

MULTICHANNEL TELEVISION METHOD OF OBJECT GEOMETRICAL PARAMETER REMOTE MEASUREMENT

©2009 I. Yu. Zhiganov

Samara State Aerospace University

The paper deals with the theoretical foundations of television devices for measuring geometrical parameters of complex objects using several telecameras spaced apart at a fixed distance. The procedure of measuring on the basis of automatic calibration and the processing algorithms ensuring the independence of measurement results on the distance from the object and its displacement in space are given.

Television measurements, geometrical parameters, processing algorithms.

References

1. Obodan V. Ya., Skriptchenko A. I., Sologub B. V. Television automatic microprocessor meter for measuring overall dimensions of pipe section and rolled products // *Stal*. 1989 – No. 6 – pp. 58-61.
2. Obodan V. Ya. Controlling circular section billet volume by optoelectronic means // *Izvestia vuzov. Priborostroyeniye*. – 1997. – No. 2 – pp. 40-43.
3. Radioengineering and television devices for information collecting and processing. / Edited by K. Ye. Rumyantsev. Taganrog: Taganrog Radioengineering University publishers, 1998 – 162 pp.
4. Balabayev S. L., Rumyantsev K. Ye. Television transducer for metal manufacture item control // *Information technologies in science and education. Collection of scientific transactions. Shakhty*, 1998. Issue 28. pp. 24-28.
5. Zhiganov I. Yu. Non-contact devices for pipe geometrical parameter measurement. – Moscow: Mezhvuzovskaya kniga, 2004. – 220 pp.

Zhiganov Igor Urievitch, candidate of technical sciences, associate professor, associate professor of Samara State Aerospace University Electrotechnics department, e-mail: aps@ssau.ru. Area of research: electrical instruments, long distance methods of measurement, metrology.