

## Effectiveness of Radon Remedial Action Implemented in a School on the Island of Ischia

**Authors :** F. Loffredo, M. Quarto, M. Pugliese, A. Mazzella, F. De Cicco, V. Roca

**Abstract :** The aim of this study is to evaluate the efficacy of radon remedial action in a school on the Ischia island, South Italy, affected by indoor radon concentration higher than the value of  $500 \text{ Bq/m}^3$ . This value is the limit imposed by the Italian legislation, to above which corrective actions in schools are necessary. Before the application of remedial action, indoor radon concentrations were measured in 9 rooms of the school. The measurements were performed with LR-115 passive alpha detectors (SSNTDs) and E-Perm. The remedial action was conducted in one of the office affected by high radon concentration using a Radonstop paint applied after the construction of a concrete slab under the floor. The effect of remedial action was the reduction of the concentration of radon of 41% and moreover it has demonstrated to be durable over time. The chosen method is cheap and easy to apply and it could be designed for various types of building. This method can be applied to new and existing buildings that show high dose values.

**Keywords :** E-Perm, LR 115 detectors, radon remediation, school

**Conference Title :** ICRRP 2017 : International Conference on Radioactivity and Radiation Protection

**Conference Location :** Madrid, Spain

**Conference Dates :** March 26-27, 2017