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# Use-wear analysis of the earliest bronze metallurgists' toolkits in Western Europe (end of the 3rd - beginning of the 2nd millennium BC): the examples from Bel air (Lannion) and Kersulec at Plonéour-Lanvern (Brittany, France)

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## Résumé

The emergence of copper and bronze metallurgy in Western Europe (end of the 3rd - beginning of the 2nd millennium BC) is a key step in the evolution process of past societies. However, the precise techniques, processes and equipments involved in these technologies are still under exploration. The detailed organization of this copper and bronze metallurgy and the equipment involved in its first development still have to be defined, as workshops generally leave only ephemeral traces, such as fireplaces, rare fragments of crucibles or stone toolkits. Consequently, the identification of metallurgists stone tools on different archaeological sites (open-air settlements, specialized workshops, enclosures) appear a promising and challenging new approach of this first copper and bronze crafts. The use-wear analysis on a selection of macrolithic implements from the early Bronze Age sites of Bel Air in Lannion and Kersulec in Ploneour-Lanvern, made it possible to identify a complete and much diversified set of macrolithic tools, including crushing tools, hammers and anvils, used for the production of bronze objects. We present here the methodological issues of these new analyses and the perspective they offer for a better understanding of technologies related to the work of copper, tin and bronze in northwestern Europe.

**Mots-Clés:** Early Bronze Age, Brittany, metallurgist toolkit, macrolithic tools, use, wear analysis

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