

ANALYSIS OF DETERMINATE ERROR OF AN OPTOELECTRONIC ANGULAR SHIFT SENSOR ON MULTICOMPONENT OPTRONIC STRUCTURES

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The paper presents the analysis of a determinate error of an optoelectronic angular shift sensor on multicomponent optronic structures on the basis of the sensitivity theory propositions.

Determinate error, optoelectronic sensor, angular shifts, multicomponent optronic structures.

References

1. Domratchyov V. G., Meiko B. S. Digital angel converters: principles of construction, theory, accuracy, control methods / V. G. Domratchyov, B. S. Meiko. – Moscow: Energoatomizdat, 1984.
2. Konyukhov N. Ye., Leonovitch G. I., Matyunin S. A. Optoelectronic digital shift converters with interferential elements of correction and processing of optical signals // N. Ye. Konyukhov, G. I. Leonovitch, S. A. Matyunin. Control devices and systems. – 1990. – No. 9. – pp. 18 – 20.
3. Matyunin S. A. Multicomponent optronic structures. / S. A. Matyunin – Samara: Samara scientific centre of the Russian Academy of Science, 2001.
4. Stepanov M. V. Conversion function of a differential optical angular shift transducer with a mobile spectroforming element / M. V. Stepanov // “Promising innovations in science, education, production and transport ‘2007’”: Collection of transactions on the materials of international scientific conference. Vol. 2. Technical science. – Odessa: Tchernomorye, 2007. – pp. 15-18.
5. Ignatov A. N. Optoelectronic devices and systems: Teaching aid / A. N. Ignatov – Moscow: Eco-Trends, 2006.

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