DEVELOPMENT OF Nb/Cu CLAD SEAMLESS CAVITY

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Abstract

KEK is developing Nb/Cu clad 9-cells Seamless Cavities to reduce cost and make higher reliability for ILC. Seamless cavities are made by mainly two processes. The first process is to neck tube at the iris area. The last one is hydroforming the necked tube to manufacture a final shape. We perform basic experiment using Cu tubes and analysis for optimum necking shape and hydroforming mechanism. From these results, we design a necking machine and a hydrofoming machine to develop Nb/Cu clad seamless cavities in house. In addition to these basic studies, we are collaborating with DESY. Recently DESY formed 2-cells seamless clad cavities from Nb/Cu clad tubes. The cavity performance also will be reported.

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