

ABSTRACT

(Figure 1)

Method for measurement of the muzzle velocity of a projectile or the like

The invention proposes that the weapon barrel or the firing barrel (1), or the muzzle brake (3) be used as a waveguide which, however, is operated below the cut-off frequency of the relevant waveguide mode (TE; TM). The transmission coupler (6, 10.1, 11.1) relevant waveguide mode. An oscillator (4) generates the signal which is then passed to the transmission coupler. The waveguide and the projectile (2) form a system in which the electromagnetic field at the reception coupler (7, 10.2, 11.2) is influenced by the position of the projectile (2). The characteristic rate of change of the intensity of the electromagnetic field at the location of the reception coupler (7, 10.2, 11.2), which results from the change in the distance between the projectile (2) and the reception coupler (7, 10.2, 11.2), is measured and is used to determine the muzzle velocity (V_0).