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(54) Title: TANTALUM SPUTTERING TARGET WITH IMPROVED PERFORMANCE AND PREDICTABILITY AND METHOD OF MANUFACTURING

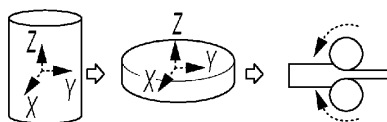


FIG. 2

(57) Abstract: A method for making tantalum sputtering targets with stable through thickness {100}+{111} preferred crystallographic orientation volume fraction is disclosed. Starting from electron beam melted tantalum ingots, the method includes various forging, controlled rolling and recrystallization annealing. The resultant tantalum sputtering targets yield stable deposition rate and film uniformity from burn-in through the end-of-life during sputtering. Also disclosed is a tantalum sputtering target made in accordance with the disclosed method.