

Mathematical modelling of the transfer behaviour of the thermal boundary layer flowmeter operating with constant heating power

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Abstract The complex problem of small liquid flow measuring in chemical industry pilot plants represents a constant field of research. So, the thermal boundary layer flowmeter realized in the Chemical Processes Automation Laboratory of the Industrial Chemistry and Environmental Engineering Faculty of Timisoara, fits the laboratory apparatus requirements. This proved good performances according to the theoretical basis of the electrothermal principle. The mathematical correlation of the main constructive and functional parameters of the apparatus allowed to obtain the mathematical models for the assessment of certain predictions of thermal boundary layer flowmeter behavior.

Keywords: flow measurement, flowmeter, sensitive element, transducer, chemical industry.
