a 2012 0017

The invention relates to the study of materials by optical means, in particular to methods for measuring the dimensions of opaque micro-objects.

The method for measuring the dimensions of opaque micro-objects consists in that the micro-object is illuminated with an interference raster with a preset period, formed as a result of interference of at least two laser beams with different intensities, with the formation of an interference image of bright fringes with different intensity and visibility $V < 1$, then the pre-enlarged interference image is projected in the form of object beam on a micro-object hologram recording medium, as a result of interference of the object and reference beams, converged at an angle with the surface of the medium, is recorded the hologram, then the reconstructed image of the micro-object by means of a digital camera is transferred to the computer. The dimensions of the micro-object are determined proceeding from the values of the recorded hologram of the interference raster with the known period.

Claims: 1
Fig.: 2