

## Tensile Properties of a Hot Stretch Formed Ti-6Al-4V Alloy Component for Aerospace Applications

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**Comprehensively considering the analysis results of the microstructure, hardness and tensile properties, different zones of a component for aircraft applications manufactured through hot stretch forming were studied. The differential thermomechanical story of each studied zone of the forging was taken into account. The results reveal that the different zones strain hardened in function of the degree of the strain and strain rate experienced during the forming, with the zones most stressed at the higher strain rate showing the best tensile properties and a loss of ductility. This phenomenon is not coupled with a visible change into the microstructure morphology of the processed material.**

**Keywords:** Hot stretch Forming, Titanium Alloys, Ti-6Al-4V, Tensile Properties, Strain Hardening

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