



Precision Temperature Control of Hydrogen Maser Room and Its Application in Time Keeping System

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Based on the working principle of hydrogen maser and its temperature sensitivity mechanism, this paper introduces the design and development of the precise temperature and humidity control of atomic clock room for the continuous and stable operation of hydrogen maser. Taking the operation data of time keeping system of Shanghai Institute of Measurement and Testing Technology (SIMT) as an example, this paper analyzes the contribution of the precise control of the temperature and humidity of the hydrogen atomic clock to the stable operation of the time keeping system.