

## IMPACT OF WATER MIST EXTINGUISHER CONSTRUCTION ON PARAMETERS OF GENERATED DROPS

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Received: 30.10.2020; Revised: 19.11.2020; Accepted: 23.11.2020

### Abstract

The paper analyses the impact that the construction of water mist extinguishers exerts on the size of generated drops. The test was based on the examination of three extinguishers of two producers, which have been available in the market in recent years.

The test was carried out with the use of the IPS Drop Spectrum Analyzer (DSA). The device operates by using the photo-electric method to measure the parameters of the extinguishing stream microstructure. There were two measuring ranges: 0÷1 414  $\mu\text{m}$  and 0÷2 658  $\mu\text{m}$ .

The test results present mean diameters of the generated drops, aggregated curves representative of their share as well as the analysis of the quality of spraying the extinguishing medium. The tests have shown that two out of three tested extinguishers do not generate water mist with standard parameters at a distance of 170 cm. The smallest mean diameters of drops were generated by extinguisher B, whereas the biggest ones by extinguisher C. The highest level of spraying among all samples was found for extinguisher B. Its Sauter diameter mean amounted to 564.03  $\mu\text{m}$ . Further, it was shown what impact the construction of water mist extinguishers exerts on the size of generated drops.

Keywords: Construction; Drops; Extinguisher; Sprayed stream; Water mist.