

## MANAGEMENT OPERATIONS ON FIBER CEMENT COVERS THROUGH WORK PROCEDURES

<sup>1</sup>Gabriela Montserrat Zárate Gamarra; <sup>2</sup>María de las Nieves González García; <sup>3</sup>Xavier Brioso Lescano

<sup>1</sup> Ingeniera Civil, Universidad Nacional de Asunción (UNA), Paraguay. Máster E.T.S. Edificación. Universidad Politécnica de Madrid (UPM), España.

<sup>2</sup> E.T.S. Edificación. Universidad Politécnica de Madrid (UPM), España.

<sup>3</sup> Departamento de Ingeniería. Pontificia Universidad Católica del Perú (PUCP), Perú.

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Asbestos is a mineral that is known to produce irreversible diseases such as asbestosis, mesothelioma, or lung cancer. Moreover, its fibers are particularly small, which makes them easy to inhale and difficult to detect in the environment [1-2]. However, before knowledge of its carcinogenic character, this compound had been widely used as a component of different materials in the construction industry [3], due to its low cost and some of its mechanical and chemical properties, such as resistance to high temperatures, fire resistance, good acoustic insulation, etc. [4-5]



**Fig. 1: Fiber cement cover currently in use**

Internationally, some countries in Europe, America, Asia and Africa have adopted norms that currently prohibit the manufacturing, trade, and use of asbestos [6-7]. However, in buildings existing prior to these regulations, it may still be present in roofs, pipes, acoustic panels, projected mortar, fiber cement components, etc. Moreover, in these types of buildings, it is common to carry out maintenance work, removal of asbestos from the construction materials, or even demolition of preexisting structures. In these cases, those who carry out these tasks must take the necessary measures so that the asbestos particles are not released to the environment and do not affect the health of both workers and third parties. It is also necessary that workers be specifically instructed in asbestos-related operations and that they use their personal protective equipment at all times.

This work aims to establish work procedures with a series of guidelines and measures to be taken in relation to fiber cement roof sheets containing asbestos under two different conditions. The first condition is when the sheets are decided to be kept due to their good conditions but it is necessary to access the roof to carry out cleaning and maintenance operations. The second condition is when it is decided to remove the sheets due to them being deteriorated. Based on current regulations, both from Spain (as an European country) and from Peru (as an Latin American one), a procedure is proposed that would permit to act on each of these conditions. These two countries were chosen as they contain different levels of specification in their regulations. Additionally, the study contemplates the situation in Paraguay, another Latin American country, where there is

no existing regulation in the subject. Therefore, operating guidelines are provided for future investigations in this field and also for the development of regulations in countries where this issue is either not properly discussed at a legislative level or even regarded as an existing one by the general population.

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