

ABSTRACT

Thesis project contains: 86 pages, 30 tables, 23 figures, 3 appendices. And 20 links

Today, deformation measuring instruments and systems are widely used in many countries in various fields of production. They are one of the promising areas of scientific and technical development of many developed countries.

The state of the art of measuring deformations is characterized by serial production of working measuring instruments (ME), among which strain gauges, strain sensors, strain gauges, secondary strain gauge equipment – strain gauges, strain gauges are widespread.

Devices for measuring deformations have become widespread as an effective means of controlling the strength at the stages of design, finishing and operation of machines, devices and structures, in solving problems of process automation and technical diagnostics.

Therefore, the improvement of the system of metrological support of these measurements is of great economic importance. Tensor resistors are now the most widely used for measuring deformations. Determination of metrological characteristics of strain gauges is carried out at their release from production and in the course of operation, after the expiration of a warranty period of storage, at use of unregulated types of binder, before carrying out especially responsible measurements and in other cases.

The presence of a large number of manufacturers and consumers of strain gauges, which need to determine their metrological characteristics, on the one hand, and the lack of centralized production of tensor resistors on the other hand, led to the creation and use of a variety of metrological characteristics of strain gauges.