

SINGLE CELL CAVITY PROGRAM FOR THE XFEL

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Abstract

The future European X-ray Free Electron Laser (XFEL) is based on 1.3 GHz 9-cell Nb cavities mainly identical to the proven TTF cavity design. In order to establish the fabrication process of approx. 1000 cavities for the XFEL a test cavity program was initiated at DESY. The program consists of fabrication, preparation and RF testing of approx. 30 single-cell cavities. Main objectives are the qualification of new niobium vendors, the evaluation of manufacturing of cavities from large grain ingot discs as well as the specification of precise material and process requirements for the large scale production. Design, documentation and qualification of the whole DESY internal fabrication are established. The first single-cell cavities are produced and successfully tested.

NO SUBMISSION RECIEVED