

## Resumen ponencia nº 19

### THE ASSESSMENT OF HOLLOW OR DRUMMY TILING

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**Abstract:**    An important aspect in the life cycle performance and the environmental cost of installed ceramic tiling systems is how long they continue to perform their intended function satisfactorily. If tiles are removed prematurely because they are "hollow", there is not only a negative financial and emotional cost, but there is also the cost to the environment of manufacturing, transporting and installing tiles that end up in a "land-fill" site.

Much tiling emits a hollow sound when tapped and this causes concern about the ability of that tiling to perform its intended function for a reasonable service life. Some hollow sounding tiling will fail in the short term, while some will perform satisfactorily for years or decades. Accurately determining what hollow tiling will perform its intended function and what will fail can avoid the unnecessary removal of tiling that would perform satisfactorily. This paper sets out to provide information whereby a more accurate and reliable methodology can be applied to the somewhat subjective process of assessing the likely performance characteristics of "hollow" or "drummy" tiling.

The paper assesses the different types of tiling system that are available and the types of sound they emit when tapped. This is linked to Youtube videos of the various sounds so suitably experienced people can better determine if the sound corresponds closely with that emitted by the tiling they are assessing. A report can then be made stating if the hollow sounding system is likely to perform its intended function, or if it needs some form of rectification. This is linked to the use of "condition surveys" so the condition of the tiling can be accurately monitored over time. The use of "coefficient of restitution" testing is reviewed in relationship to its usefulness in assessing drummy tiling.

Rectification systems that avoid wholesale removal and replacement of the hollow tiling are also examined and options presented.

The aim of the paper is to avoid the unnecessary removal and replacement of hollow or drummy tiles, thereby saving the associated financial and environmental cost.