

# CONSIDERATIONS ON OXYGEN SENSING DEVICES BASED ON INTERFEROMETRIC PRINCIPLES

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**Abstract:** *This paper proposes and analyses the application of interferometric principles in gas sensing devices. A specific sensing principle, based on ultrasonic interferometry produced inside an analysis chamber which contains the gaseous mixture is described. By setting up a strong magnetic field inside the analysis chamber, oxygen molecules will be selectively concentrated thus altering the load impedance of the ultrasonic wave generator.*

**Key words:** *oxygen sensing device, interferometry, ultrasonic beam.*