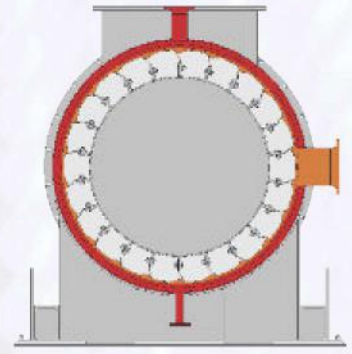
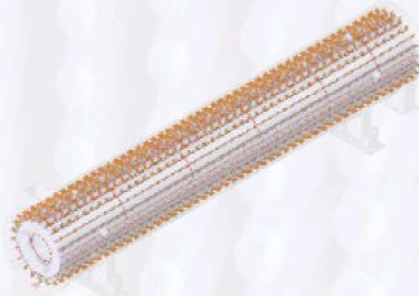


Horizontal Thin Film Dryers



Horizontal thin film dryers are continuously operated contact dryers and used for a broad range of applications under vacuum, atmospheric pressure and overpressure. They consist of a horizontal externally heated shell with end covers, the inlet and outlet nozzles for feed, vapour and final product, nozzles for the heating medium and a rotor with screwed on elements supported in external bearings. The wet product fed through the inlet nozzle is conveyed steadily by the rotor elements along the heated dryer wall in a thin film, allowing an optimum heat transfer and a high evaporation performance.

Vapours pass counter-currently to the product flow and leave the dryer close to the feed nozzle. Entrained particles are removed in the wet zone. Moisture levels of a few tenth of a percent up to 5% and more can be achieved. The residence time of the product is typically between 5 and 15 minutes.



Transport of thin film dryer for food industry

Applications

- DRYING of slurries, sludges, pastes, filter cakes, wet powders
- HEATING and COOLING of solids
- MELTING (Urea etc.)
- REACTION
- MIXING of solids with liquids and subsequent thermal processes

Process Features

- Continuous, fully enclosed processing
- Short residence time, small product hold-up
- Low energy consumption
- Superior mixing efficiency
- Flexible through exchangeable rotor elements
- Self-cleaning of heat exchange surface
- Easy access
- High heat transfer coefficient



Thin Film Dryer with pulled rotor