

## **Considering temperature component metrological characteristics of production safety parameters**

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The need arises to develop methods of use of nanomaterial and quantum-dimensional structures to prevent technogenic emergency situations (fire, electrical, hazardous technology processes, transport, etc.) and adaptation means to perform tasks to rescue people and emergency and their consequences elimination [1].

Nanotechnologies became a revolutionary foundation for society development. Unfolding opportunities synthesize unknown in nature systems not only in composition but also in structure and, above all, the properties, and hence, by functional abilities.

Characteristics of existing measurement instruments not fully meet these requirements. So the search for new methods and tools for measuring the parameters of tiny objects important is. Development of theoretical principles, models and techniques make it possible in the future to solve the important problem of proper metrological characteristics of contactless measurements, for example, temperature measurements of small size objects. Often different authors put different meaning in the same definition.

Not defined by various authors used the terms "pinpoint objects", "small size", for which suitable metrological characteristics and suitability to his measurements in the nanometer size range measurement object. Also in this case there is need to clarify the methodological component device uncertainty as the main development on it and consider its reduction only with respect to the calibration function for converting the secondary circuit of the optical scheme [2].

Thus, expanding the measurement range, new methods and tools for measuring dimensions, temperature and other parameters of hazardous objects, providing their essential metrological characteristics, since accurate maintenance of temperature in most dangerous processes is a key parameter which determines the safety of the final product or process.

### LITERATURE

1. Rudyk Yu., Lavrivska O. Methods of nanotechnology application to the prevention and elimination of emergency situations / Physics and Technology of Thin Films and Nanosystems. Materials of XVI International Conference / Ed by Honored engineer and techniques of Ukraine, Dr. Chem. Sci., Prof. Freik D.M. – Ivano-Frankivsk: A publish-designing department of 'Vasyl Stefanyk' Precarpathian National University, 2013. – P. 188.

2. Kryvenchuk Y. Research Raman frequency shift of carbon nanotubes with temperature change / O. Seheda, Y. Kryvenchuk, N. Zamishchak // Metrology and devices. – 2013. – # II (40). – P.215-219.

3. The Application of Nanotechnology in Fire Protection / Bezpieczeństwo i Technika Pożarnicza / Safety & Fire Technique