

REBOUND STRENGTH OF CARBONATED ROCKS

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Rebound strength of rocks is very important because it permits an estimated calculus of uniaxial compressive strength. This fact and that this test is easy to apply, quick and cheap have contributed to its large applications on a great variety of materials. This test has been performed on four carbonated Carboniferous lithostratigraphic formations situated in the south slope of the Cantabrian Mountains (north of Spain). Two models of hammer have been used (Schmidt hammer L and N) and a correlation between both has been established. The aim of this correlation has been to correct the N model measurements to render possible its use on rocks; this model is special for concrete. The measurements have been made on different kind of samples (core drill, block and in situ test) of several dimensions. Our results show the influence of kind of sample, its dimensions and the sort of surfaces to measure. Because of the great influence in the results of the diameter of the samples (core drill), the test in situ is the more suitable, overall because the measurement on different sorts of surfaces (joint, bed) give similar results. This occurs in the case of surfaces free of irregularities and with a low degree of weathering. The uniaxial strength estimated shows a predominance of middle values.