Andrey Anatol’evich — Doctor of Technical Sciences, Professor, Chair, Department of Information Systems, Technology and Automation in Civil Engineering, Moscow State University of Civil Engineering (MGSU), 26 Yaroslavskoe shosse, Moscow, 129337, Russian Federation; it@mgsu.ru;
Yarulin Rustam Nazipovich — postgraduate student, Department of Information Systems, Technology and Automation in Civil Engineering, Moscow State University of Civil Engineering (MGSU), 26 Yaroslavskoe shosse, Moscow, 129337, Russian Federation; rn.yarulin@gmail.com.