

Dry cleaning of stone

Dry cleaning drum TRH / MOZER® system



Dry limestone cleaning – water-free, economical, environmentally conscious

Processing of prescreened stone – a worthwhile business

Crushed stone and gravel works are finding it increasingly important to process the rubble collected during prescreening, involving cleaning it and converting it into marketable products such as high-quality limestone granulate or different kinds of aggregates for use in construction products.

With Allgaier dry processing using the TRH dry cleaning drum, it is possible for limestone cleaning to take place without water, and in an especially energy-efficient process.

Contaminated material no longer has to be dumped, and old spoil heaps can be recycled.

Cleaning combined with drying the minerals mean that expensive stone washing can be dispensed with. There is no need for a separate stone washing plant to be purchased or for such a plant to be operated (which entails high levels of water consumption and subsequent expensive water processing).

Also, the energy consumption for drying the limestone is minimised, because the natural moisture content of the prescreened stone is lower than the moisture level of the stone after washing. When limestone is washed, it absorbs additional water, which has to be removed again by drying, involving significant use of energy.

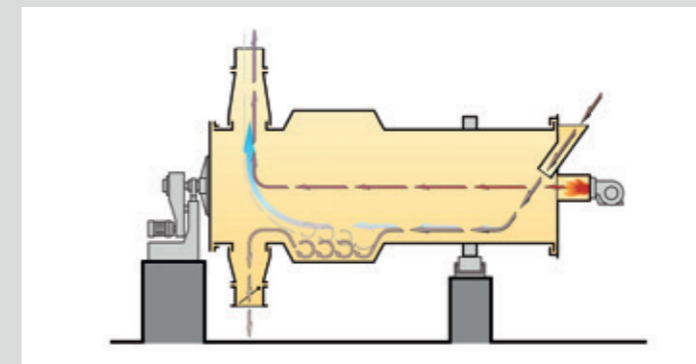


MOZER® TRH drum dryer system

Drying and cleaning of the contaminated stone takes place in two combined zones of the dry cleaning drum.

First of all, the stone is dried very quickly in the rotary drum using hot gas. Following this, it is cleaned by intensive mixing which causes the stones to rub together in the extended cleaning zone. Adhering mud or clay is removed from the stone by the combination of thermal and mechanical processes, and the impurities are comminuted, dried further and finally converted into dust. The dust is removed by the waste air from the dryer to be collected in the waste air filter or by a screening machine.

The result is cleaned and dry limestone comparable with the quality of a washing system.



Bypassing the washing procedure

The simple and effective solution for cleaning stone means that Allgaier saves quarrying companies the need to use washing processes, thereby allowing them to access wide-ranging savings:

- Reduced apparatus costs
- Low operating and energy costs
- No water consumption
- Minimum maintenance costs

Dry cleaning is also advantageous if the operating company wants to avoid the washing process due to the considerable expenses involved in obtaining a permit for the water use, processing the water, filtering and dumping the sludge.



The limestone first passes through the drying zone. Following intensive drying, the grains in the dry cleaning zone are rubbed together, which removes the mud or clay contamination from the stone. The dried dirt which has been ground down into dust is then carried into a dust filtering system by the waste air. The dried and cleaned stone is transported out of the dryer, and can be taken for further processing.

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