

PRELIMINARY INVESTIGATION FOR THE CONSERVATION PLAN OF A MARINE COMPOSITE (COPPER/TEXTILE) FROM THE 19TH CENTURY SHIPWRECK 'PATRIS' IN GREECE

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Abstract

In October 2006 the famous shipwreck "Patris" was visited off the coast of the Greek island Kea, and several artifacts were removed and taken for exhibition at the Ermoupolis Industrial Museum in Syros. Many of these objects were composites, and difficult to treat due to the fact that the organic component could not be separated from the metal. Collaboration between the Museum and the TEI of Athens has resulted in the conservation of the finds removed from the shipwreck. This paper discusses the analysis and conservation considerations of a copper alloy fire hose with textile and remnants of wood attached to the surface of the metal. A detailed examination and assessment of this object was carried out using SEM-EDX, XRF, and FTIR analyses. Analyses enabled weave, yarn and fiber identification of the textile, and also identified the chemical and mineralogical composition of copper alloy and its corrosion products. Results obtained clearly showed the presence of organic matter within the textile fibers. Understanding the technology and condition of the different components of the object will help in planning a suitable conservation treatment, which should be effective and at the same time preserve the different components of the object.