

Sound Pressure and Frequency Characteristics of Whispered Voices Used in Hearing Tests for Railway Drivers

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In order to obtain a railway driver's license, drivers have to pass a physical examination. The hearing standard in the physical examination states that "each ear must be able to hear whispered words clearly at a distance of 5 meters", but the specific method of measurement is not clear, nor its relevance to the audiometer test method used by JR. A survey was conducted to understand the characteristics of whispered voices across different phrases and speakers. The results confirmed that, regardless of the phrase or speaker, the peak sound pressure generally occurred around 1000 Hz. Although the overall sound pressure level depended on background noise levels, these findings were consistent with trends observed in previous measurements conducted by railway companies.