

Characterization of SMA actuators

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Biomedicine is a field of research very interesting for Shape Memory Alloys because their special characteristics of low volume and high strength. Apart from catheters, there are other applications suitable for using a Shape Memory Alloy, for example a Ventricular Assist Device for a damaged heart.

The human heart is a very powerful pump with a typical ejection factor of 60%. An actuator designed to help the muscles of the heart must have very high relative deformation and reasonable activation time in order to make up for required beats per minute.

In this presentation, We present tests on different types of actuator concepts.