

Project 17: Characterization of Microstructure Evolution in Nickel-Titanium-Hafnium Intermetallics

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Program Goal

Development of Ni-Ti-Hf alloys with high strength, hardness and toughness via superelasticity

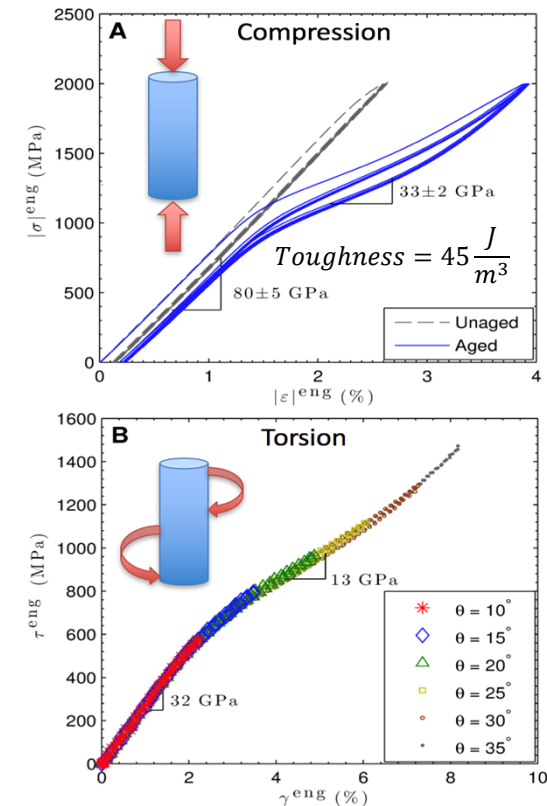
Approach

Characterize residual stress and fatigue properties of Ni-Ti with added levels of Hf

Correlate properties to microstructural variations between alloys

Benefits

A new class of bearing materials with high strength and high damage tolerance



Very Small Hysteresis
 Superelasticity of $Ni_{54}Ti_{45}Hf_1$

Project Duration
 Aug. 2015 to Aug. 2019



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