

Title:

Tensile and Microindentation Stress-Strain Curves of Al-6061

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Abstract:

Recent spherical microindentation stress-strain protocols were developed and validated on Al-6061 (DOI: 10.1186/s40192-016-0054-3). The scaling factor between the uniaxial yield strength and the indentation yield strength was determined to be about 1.9. The microindentation stress-strain protocols were then applied to a microstructurally graded sample in an effort to extract high throughput process-property relationships. The tensile and microindentation force-displacement and stress-strain data are presented in this data set.