

WIRE ELECTRODE FOR SPARK EROSION CUTTING

ABSTRACT

A wire electrode for spark erosion cutting of metals, electrically-conducting ceramics etc., comprising either a homogenous centre (1) made of a metal or of a metal alloy, or a composite centre made from a steel core with a coating of copper or copper alloy, wherein the wire electrode comprises at least two sheath coatings made of zinc alloys, with said coatings wearing during erosion. In order to increase performance during high-speed cutting, such a wire electrode comprises an inner sheath coating (2) predominantly comprising β -brass, and an outer sheath coating (3) predominantly comprising γ -brass, wherein the fraction of β/β' -phase or γ -phase in the two sheath coatings is at least 60 %. The ratio of the coating thickness of β -brass to γ -brass is between 0.3 and 7. The sum of the thicknesses of both sheath coatings in relation to the external diameter of the electrode is between 0.1 and 0.3.

(Fig. 3)



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