

most important assemblages was unearthed in the Celtiberian ancient town of Numancia, where a highly specialized and diversified technological level of pottery production has been detected. In that assemblage, a white pigment was regularly used as a base for black and red geometric and/or figurative ornamental designs. However, at the same time, black and red designs were often painted directly on the smoothed surface of the vessel.

This contribution presents results from a preliminary characterization study of polychrome decoration undertaken on selected Numantian specimens by means of Optical and Scanning Electron Microscopy. Different X-ray diffraction configurations (conventional and INEL) were also used to better understand the nature of the three pigments observed. The study was focused on determining components and specific coloring agents that result in a range of white and red to brown/black colors. These analyses illustrate the specialized selectivity of the Celtiberian potters.

KEYWORDS: Polychrome pottery, Late Iron Age, Spain, pigments characterization.

APPLICATION OF THERMIC PLASMAS TECHNIQUE IN THE LINING OF STONE MATERIAL

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Stone materials which are part of our heritage are degraded by the joint action of water, atmospheric gases, air pollution, temperature changes, and the action of microorganisms, which produce cracks, fissure, flakes, fragmentation of the stone surfaces. Therefore, it's our aim to study the possible application of a protective lining to stone material surfaces, previously cleaned and consolidated by means of the Thermic Plasma technique. The purpose of this work is to analyze the physical and chemical properties of three kinds of stone materials: *cantera*, *tezontle*, and *chiluca*, usually used in our heritage's construction, before and after submitting them to the thermic plasma action, in order to estimate the viability of this technique in these kinds of applications.

The techniques are applied to fix density, specific gravity, porosity, absorption, absorption by less pressure, crystallize by total immersion. mechanic testing. Moreover, instrumental techniques like surface area, Neutronic Activation Analysis, Scanning Electronic Microscopy, and X-ray Diffraction, had permitted to learn the specific characteristics of the aforementioned material before and after being treated with Thermic Plasma technique, projection g quartz on the stone surface at different distances and current intensities, showing the present effect throughout the surface's alterations or modifications caused by the aforesaid lining.

KEYWORDS: Stone, Thermic plasma, *tezontle*.

EVALUATION OF A TRADITIONAL LIME PLASTER TECHNOLOGY USING A NATURAL ORGANIC ADDITIVE: THE EFFECTS OF AN AQUEOUS EXTRACT OF NOPAL (OPUNTIA SPP., CATACEAE)

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