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OXYGEN ANALYZING USING ZIRCONIUM MATERIAL AND CONTROLLING THROUGH GSM NETWORK

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Abstract

The zirconia oxygen analyzer has been designed to measure excess oxygen in a wide variety of combustion processes. It is an outstanding unit for monitoring oxygen concentrations in combustion gas of large or small boilers, industrial furnaces and combustion processes or for the control of low percent oxygen combustion [1]. This paper explores the feasibility of Zr-O_2 analyzing through GSM network consists of a detector, converter, microcontroller circuit, GSM Modem, dc motor unit. The Zr-O_2 analyzing through GSM network is prototype project collaboration with oxygen analyzer using in industrial furnace which utilizes a high performance microcontroller based electronics unit incorporating the latest technology. When combined with the GSM network, reliable output of the zirconia oxide detector (ZOD) [5], the user receives text message through GSM communication which enables an accurate, dependable oxygen concentration measurement in combustion gases of boilers, incinerators and other industrial furnaces [3] needed for control and monitoring capabilities. Network to act as a medium for the communication of control signals. Coupled with oxygen analyzer that are able to detect the concentration of oxygen in the surrounding furnace and control signal provided by microcontroller which is control the dc motor (as a FD fan). This would then enable the achievement of truly mobile global remote monitoring; the control of the oxygen in furnace and other industrial processes; as well as security and safety applications. [2]

Keywords: GSM, SMS, Automation, Telemetry, Temperature, Zr-O_2 Analyzer, RMACS, ZOD, ZOA