



## **Phenomenological observation of brittle damage from physical weathering processes and proposal for adequate estimation of durability from experimentally derived rock mechanical data**

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Based on the observation of decayed surfaces of porous natural stone affected by various physical weathering processes, it is evident that brittle damage accompanying various decay forms occurs due to the development mode I (tensile) microfractures. According to this phenomenological observation, the experimental testing for durability should encompass those tests which can produce similar damage. In our recent approach, we are employing experimentally derived rock mechanical data, specifically stress-strain behaviour and energetic parameters computed from them as a proxy for the evaluation of the resistance of natural stone to physical weathering.