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## Development of a $T_c$ test stand to analyze superconducting thin-film coatings

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The need for particle accelerators and circular colliders capable of reaching energies beyond the state of the art machines, such as the LHC, is resulting in extensive efforts on the development of the required technologies. Among the challenges, the development of new SRF cavities capable of providing higher accelerating fields is critical. To this end, among the several possibilities, current research is exploring A15 compounds as thin film coating materials, in particular Nb<sub>3</sub>Sn on copper substrate. Presently, the achievement of the literature values for bulk materials of the critical temperature is one of the major challenges. In this work, we present a dedicated test stand that has been commissioned at the Central Cryogenic Laboratory at CERN for contactless, inductive measurements of the critical temperature of superconducting thin film samples deposited on copper. We also present, as proof of principle, the measurement of the critical temperature of a bulk Nb sample performed with the presented test stand.

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