

Title (en)

METHOD FOR PRODUCING METALLIC HOLLOW BODIES AND MINIATURIZED HOLLOW BODIES MADE THEREBY

Title (de)

VERFAHREN ZUR HERSTELLUNG VON METALLISCHEN HOHLKÖRPERN UND HIERNACH HERGESTELLTE MINIATURISIERTE HOHLKÖRPER

Title (fr)

PROCEDE DE FABRICATION DE CORPS CREUX METALLIQUES ET CORPS CREUX MINIATURISES OBTENUS PAR LE PROCEDE

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Application

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Abstract (en)

[origin: US2003077473A1] According to the invention, the shaped bodies are comprised of at least one heavy metal, preferably Fe, Ni, Co, Sn, Mo or W which can be reduced from a corresponding metallic compound at a temperature of less than 1 500° C. The shaped bodies have an outer diameter ranging from 0.05 to 0.5 mm, and a diameter-to-wall thickness ratio of 0.5 to 3%. According to the method, starting materials are deposited as an enveloping layer on supporting elements of any shape, and the green compacts thus produced are subsequently heat-treated. On that occasion, the supporting elements are pyrolyzed, the enveloping layers are essentially thermally decomposed and the decomposition products are sintered. The outer dimensions of the supporting elements are selected such that they are larger than the shaped bodies to be produced. Metallic compounds, preferably metal oxides, metal hydroxides, metal carbonates or organometallic compounds are used as starting materials and can be reduced at a temperature of less than 1 200° C. The thermal treatment is carried out in a reductive atmosphere containing hydrogen and/or carbon such that the starting materials are essentially reduced to the sintered metal which is based on the respectively used metallic compound.

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