ENERGY MEASUREMENT OF BUBBLE BURSTING BASED ON VIBRATION SIGNALS

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TÓM TẮT:

An experimental study of the energy of bubble bursting at the surface of a high-viscosity liquid on a cantilever beam is reported. The sudden bursting event of a bubble at the liquid surface can cause a vibration of the cantilever beam besides the acoustic wave and jet wave. The peaks of the vibration signal from the beam slightly lag the peaks of the acoustic signal, and the energy transferred to the vibration is larger than that transferred to the acoustic wave. The amplitude of the jet wave depends on the thickness of the liquid film and the size of the bubble. The results of the investigation can be used to understand the dynamic characteristics of bubble bursting.