

On the structure of shape memory alloys

Abstract

The paper presents the obtaining of shape memory alloys, base copper and a diffractometer and microscopic study on some samples. The study was made on CuZnAl samples, obtained by classic casting and educated. The shape memory alloys properties recommend their use for applications in domains as follows electric contacts, robotics, and aeronautics. When choosing the type of alloy used for the manufacture of the component parts of different industrial applications, it must be taken into account fatigue resistance, resistance to shocks and resistance to corrosion. Shape memory alloys are a unique group of alloys with the ability to remember a form even after quite severe plastic deformations. At low temperatures, shape memory alloys can be deformed apparently like other metallic alloys, but this deformation can recover with a relatively modest increase in temperature.

Keywords; Compound, Microstructure, Shape Memory Alloy, Standard Samples