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Spotlight on *Structures*



Editor's Featured Article

The Featured Article for Volume 70 of *Structures* is now available. Dario De Domenico, Associate Editor, has chosen a paper introducing a new reliability-based procedure for life-cycle management.

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A new reliability-based procedure for life-cycle management of new and existing constructions

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The life-cycle management objective is to

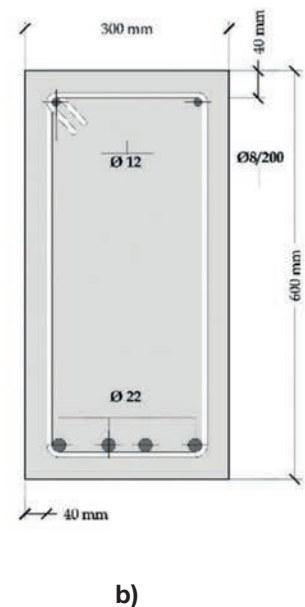
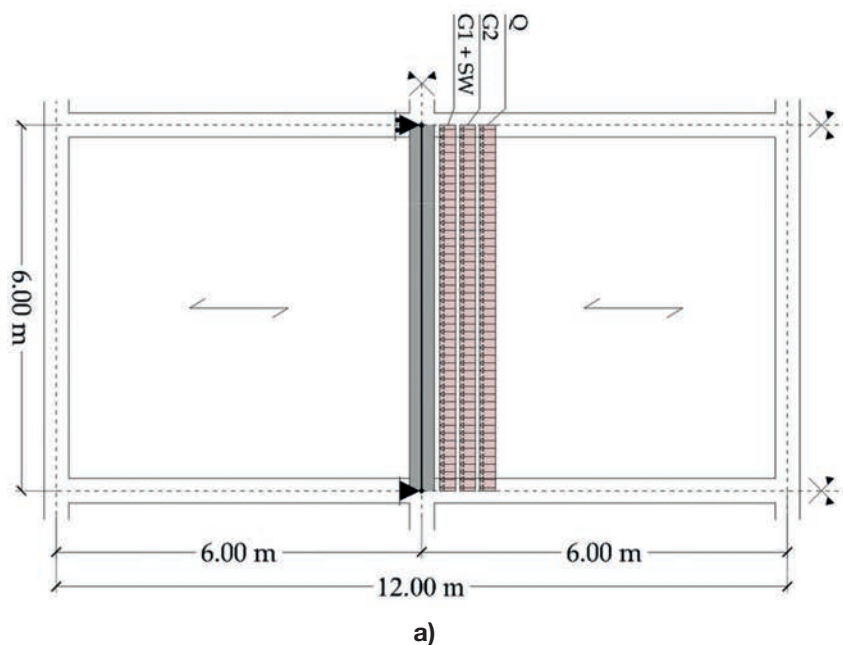
predict construction future, by controlling the factors that may threaten its performance. In doing so, being this prediction affected by uncertainties, it is necessary a probabilistic description of all variables governing the construction behavior.

In this study a new reliability-based procedure is presented for the life-cycle management of existing and new constructions. It may be applied coherently either with Level II method, where explicitly reliability indexes are taken into account, or with Level I method, by means of partial factors depending on the reliability indexes.

The procedure also proposes criteria for reliability checks according to Level II and Level I method.

Finally, a reliability assessment of a simple supported reinforced concrete beam is presented and discussed, in order to illustrate the application of the procedure proposed. For completeness four scenarios are considered in order to investigate how the assumptions made may influence year-by-year the reliability assessment.

→ Read the full paper at <https://doi.org/10.1016/j.istruc.2024.107837>



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