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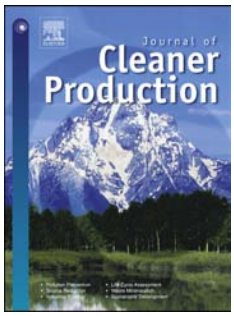

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DURABILITY PERFORMANCE OF CONCRETE INCORPORATING COARSE AGGREGATES FROM MARBLE INDUSTRY WASTE

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ABSTRACT

The quarrying of marble, a well-known ornamental stone, has a substantial positive impact on Portugal's economy, but it also generates large environmental impacts. The amount of waste produced during quarrying can be as much as 80% of all stone/soil extracted. That waste is then dumped near the quarry, where it accumulates indiscriminately because a viable alternative for its disposal has not yet been found. In this context, solutions must be found that can transform this waste into a by-product and restore some of its economic value. The main goal of this study was to evaluate the influence of the replacement of primary aggregates (PA) with marble aggregates. No additions or admixtures were used, as those could change the fresh or hardened properties of the resulting concrete and disguise the influence of the replacement under study. This evaluation required the production of three