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Cryogenic testing of CuAg alloys for high gradient cavities

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Increasing accelerating gradients in normal conducting cavities is a major focus in the development of future lepton linacs in applications like light sources and medical devices. To this end, improved understanding of material and surface physics of cavities is of paramount importance especially in the context of reducing breakdown rates. We are here interested in considering the use of CuAg silver alloys to improve material properties such as hardness. We present on the preparation and measurements of CuAg pillbox cavities. Unloaded quality factor measurements are compared with existing C101 measurements in a significant range of temperatures from room temperature to below 77 K.

Footnotes

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North America

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