Electroacoustic Oscillations in the LEP Superconducting Cavities, D. BOUSSARD, P. BROWN, J. TUCKMANTEL, CERN - The LEP superconducting cavities have been plagued by electroacoustic oscillations. Tests have been done to eliminate these by a special feedback loop in the tuning circuit as well as by a feed-forward arrangement, but they could only be eliminated safely over the full field range by running the cavities close to tune, without compensating the reactive part of beam loading. This technique proved successful during the first LEP test run at 70 GeV. The corresponding stronger loading of the power coupler and possible ways to reduce it have been analysed as well as the mechanism and essential parameters driving these oscillations.