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PREVENTING RISK OF NOISE EXPOSURE IN WORKING ENVIRONMENT USING NOISE MAPPING

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Abstract

In the developed countries, excessive exposure to noise represents at least half of the reasons for which workers lose hearing. Noise inducing hearing loss is among the most common causes of occupational illness. In this paper, the noise is considered the most expensive risk factor in terms of the occupational diseases costs. Noise maps are treated essentially as a tool for both urban or industrial noise monitoring and control. The maps we analyzed enable the real-time monitoring of the current situation, for a specific area or multiple areas, in terms of noise level, for each category of working equipment, which may represent sources of noise. Noise maps highlight the noisy work area, the workstations with exposure across limits, and the number of employees in a work shift exposed to levels of noise from neighborhoods with strong noise sources. Noise maps method is useful for the design and location of workstations depending on the acoustic field. As highlighted, noise maps representation facilitates the selection and purchase of cost-effective PPE earshot, in terms of attenuation to the receiver. Noise mapping in the working environment improves the modalities of responsibility and awareness of employees regarding the exposure to risk, thereby reducing the cost of working accidents and occupational illness.

Key words: accident, disease, mapping, noise, prevention, risk, working environment

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