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ACTION

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(54) Title: REFRACTORY METAL PLATES WITH UNIFORM TEXTURE AND METHODS OF MAKING THE SAME

(57) Abstract: A method (10) of forming sputtering target from ingots of tantalum or niobium of requisite purity by the process of cutting the ingot to short lengths (12) and pressure working (14, 22, 30, 34) the ingot along alternating essentially orthogonal work axes. Intermediate anneals (18, 26, 38) are applied as necessary to establish a uniform texture thickness-wise and area-wide throughout the target, including the center. The uniform texture is a substantially constant mix of grains with orientation (100) and (111), thereby improving sputtering performance by providing a more predictable sputter rate to control film thickness.