Kraft Energy Systems GmbH & Co. KG, 49699 Lindern, Germany

Curing of concrete roofing tiles (Hungary)

In January 2005 Mr. Attila Gódi, owner of the Hungarian company Mediterran Kft., decided to upgrade the aftertreatment system of his main plant at Bóly in the heart of Hungary. In the past Mediterran Kft. had heated the aftertreatment chambers (4 dual chambers, 9 single chambers, 1 rotary chamber) with radiators. In addition, cold atomised water was injected into the warm chambers via nozzles. Injection of cold water led to a reduction in chamber temperature and needless re-heating of the chambers, with associated additional energy consumption. The situation was unsatisfactory, particularly with regard to high gas consumption and the fact that the system was difficult and slow to control.

The drying chamber at Mediterran Kft. before (Fig. 1a), and after the upgrade by Kraft Energy (Fig. 1b)

Once the decision to upgrade the aftertreatment system had been made, in March 2005 a vapour aftertreatment system from the company Kraft Energy Systems was chosen for five of the chambers, which, based on excellent initial results, was later extended to nine chambers.
The challenge for Kraft Energy Systems was to reduce cement content by at least 8% and eliminate efflorescence (which predominantly occurred during the colder months of the year), as specified by the customer.

Kraft Energy Systems equipped the first five chambers with a "VaporMicro™" vapour generator and the associated vapour distribution system. The chambers were well insulated, including the doors. After the actual aftertreatment phase, heat and humidity is removed from the chamber via a radial extraction system, which has the advantage that early strength increases by around 15%, less breakage occurs, and the finished products can be processed further immediately.

Compared with conventional heating systems the vapour system has the following benefits:

- Very short warming-up phases
- The system responds relatively quickly and can be controlled exactly
- No additional humidity has to be introduced into the chamber
- The system is highly efficient (98%)
- In continuous operation an 80% reduction in gas consumption is expected compared with the previous radiator heating system

In general the service requirements of the system are very small compared with other concrete drying systems working with warm air and cold atomised water, and it is easy to operate. Encouraged by the positive initial results Mediterran Kft. shortly afterwards decided to extend the vapour aftertreatment system to the remaining four chambers.

The "VaporMicro™" vapour generator at Mediterran Kft. in Hungary

This example shows that quality can be improved and energy consumption reduced significantly with relatively little investment, based on good insulation and an advanced concrete curing system.

Further information:

Mediterrán Betoncserép Gyártó Kft.
Herr Attila Gódi
7754 Bóly, Tompa M. u. 10
T +36 69 569950
vevoszolg@mediterran.hu · www.mediterran.hu

KRAFTENERGY™

Kraft Energy Systems GmbH & Co. KG
Herr Manfred Stadtsholte
Zur Radde 17
49699 Lindern, GERMANY
ManfredStadtsholte@kraftenergy.com
www.kraftenergy.com