



DEPARTMENT OF HISTORY AND ARCHAEOLOGY

**UNRAVELLING TECHNOLOGICAL ISSUES
OF METALLURGICAL CERAMICS FROM
LATE BRONZE AGE CYPRUS**

The cases of Enkomi and Kition

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ABSTRACT

Cyprus is considered to be one of the main sources for copper for the Old World since the second millennium BC. Yet we are still far from fully understanding the dynamics, which govern the organisation of copper production and distribution on the island. It is commonly suggested that by the 14th century BC the economic and sociopolitical organisation of the island comprised several polities which competed for the natural and mineral resources of the island. Thus, within this framework of heterarchical political configuration, copper production was organised within regional networks under the control of local élites. The suggested model for the organisation of Cypriot copper industry during the Late Bronze Age starts with the primary treatment of the sulphidic ore at mining and smelting sites located in the metalliferous foothills of the Troodos Mountains. The copper is then transhipped to the urban or port centres to undergo further processing until it reaches the desirable level of purity. Subsequently, the metal was exported overseas in the form of oxhide ingots through the established international trade networks.

The discovery of the primary smelting workshop at Politiko *Phorades* and the mining village at Apliki *Karamallos* both located near the ore deposits provide substantial support for the abovementioned model of spatial organisation of copper production on the island. Nevertheless, archaeometallurgical examination of various assemblages found in urban and regional administrative centres has shown that copper production was not of primary importance in the economy of every region.

This project focuses on the systematic and interdisciplinary study of two metallurgical ceramic assemblages found in the copper workshops excavated at the urban coastal centres of Enkomi and Kition *Kathari*. Past studies, which have relied almost exclusively on the examination of slag, have produced inconclusive and contradicting results as to the metallurgical operations that were carried out within the premises of the workshops.

Archaeological and analytical data have illustrated that the two workshops operate on a different basis and scale. The industrial complex at Enkomi was dedicatedly involved in the processing of impure metal, which was subsequently melted and cast. Conversely, the metalworkers at the sacred precinct at Kition were engaged with the entire range of the multi-staged process of producing copper from copper sulphide ores. Nevertheless, the main activities carried out at Kition were the melting and remelting/recycling of bronze scrap. Comparisons with published results from other contemporary sites denote the outstanding position of Enkomi in the organisation of Cypriot copper industry during the 2nd millennium

BC. Concurrently, the results produced in this thesis are contextualised in the discussion of the sociopolitical configuration of the island during the last half of the 2nd millennium BC through the prism of the ancient metallurgy of copper.