

INFLUENCE OF THE MORTAR ON THE COMPRESSIVE BEHAVIOR OF CONCRETE MASONRY PRISMS

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ABSTRACT

Finding an embedding mortar that is suitable as an infill material to be used in the vertical hollow cells of concrete block masonry is a central issue on the development of solution for reinforced masonry to be used in Portugal. An experimental study of mortars with different mixes was performed to find an equilibrium point, i.e., an intermediate mix with appropriate plasticity and sufficient workability. In this scope it is important to clarify the influence of different types of mortar, with different mechanical properties, on the compressive behaviour of concrete masonry. Thus the assessment of the suitability of the mortar as infill material is also evaluated by means of a set of uniaxial compressive tests conducted on masonry prisms with and without mortar infill. The major significance of the present work is the achievement of a proper mortar that can be used as embedding and as infill material, which involves economical advantages and can simplify considerably the constructive process of reinforced masonry.