


Drying, restoration and protection of buildings against humidity by Electro-chemical Moisture Control System (10 DE 1380 3H9Y) 

Abstract

A German SME has developed a unique electro-chemical system for permanent protection of buildings against moisture, dampness and water seepage. The system is able to turn a wet room into a dry, stable and healthy condition in a short period of time (without digging, chemicals or heat). It can also be used as a precaution in areas where seepage is high and/or where flooding may occur on regular basis. The SME searches for partners interested in introducing this new technology into new markets.

Description

A German SME specializing in high-tech engineering for environment decontamination of matter and civil works has developed a cost-effective electro-chemical system to control and repel moisture in buildings.

The new process is basically an electro kinetic procedure, which inhibits the capillary action of the wall material (be it concrete or bricks, mixed stone and materials, sand stones), by using a special electronic power supply and control unit as well as unique graphite electrodes and graphite powder that is added to a local standard mortar. A building can be dried/restored within 4 – 8 weeks after installation.

The system automatically adapts to changing conditions and once the unit has dried the area, it automatically switches to a permanent conditioning mode to maintain a consistent level of dryness. Usually it is installed on the inside of a building and preventing moisture from penetrating into the outer walls .

The system is already on the market and the company can name numerous references showing its successful application.

Innovations and advantages of the offer

This method is by no means to be compared or mixed up with osmosis.

The system, can cope with multiple humidity sources and a dripping basement can e.g. be turned into a

storage room for paper.

There is also an energy saving aspect with respect to traditional technologies and thus a fast return of investment in just a few years is possible. At the same time the value of the building increases and the overall conditions improve, e.g. supporting mould remediation.

The system is able to reduce heating costs or eliminate air dryers or constant ventilation. In fact the energy consumption of the standard version of the system per day is very low (1kW).

Moreover the system is:

- easy to install
- automatically adapts to changing moisture conditions
- maintenance free

Assuming that at least one third of the buildings in many European countries have at least a minor problem with moist the technology has a great market potential.

Current and Potential Domain of Application

The system is already applied successfully in several buildings and the company can give numerous references.

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For further information (including IPR status)

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