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INTERACTIVE PLANNING OF RENOVATION WORKS FOR RESIDENTIAL BUILDINGS

The paper deals with a new approach to renovation planning. The approach is based on the two models: one devaluation model and one renovation model.

The proposed devaluation model is used to simulate the deterioration process taking place in a single component, a group of components or the whole building. The devaluation behavior is expressed through the employment of normalized values and the calendar time. Each component of the building has its own significance, so the normalized value of the whole building can be presented as a sum of normalized values of its components. The renovation model depends on the devaluation model as well as conditions and parameters applied by the user. For example, the user can attribute a certain value to a certain component and identify the level of renovation (the restored value).

Thus, the two models consolidate into an integrated model. The input information is composed of the data about the physical state of the building, materials and mode of maintenance and operation. The output information represents renovation periodicity and renovation costs needed to maintain the building at the pre-set level.

Key words: renovation, residential buildings, life span, interactive planning.

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