PROGRESS ON SPUN SEAMLESS CAVITIES*

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Abstract

Not only the progressive achievement of higher accelerating fields, but also the drastic reduction in resonator production time and costs (K$ per MV/m) is compulsorily for the feasibility of more and more powerful accelerators, as for instance the ILC. This is the motivation under the research toward simpler and cheaper fabrication techniques as for instance seamless cavities. Plastic deformation of metals by spinning is a technique as ancient as powerful and it has already shown that seamless resonators can be cold formed starting either from circular at blanks or from tubes without need of any intermediate annealing. In the optics of a low cost resonator mass production, a strong effort on fabrication times reduction (around 4 hours per resonator) has been spent in last two years. Much shorter fabrication times are however possible and are under study at the moment.

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NO SUBMISSION RECIEVED