Innovative heat insulation and heat-reflective coating for indoor application

A Hungarian company developed a unique coating to improve thermal insulation and thermal comfort. The coating provides even heat distribution, lessens moist condensation and mould growth (creates healthier environment). The company is interested in finding partners to distribute the coating as a product in various countries and markets in Europe.

OVERVIEW:

The solution is perfect to use on concrete and lime-cement walls, lime-cement plasters, on brick walls, thermal bridges, behind the radiators (where the moist condensation causes mould growth) and in every other building with the poor thermal insulation, where the wall width limitation does not allow implementation of other insulation methods. The coating makes possible heat insulation is applicable in all kind of buildings, even in historical monuments, as the thickness of the coating on the inside walls is only 0,5-1mm. Thanks to the easy application method, it can be easily applied even by non-professionals. The application can be done any time in the year, in wintertime (in closed rooms with 5 °C temperature or above) and in the summertime too.

Its structure and low vapour diffusion resistance allows it to stop mould growth, when applied on mouldy walls — after treating the mould with mould prevention chemicals and drying the wall – the coating eliminates the mould problem for good.

ADVANTAGES:

- ÉMI-TÜV test results confirmed, that the inside surfaces of the walls, coated with the presented coating reflect back into the room 85% of inside thermal radiation, which may result 20-30% heating/cooling energy savings.
- Its heat insulation efficiency is equivalent to a 5-cm polystyrene external thermal insulation.
- It is equally suitable for heat insulation of walls and ceilings. It can be applied on indoor plasters, concrete surfaces and gips carton. For wood, metal and glass surfaces additional bonding material is required.
- The coating has an off-white colour, paste viscosity, easily mixable with water based paints (quantity of paint should not be more than 10% of HP4 quantity). The treated surface can be painted over 30 times with any type of normal water based paint.
- It is non-polluting, non-hazardous to the environment, it is not classified as hazardous to health.

SPECIFICATIONS:

- touch-dry state time (1mm thick coating): 30 minutes
- coverage: 0,4 kg/m2/mm
- min. layer thickness needed: 0,5 mm
- can be thinned with water (max. 2-7%, will loose its heat-reflective properties if over diluted)
- recommended application temperature is between +5°C and +50°C
- minimum durability is 15 years
- recommended usage is where environment temp is between -30°C and +100°C

POTENTIAL APPLICATIONS:

Follow-up heat insulation of the internal spaces of industrial halls, school buildings, day care centers, hospitals, blocks of flats, holiday-houses, garages, offices, institutes and monuments, especially where implementation of other insulation methods is not possible (due to monument protection, architectural restrictions, limitation of space, etc.).

The company also developed an outdoor heat insulation coating primarily for regions with warmer climate. The coating is applicable for the outside of houses and other buildings where high general temperature is common.

SPECIAL APPLICATIONS:

- Heating and cooling pipes
- Fire hydrants (anti-freeze protection)
- Ships, yachts, aeroplanes, refrigerating trucks (inner cargo space)
- Roof tiles
- Beehives – treating the inside surface (the only material the bees accepted)

POTENTIAL COLLABORATION:

The company is looking for partners interested in distributing the coating in various countries and markets. In case of a strong candidate manufacturing agreement can be also a possibility.

If you are interested, please respond to:

Mr. Balázs Mogyorósi
Technology Transfer Manager,
Head of TT Department
LC Innoconsult International
innovacio@lcinnoconsult.com