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

The authors present a decision making algorithm applicable in the event of an emergency involving structural elements of a building, as well as the algorithm of synthesis of repair plans (emergency and scheduled repairs) consisting in redistribution of emergency repairs over regular repairs.

In the event of an accident, a structural element of a building is damaged. An expert compiles a plan of emergency repairs, according to the previously described algorithm, or using PRR CAD software. The proposed algorithm is employed to analyze the plan of emergency repairs and to reconcile it with a plan of scheduled repairs. If the decision is made to conduct emergency repairs within scheduled repairs by means of their synthesis, emergency repairs are redistributed over scheduled repairs. The algorithm of synthesis of plans of repair works is to help the expert distribute emergency repair works over scheduled repair works, or to save material, human and other resources. Implementation of algorithms in a cluster of buildings and structures requires substantial technological resources. Cloud computing technologies can serve as a platform for the implementation of the proposed solutions.

Key words: CAD, urgent work, repairs, schedule, unscheduled maintenance activities, technical building management, cloud computing.

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