

Role of aggregates in air lime mortars durability: Influence of curing conditions

C. Borges^a, A. Santos Silva^b and R. Veiga^c

a. ISEL, Área Departamental de Engenharia Civil , Portugal, cristinaborges@dec.isel.ipl.pt

b. Laboratório Nacional de Engenharia Civil, Lisboa, Portugal, sslva@Inec.pt

c. Laboratório Nacional de Engenharia Civil, Lisboa, Portugal, rveiga@Inec.pt

ABSTRACT

Ancient mortars have proved to be durable and reliable materials even when submitted to severe conditions of salts and high humidity. This study intends to contribute to the rediscovery of the role of aggregate on the durability of lime mortars, namely in terms of its mineralogy characteristics. Thus, several lime mortar compositions were prepared with different kinds of sands and subjected to salty exposure conditions simulating maritime environments. These mortars were followed by physical, mechanical, mineralogical and microstructural characterization.

KEYWORDS: air lime mortars, durability, aggregates, curing conditions.