

**SHIELDING OF FIRE RADIATION WITH THE USE
OF MULTI-LAYERED WATER MIST CURTAINS: PRELIMINARY ESTIMATES**

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ABSTRACT. An approximate solution for the complete problem of attenuation of fire radiation by water mist is presented. This solution is based on simplified approaches for the spectral radiative properties of water droplets, the radiative transfer in the absorbing and scattering mist, and transient heat transfer taking into account partial evaporation of water mist. An analysis of the example problem makes it possible to recommend a decrease in the size of supplied water droplets with the distance from the irradiated surface of the mist layer. This can be achieved with the use of multi-layered mist curtain. The advantage of this engineering solution is also confirmed by numerical calculations.