

Let's get to know about the "Silent Material"!

Vibrations are often undesirable since they generate noise and can also lead to cyclic fatigue damage. Recently, considerable attention has been given to damping materials. In this course, we will make several materials, such as pure metals and several shape memory alloys, which will be used to test their damping capacities. The materials are collided with a steel ball, and the decay of the sound will be monitored to analyze the damping properties. The microstructure of the prepared samples will also be observed to discuss its correlation with the damping properties.

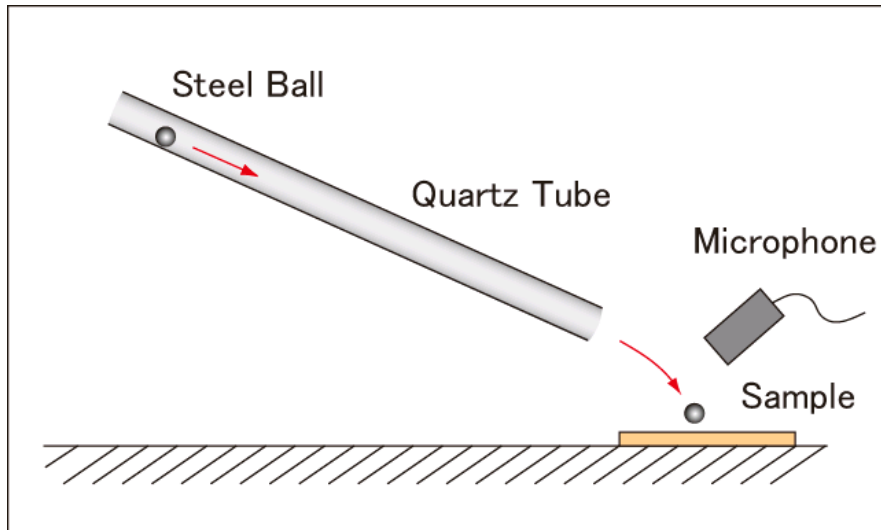


Fig. 1 Test method for measurement of damping capacity.

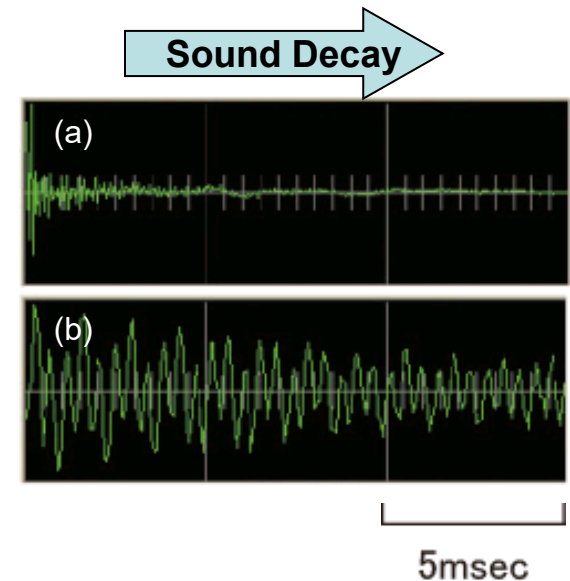


Fig. 2 Decay of sound in (a) Cu-Al-Mn shape memory alloy and (b) stainless steel.