

R&D ACTIVITIES FOR ILC HIGH GRADIENT CAVITY IN KEK

K. Saito, T. Saeki, F. Furuta, Y. Morozumi, Y. Higashi, T. Higo,
H. Yamaoka, H. Matsumoto, S. Kazakov, K. Enami, K. Ueno, KEK
N. Toge, Y. Sohn, PAL
J. Sekutowicz, DESY
K. Ko, SLAC

Abstract

After the ILC 1st workshop, KEK organized a high gradient SRF cavity R&D group. As a result of many considerations, KEK decided to push both R&D of 35MV/m baseline cavity and 45MV/m higher gradient cavity, of which purpose is to realize the colliding energy 1-TeV in 40km tunnel. The 35MV/m cavity development will be done by industrial fabrication base. On the other hand the 45MV/m cavity R&D is done by in-house base. Such a high gradient operation needs 500kW input coupler and new tuner system. These all related issues are developed in our group. In this paper we concentrate to report about the status of the 45MV/m cavity, 500kW input coupler and mechanical tuner system.

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