Supplementary file

The Influence of the Tantalum Content on the Main Properties of the TixTa9Nb8Zr2Ag Alloy

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The elastic moduli of our specimens were estimated, according to the procedure described in the literature [15; 17], from the stress–strain curves. In the figure below, a selection of stress–strain curves for several test samples from the experimental batch is presented. It should be mentioned that the tensile sample geometry and testing procedure were made in accordance with ISO 6892-1 specifications.

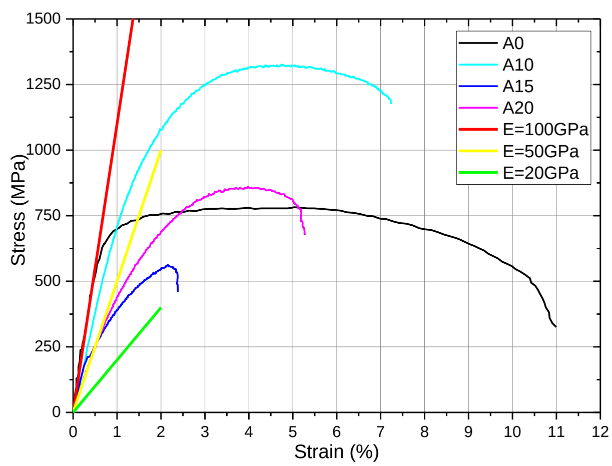

Fig. S1. *Stress–strain curves for a selection of test samples. In the chart, plots showing the linear-elastic region of elastic moduli of 100GPa, 50GPa, and 20 GPa are presented.*

The elastic moduli of the alloys showed a continuous decrease with a tantalum concentration increase, as depicted in Table S2. The microstructure shows little influence on the values of the elastic modulus, while the yield strength, tensile strength, and elongation at break are mainly determined by this parameter. The yield strength shows an initial increase at 10%Ta, followed by a sudden drop; a similar trend was observed for the tensile strength. The elongation at break was considered irrelevant in this context since premature failure occurred.

Table S2. *Strength parameters for the experimental alloys*

Alloy	*Elastic modulus (GPa)*	*Yield strength (MPa)*	*Tensile strength (MPa)*
A0	*100.10±1.57*	*602±22*	*782±18*
A10	*82.49±1.69*	*803±19*	*1325±26*
A15	*78.16±1.41*	*310±26*	*526±16*
A20	*51.12±1.28*	*462±17*	*859±29*