

## Analysis of the test results of visualization means of various spectrum ranges for the detection of a fire source and a person in the fire training complex PTS «Ugolyok»

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*The article presents the results of field tests of visualization means of the visible, short-wave and long-wave infrared spectrum range, intended for the detection of a fire source and a person in smoke conditions in the fire training complex PTS «Ugolyok». The studies were carried out with the aim of experimentally determining the effectiveness of visualization tools for various spectral ranges during the work of fire departments in an environment unsuitable for breathing. During the research, well-known scientific methods were used: analysis, synthesis and natural experiment. As a result of the experimental study, the effectiveness of the use of cameras in the short-wave infrared range has been proven, because when using it, the detection range of a fire source and a person in natural smoke is five times greater than when using a camera in the visible range of the spectrum.*

*Keywords:* fire, smoke, SWIR, LWIR, fire source, PTS «Ugolyok».

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