

FLOW METERS WITH VERY GOOD PERFORMANCES

Mircea Dimitrie CAZACU¹,
Mihail Viorel BADESCU²

Rezumat. Se prezintă calculul teoretic al unui debitmetru brevetat, atât din punct de vedere termodinamic cât și aerodinamic, precum și precizia de măsurare a debitului de aer în orice condiții meteorologice. În același timp remarcăm că debitmetrul propus, prin poziția sa de amplasare, nu are pierderi de sarcină.

Abstract. We present the theoretical calculus of a patented flow meter, concerning such the thermodynamic and aerodynamic calculus, as well as the offered precision to measure the flow of the air in any meteorological conditions. In the same time we remark that the proposed flow meter, by its positioning, has not loss of head.

Keywords: Gas flow meters, Gauging of gas flow meters, Thermodynamic and aerodynamic calculus, Offered precision calculus, Flow meter without pressure loss

1. Introduction to present our special flow meter

In this work we shall present the theoretical support of a gauge flow meter, patented in the year 1989 [1], studied in any works [2-5] and schematic represented in the figure 1.

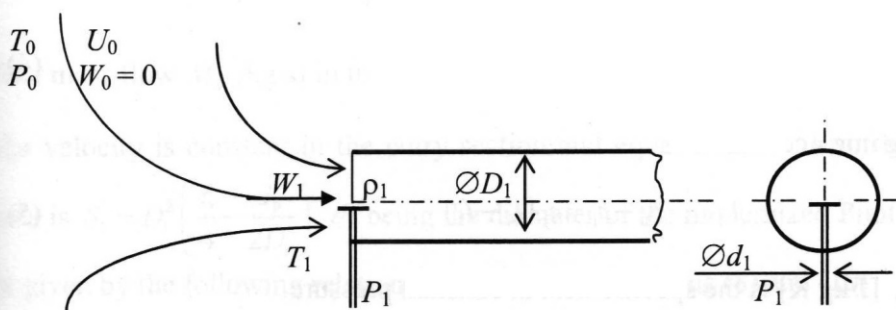


Fig. 1. The physical magnitudes of the aspirated air in a pipeline foreseen with a special tube at the entry.

¹Prof., PhD, Eng., Polytechnic University of Bucharest, Power Engineering Faculty, Hydraulics, Hydraulic Machines and Environment Protection Chair, Bucharest, Romania, Honorary Researcher of the Romanian Academy (cazacumircea@yahoo.com).

²Prof., PhD, Eng., Polytechnic University of Bucharest, Faculty of Mechanical Engineering, Thermo and Refrigeration Chair, Bucharest, Romania, (badescu@theta.thermo.pub.ro).