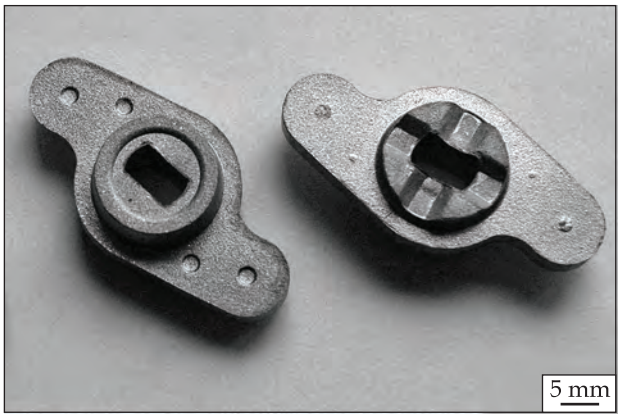
COST-EFFECTIVE POWDER TECHNOLOGY FOR MANUFACTURING TITANIUM ALLOYS AND PRODUCTS WITH DESIRED PROPERTIES

Automotive connecting rod (Ti–6Al–4V alloy)



Lock body of aircraft hatch (Ti–6Al–4V alloy)

Areas of Application

The technology can be used for manufacturing titanium alloy parts operating under noncritical loads for automotive, chemical, defense, medical, and aerospace industries

Specification

The technology uses the multicomponent powder mix method in its simplest version that is pressing and unpressurized sintering. Its distinctive feature is the use of cheap hydrogenated titanium powder instead of conventional one. Hydrogen purifies the material from impurities, decreases porosity, and provides the desirable microstructure of products obtained

Watch bodies (CP-Ti)

Advantages

The technology advantage is a significant reduction in the production prime cost (2–5 times depending on the product type) and the obtainment of required characteristics of alloys and products that meet the standards for corresponding alloys produced by casting and forging technologies

Stage of Development. Suggestions for Commercialization

IRL4, TRL4
License agreement
for commercial use of technology

IPR Protection

IPR1, IPR3, IPR5

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