

Method of producing powder from the Mo-Ni-B-Re system and an alloy layer containing this powder

Description of the solution:

The Mo-Ni-B system includes: boron-based transition metal compounds, so-called borides, with the Mo_2NiB_2 composition. These materials are among the hard materials intended for applications where abrasion resistance is required. The purpose of the invention is a method of improving the surface hardness of 316L stainless steel by using a laser alloying technique to perform an alloying of a boride coating of the Mo-Ni-B-Re system with the stainless steel material, resulting in a new alloy layer of the Fe-Cr-Ni-Mo-B-Re-Mn system on the steel surface with an altered microstructure and improved hardness in relation to the stainless steel material.

Benefits of the solution:

- Improving the hardness of 316L stainless steel.

Area of application:

Materials engineering, equipment construction.

Technology readiness level:

5

Intellectual property:

Invention: P.443145

Owner:

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