Gypsum Mortar in Historic Structures

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Abstract:

Gypsum has been used as a mortar since the time of the Pyramids. It has several advantages over traditional lime including lower fuel requirements for manufacture, greater strength, and more rapid setting time. Its major disadvantage is its relatively high solubility compared to lime mortar. Structures using gypsum mortar are found extensively throughout the arid Middle East, but are also found in wetter climates including France and Germany. Cement grout used un the restoration of gypsum mortar structures has caused major damage because of the reaction between the gypsum and the cementitious material to from ettringite.

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