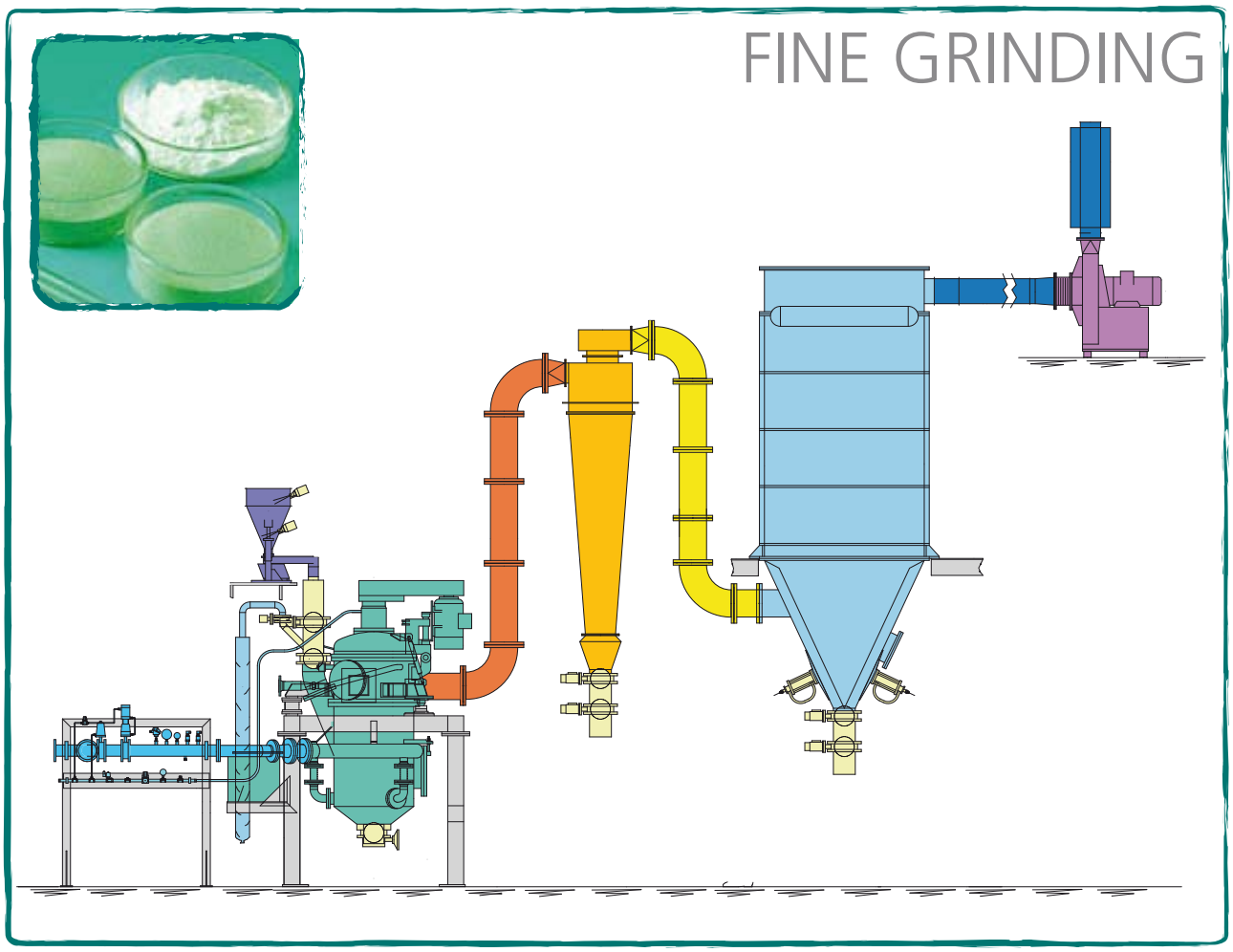
Glass & Glass Frit Processing Technology by NETZSCH-CONDUX

In its pure form, glass is a transparent, relatively strong, hard-wearing, essentially inert, and biologically inactive material which can be formed with very smooth and impervious surfaces. These desirable properties lead to a great many uses of glass. Glass is, however, brittle and will break into sharp shards. These properties can be modified, or even changed entirely, with the addition of other compounds or heat treatment.

Common glass contains about 70% amorphous silicon dioxide (SiO_2), which is the same chemical compound found in quartz, and its polycrystalline form, sand.



High quality equipment is only one part of successful material processing. NETZSCH-CONDUX finds the optimum process conditions for every material, investigating all grinding parameters such as pressure, temperature and nozzle design to provide the highest quality product with the lowest possible energy assuring maximum profits for our customers.

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Fine Grinding

CGS Fluidized Bed Jet Mills, with NETZSCH-CONDUX developed process technology are used with high pressure hot air, 7 BARG at up to 150°C. The advantage of the CGS Fluidized Bed Jet Mill is low energy use, high fineness, very steep particle size distributions, stable operation, and high product purity. In addition, grinding in a fluidized bed results in very low noise emission.

Fluidized bed jet mill CGS 71

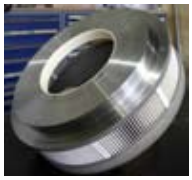
Wear protection features in a CGS Jet Mill

Passive Wear Protection:
- Wear resistant classifier wheels of Alumina, Zirconia or Tungsten carbide
- Ceramic lined mill housing

Operational Wear Protection:
- Autogeneous grinding in a fluidized bed

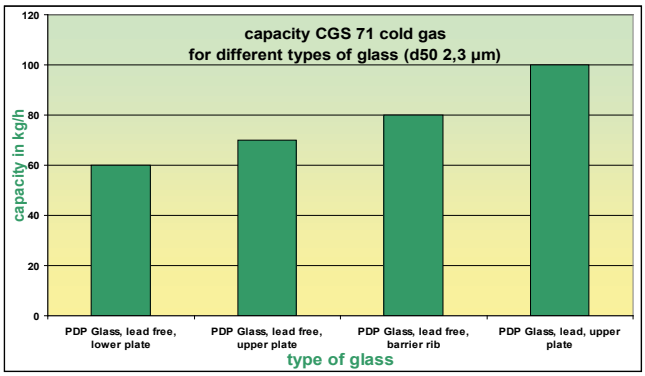
ceramic tile lined grinding chamber

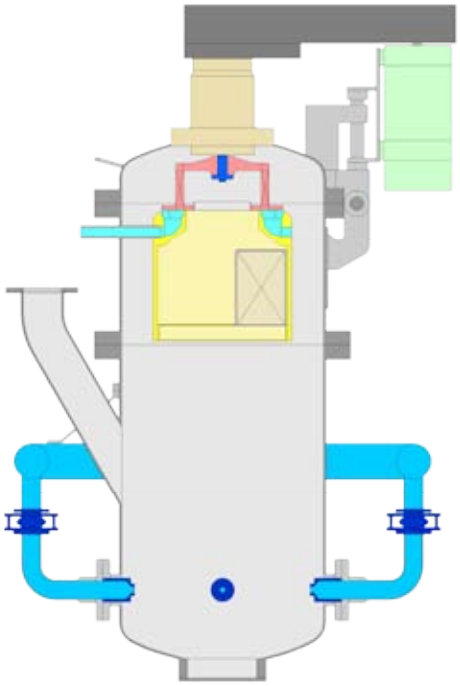
ceramic nozzles



zirconia wheel

The CGS Fluidized Bed Jet Mill is a fluid energy impact mill that has gas nozzles positioned around the mill housing. The high velocity gas jets from the nozzles accelerate particles up to 540 m/sec. Size reduction is a result of inter-particle collisions. The internal air classifier controls the maximum particle size by allowing only particles of the desired fineness to exist the mill. The oversize particles are re-circulated back to the grinding chamber. A load cell positioned on the frame monitors the internal mill load and controls the feeder to maintain a constant internal material volume. A constant material load in the mill assures stable operation, optimum particle size control and limits wear.





Function of Fluidized bed jet mill CGS

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