

Method for measurement of dynamical pressure that is in transformation of pressure to bend of elastic membrane receiving it, measurement of bend of membrane $w(t)$ at time instant t , determination of rate of motion of membrane $w'(t)$ with digital differentiation of output signal $w(t)$ by formula

$$w'(t) = \frac{\partial w(t)}{\partial t},$$

- determination of acceleration of motion of membrane $w''(t)$ with digital double differentiation of output signal $w(t)$ by formula

$$w''(t) = \frac{\partial^2 w(t)}{\partial t^2}$$

And determination of measured pressure $p(t)$ at time instant t by formula

$$p(t) = \frac{w''(t) + 2\beta w'(t) + (\omega^2 + \beta^2)w(t)}{k\omega},$$

where β - damping coefficient; ω - frequency of natural vibrations of membrane; k – constant coefficient of static transformation for membrane. Procedure of measurement, according to the method proposed, leads to substantial increase of accuracy and operation speed of measurement of dynamical pressure in real time.