

Le pietre verdi del Reventino: valutazione della dispersione di fibre di tremolite nelle attività lavorative

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KEY WORDS

Greenstone; asbestos; tremolite; airborne fibers

SUMMARY

«*Mount Reventino greenstone: assessment of tremolite fibre dispersion in the workplace*». **Background:** *Mount Reventino, a massif located in the Calabria Region of Italy, has several ophiolite outcrops of greenstone. These deposits are an important economical resource in the surrounding area. Some rock layers contain tremolite, a type of asbestos fibre.* **Objectives:** *The aim of this paper was to analyze the chemical and physical structure of the outcrops of Mount Reventino, and to assess and reduce the risk to workers associated with exposure to airborne fibres.* **Methods:** *Personal and environmental samples were collected and analysed by Scanning Electron Microscopy equipped with energy-dispersive X-ray analysis.* **Results:** *The analysis of samples showed a difference in mineralogical features not only between the quarries under study, but also between the two opposite sides of the mountain. Exploitation of the quarries produces a fibre dispersion that is higher than the natural emission. Occupational exposure to asbestos fibres during greenstone transformation was confirmed by the results of analysis of the collected samples.* **Conclusions:** *This study made it possible to identify working activities with highest exposure to asbestos and establish the correct procedures to abate fibre dispersion, in order to reduce the correlated risk. Environmental samples collected in the urban area surrounding the quarries showed that the asbestos fibre concentrations were very low, however, further studies are needed in order to confirm these findings.*