

Limescale free operation

saves on cost and labour

Construction project:

Thürmann (bakery chain)–branch, Markstrasse 32-34 (in the Reichelt Supermarket), 13409 Berlin, Germany. QB Plumbing and Heating Technology look after all Thürmann Ltd bakery and confectionery branch stores.

Currently about 200 branches are in operation. Fresh dough is delivered to the individual branches from the production site and then baked in special ovens in the shops.

Because the ovens operate with steam, there is always a danger of lime deposits building up quickly and, as a result, leading to expensive repairs. To prevent the formation of limescale up to now, conventional water softening systems (ion exchangers with salt/sodium chloride) were installed before each oven. This water treatment method keeps the water totally free of lime. However, this method requires annual servicing, which has associated financial and ecological costs, because the spent salt has to be disposed. Furthermore there are running costs because the systems run on electricity and they are also subject to the usual wear and tear. In the above-mentioned bakery location, two ovens were replaced in September 2007. One was connected to the conventional water softening system. The other oven had a Pengergetic AquaKat connected to its water

supply for a test period. Because of the strong electromagnetic fields emitted by the oven, an Aquakat L was chosen in order to counteract this negative influence and to guarantee a lasting effect. On 20. May 2008, the ovens were opened by a technician to compare the results. He was visibly surprised, when it turned out, that the nozzle fitting on the oven fitted with the AquaKat L, was totally free of limescale. Only light baking residues caused by the heat could be detected. The baking chamber of the oven, itself, had just a thin layer of limescale



The technician during the opening of the oven, which no longer shows any noticeable deposits

under the covering plate, which came loose immediately after a light tap with a screwdriver. However, this came loose immediately after light tapping with the screwdriver.

The fact that the baking chambers of the ovens undergo a general cleaning during a service and that the limescale layer can be removed by a simple tapping action, because it has become porous from the vitalisation of the water clearly shows that no additional cost or labour will arise. In fact, the opposite is the case,

because servicing of the now obsolete, a water softening device is no longer necessary and no more electricity is used. On the same day, the Thürmann management was informed about the result. Here too, there was amazement all round and QB Plumbing and Heating were asked on that day to submit costing to have additional bakery branches retrofitted with AquaKats. Deliberations as to how and when all branches can be fitted with AquaKats are currently ongoing.

Installation of the AquaKat on the water supply before the pressure reducer of the oven



The baking chamber after the covering plates were removed and the nozzle fittings are exposed. Only heat residue and a very light and thin limescale layer are visible on the sides and on the edging at the back.



The nozzle fitting without limescale deposits.
The nozzle holes are absolutely clear.