

NEW APPROACHES TO Nb THIN FILM COATING

S. Calatroni, A.E. Gustafsson, M. Scheubel, W. Vollenberg [CERN, Geneva, Switzerland]

Abstract

Niobium films are widely used at CERN and several other Laboratories for the coating of superconducting cavities. The performances of these cavities are highly influenced by the thin film properties, and in particular its microstructure. Energetic condensation, and in particular High Power Impulse Magnetron Sputtering (HIPIMS) gives new opportunities for conventional magnetron sputtering equipment. In this talk we will review the background on thin film performance, the motivations of the study, illustrate the experience that has been gained at CERN during the first months of operation and present the results obtained so far.

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