POSSIBILITIES OF APPLYING ACOUSTIC METHOD AND ELECTRICAL ENGINEERING FOR ACOUSTIC WAVE FLAME EXTINGUISHING BASED ON THE LATEST EUROPEAN RESEARCH: BENEFITS, DEVELOPMENT PROSPECTS AND LIMITATIONS

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Abstract *– The article analyses the possibilities of using acoustic technology for extinguishing flames from various sources. Advantages as well as disadvantages of acoustic technology are presented. The structure of this article shows different approaches, methods, as well as application of acoustic waves for fire extinguishing. In the light of the latest research, the state of the art is presented (literature review) and the prospects for the development of technology using low cost intelligent sensors are shown. The second aspect of fire management is fire detection. In practice, the use of a subdiscipline of machine learning, in which the learning process is carried out in an unsupervised way – deep learning, is a modern alternative to flame detection in relation to classical temperature or smoke sensors. In this case, it is possible to benefit from the advantages of technologies described in this article by combining the use of these techniques.*

***Keywords** – Electrical engineering; environmental technology; firefighting; flame extinguishing; intelligent sensor*