

Limestone Filler Flash Heating System

A fast, efficient heating system for cold filler with $\pm 5^{\circ}\text{C}$ temperature control and minimal maintenance.

Benefits

- Low specific energy consumption thanks to the direct heating of the filler
- Finite temperature control to within $\pm 5^{\circ}\text{C}$
- Instantaneous temperature adjustment to changes in feed temperature or other process changes
- Your choice of fuel – the heater is typically gas-fired, but can be solid or liquid fuel-fired if desired
- No moving parts – very little wear
- Low maintenance
- High reliability and consistency for optimum product quality
- Low sensitivity to changes in filler properties
- Customisable system layout
- Fully automated PLC control system

Super fast heating, with efficiency built in

Flash heating limestone filler

Flash heating is safer, more economical, reliable and efficient than traditional hot oil-based indirect heating equipment. Cold filler used to manufacture asphalt roofing is heated up to a precise temperature in seconds, ensuring optimum energy efficiency, and with a high degree of temperature control and flexibility.

How the FLSmidth flash heater works

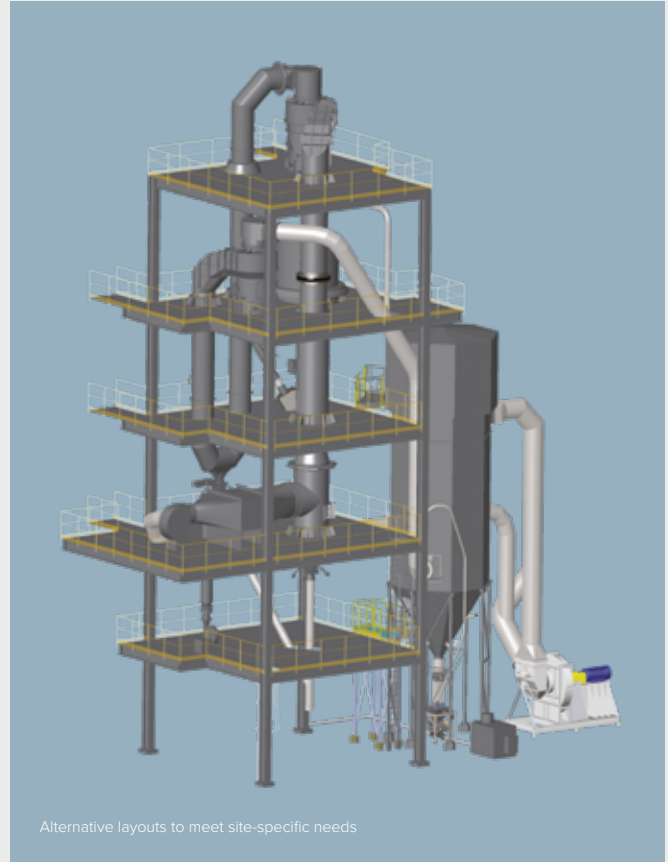
The FLSmidth flash heater is a vertical cylindrical column with no moving parts. Fuel (typically natural gas) is combusted in a high efficiency, low NOx external air heater that produces hot gas used to directly heat the cold filler. Preheated combustion air is introduced into the bottom of the heater column.

Cold filler enters above the flash heater venturi where it is immediately entrained in the hot gases and heated. Hot filler and spent gas are separated in a collection cyclone. Spent gas and fines are vented through a baghouse and then to atmosphere. Cyclone underflow and baghouse dust are transported as hot filler to the hot filler bin for dosing to the mixer. This method of heating is also less sensitive to minor changes in filler particle size than fluid bed technology.

To ensure uniform product quality and emission control, the temperature can be closely controlled to $\pm 5^{\circ}\text{C}$. Because the flash heater has minimal material in process at any one time, the system can also adjust to changes in feed temperature or process changes to optimize filler temperature and energy consumption, all within seconds. This ensures your feed to the asphalt roofing line is consistent, upsets are minimized and scrap is reduced.

Your choice of fuel

While the most common fuel for this application is natural gas, we can offer systems fired with a wide range of other solid and liquid fuels.



Operating characteristics

- High-efficiency cyclone with low pressure drop, resulting in low fuel and power consumption
- Simple PID loop control and fast start-up and shut down
- Limited maintenance
- Rapid response time for process adjustments
- High reliability