Microstructure and Mechanical Properties of Cast Ti-6Al-4V with small additions of boron

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Cast Titanium Alloy: Ti-6Al-4V

Titanium exhibit excellent strength – weight ratio

Thermo-mechanical treatments control the microstructure

- Different microstructures – critical properties
NGSST

Boron effect on microstructure

$\approx 0.1 \text{ wt.}\% \text{ B}$ refines the microstructures
Boron effect on Mechanical properties

Improves strength and ductility