

Adsorbed Water Removal from Titanium Powders via Water Activation

Disclosure Number

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Technology Summary

Titanium powder of high surface area when consolidated in the solid state shows an increase in oxygen content that could be attributable to adsorbed water. Welding of the consolidated powder reveals porosity also attributable to the hydrogen constituent of adsorbed water. Removal of the adsorbed water with the disclosed apparatuses and methods has the potential to lessen or eliminate the increased oxygen pick and also eliminate hydrogen evolution that occurs during welding. Improved material properties and reduced processing costs will result.

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