



NESS Thermal Oil Curing system for Concrete Blocks

Concrete blocks formed in the block machine require curing in a defined environment (temperature and humidity).

The Ness thermal oil block curing system is a most efficient way of curing blocks with controlled temperature and humidity.

It can be used in individual curing chambers or curing racks with concrete walls or steel frame racks.

Thermal oil with a temperature of more than 200 °C is circulated through finned pipes located at the bottom of the curing chambers. The air in the

chambers is heated and circulated by natural draught. This results in a very gentle heat transmission into the concrete blocks.

Compared to steam chambers the concrete is heated very gently, edges are not dried out, internal thermal stress in the blocks is much lower.

In comparison, steam condenses on the wet block surface at 100 °C while the core is still cold. This usually leads to overheating and drying on the surface and on the edges.

The chamber air temperature can be controlled independently from the humidity.

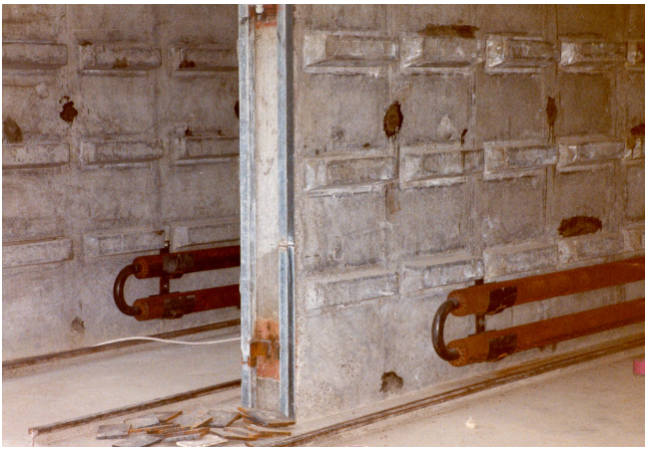
Advantages of the NESS block curing system

- very energy efficient (use of hydration energy, no condensate losses, optimum insulation possible)
- very accurate temperature and humidity control
- no drying of surfaces and edges, low thermal stress in the blocks
- no condensate traces on the product
- very little corrosion on equipment
- no high pressure steam system and feed water treatment
- equal temperature and humidity distribution in the chamber
- very reliable



Picture 1: Thermal oil heating register in a concrete block chamber

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Picture 2: Automatic stone curing system with 18 chambers for concrete products (stone walls)



Picture 3: Outside view of a stone curing system with 18 chambers for concrete products with thermal oil

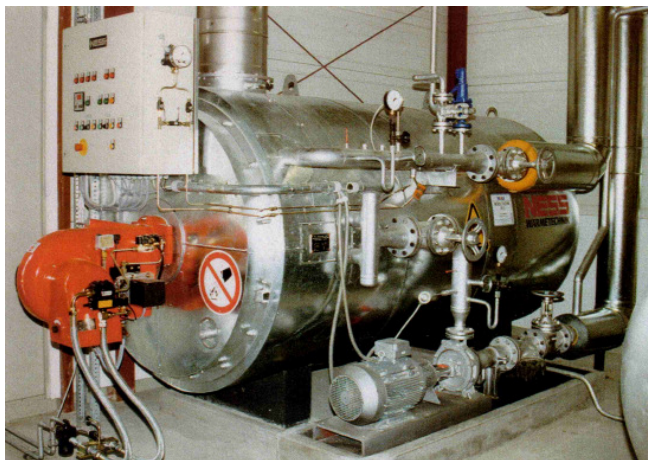
For certain products, humidity control is most important. When the air is heated and relative humidity falls, a water mist is sprayed into the chamber with special humidifying nozzles. Relative humidity is controlled with a robust sensor and automatic control.

The chamber temperature is raised slowly and smoothly. This allows the cement in the blocks to react and release its hydration energy. This can save a substantial amount of energy.

Compared to steam systems there is much less condensation of humidity on product surfaces and steel structures. Corrosion is minimal.

The Ness block curing system can be installed in individual curing chambers with sliding doors or large curing racks with homogeneous climate from the stacker to the unstacker.

Please do not hesitate to contact us for further information.



Picture 4: Thermal oil heater WE 1250

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