

Mineral rock wool processing

1. Application

Mineral rock wool is a multi-purpose product in insulation technology. It consists of minerals such as dolomite, basal and other additives. The material, heated to 1400°C, is blown with air at a constant pressure through fine nozzles. The resulting weave is processed for use in noise-insulation panels and fireproof insulation, among other products.

2. Role of compressed air technology

Up to 2 bars of air pressure are used for the transport of the raw materials to the silos. For the air blast, there must be high availability and constant pressure. Slight fluctuations in pressure lead to varying characteristics in the mineral rock wool. The blast pressure is between 2.5 and 3.5 bar(g), depending on quality.

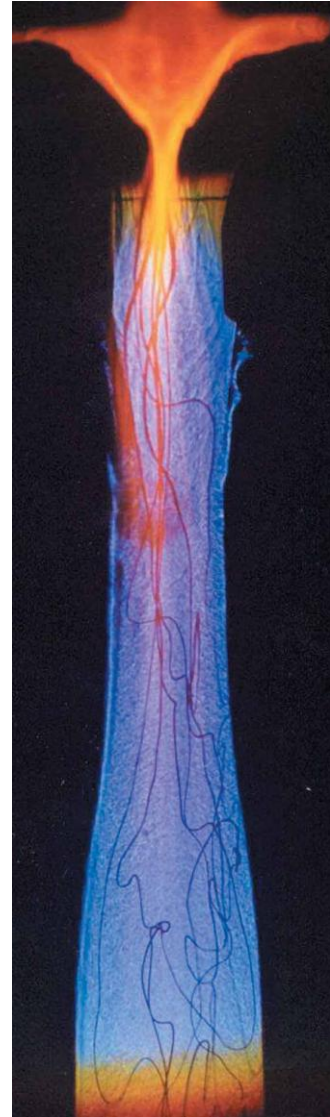
3. Compressed air technology

To generate compressed air, single-stage, oil-free screw compressors and/or two-stage turbo compressors are used. Since the process is continuous, the compressors must have a high level of reliability and long maintenance intervals.

4. Energy efficiency

Using speed-regulated compressors leads to energy efficient production of compressed air. These compressors are ideal for fluctuating compressed air requirements with constant pressure. Energy-wasting pressure-regulating valves are not necessary.

Reducing the operating pressure by 0.3 bar(g) results in an energy saving of 6%.



Example provided by VDMA member companies