Environmental Engineering and Management Journal xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
http://omicron.ch.tuiasi.ro/EEMJ/

"Gheorghe Asachi" Technical University of Iasi, Romania

LAB SIMULATION SYSTEM FOR CRITICAL SITUATIONS VIEWED WITH THERMOVISION EQUIPMENT

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Abstract

The paper presents an experimental system enabling a laboratory simulation of several types of critical situations and aggravating circumstances (sources of smoke, fog, rain, heat) using a thermovision equipment. The critical situations taken into consideration are those caused by human negligence or natural disasters such as earthquakes. Aggravating circumstances are those considered as being limit. The proposed thermovision equipment with appropriate accessories must highlight and determine the measures useful in the such situations of risk. The acquired images are transmitted in real time and require using of special equipment which is presented in the work, to observe the occurred phenomena. It is also analyzed in the paper the calibration of that equipment to allow the selection of features and possibilities for adjusting of this thermovision system, to ensure optimum detection, warning, management and the intervention as a risk event. The presented experimental results show the performance of the proposed system and its possible future developments.

Key words: aerosol, disaster, modeling, simulation laboratory, thermal camera

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