TRITON, AN ULTRASONIC FLOWMETER-COUNTER

Description
A flowmeter-counter TRITON is designed for measuring flow rate and volume of the liquid, displaying the data on the built-in indicator, and transferring the information through the RS232 port to the computer or printer.
A new phase technique is employed to measure the propagation velocity of ultrasonic waves. New circuit solutions based on employment of microprocessor and mathematical processing of the information makes it possible to measure instantaneous speed of sound in water to the accuracy of $\delta V/V < 10^{-5}$. The hydrodynamics of the test section was analyzed to select the design geometry in order to increase the accuracy of flow velocity measurements by the flowmeter.

Technical appraisal and economic benefits
The developed technique and the instrument make it possible to design a new class of wide-range high-accuracy flowmeters for gas and liquid. The meters are competitive both in domestic and foreign markets.

Application areas
Accounting systems for liquid flow rate operating in the temperature range from 5 to 160 °C and pressure below 1600 kPa.

Development stage
Production, service and design of the registration and control systems, assemblage at «NEVZ» Joint Stock Company, «Siberian Thermometry Center» and «EKZOT» Close Joint Stock companies.

Patent situation
The instrument is certified (RU.C.29.007.A No. 6498/2.). Serial Number in the State Register of Instruments is No. 18556-99.

Commercial offers
Contract for supply of the flowmeter, transfer of manufacturing documentation, industrial commercialization of the instrument. Design of a special instrument applying the experience and basic principles of using ultrasonic technique for measuring flow velocity, density of mixtures and materials, etc.

Estimated cost
Negotiated price.
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