

Metrology & Hallmark

<https://gum.biuro.jskinternet.pl/wye/content/archives-of-biuletyn-metrologi/volume-3/5423,Measurements-of-long-gauge-blocks-on-a-modernized-measuring-system-with-a-laser-.html>
26.10.2026, 15:30

Measurements of long gauge blocks on a modernized measuring system with a laser interferometer

Authors Robert Szumski - Central Office of Measures (Główny Urząd Miar)

[interference comparator](#) [long gauge blocks](#)

Abstract

The article presents the modernization of an interference comparator for calibrating long gauge blocks with a measuring range of up to 500 mm. The measuring system has been extended with the possibility of performing measurements using the exact fractions method.

Bibliography

- [1] A. J. Lewis: Absolute length measurement using multiple wavelength phase-stepping interferometry. PhD Thesis. University of London (1993).
- [2] Y. Bitou, A. Hirai, H. Yoshimori, F. Hong, Y. Zhang, A. Onae, K. Seta: Gauge block interferometer using three frequency-stabilized lasers. Proc. SPIE 4401 (2001), 288-297.
- [3] O. Iwasińska-Kowalska, M. Dobosz: A new method of noncontact gauge block calibration using the fringe counting technique: II. Experimental verification. Optics & Laser Technology, vol. 42 (2010), p. 149.
- [4] E. Ikonen, K. Riski: Gauge-block interferometer based on one stabilized laser and a white-light source. Metrologia, vol. 30 (1993), p. 95.

ISSN 2300-8806

Year 2013

Volume 3

Application generates the quote in the selected format.

[Generate quote from this publication](#)

Generate the quote

Download

[Next Page](#)