Efficient contact drying of liquids in the innovative CD Dryer

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The CD Dryer is a **contact dryer** for drying liquids. The newly developed dryer is heated with steam and can be used to recover dry solids from liquids containing solids, e.g., solutions and suspensions. It is **extremely energy-efficient** and its use of an assembly of rotating disks means that it has a significantly more compact design than comparable contact dryers such as conventional drum dryers. Thus, for example, high-quality solids can be recycled from effluents or product quantities e.g. of an effluent can be reduced by evaporation of water (disposal costs not included).

A pump and several feed pipes are used to bring the liquid being processed onto an assembly of rotating disks that are steam-heated. The liquid then evaporates on the surface of the heated disks, and, after a single revolution, the remaining dry material is scraped off from the disks' surface by blades that contact the disks. The yielded dry material is then conveyed out of the dryer via a product discharge system. Vapors are discharged with high water vapor concentration, resulting in relatively low heat loss with the dryer's exhaust air.

The **customer benefit** primarily consists of a compact, robust and very efficient drying plant for the treatment of solids containing liquids (suspensions / solutions) which, compared to the commonly used convective systems, works according to a simple principle and can be offered at a lower sales price.
A practical dryer is available in the familiar and recognizable Allgaier design.
The entire drying unit should be transported in one piece and installed through a type of plug and play system with a flange connection for the steam supply. This provides flexibility in operation / set-up of the plant and accelerates the commissioning of the dryer.
The entire drying plant including the spare parts is designed according to European standards.

Advantages

- Robust and compact design
- Indirect heating
- Adaptable knife system (easily interchangeable)
- Automatic system cleaning possible
- Adaptable to customer requirements (disk / material / number / size)
- Attractive, modern design
- Low specific energy requirements in comparison to convection dryers
- Extremely efficient transfer of heat via the disks
- Can be used to increase the concentration of liquids
- Easy to use; heavy-duty construction
- Low-maintenance
- Low electric power needs as a result of low process air rates
- A compact design means that little installation space is required

Industries

Waste/recycling

Stones and soil

Mining (coal/ore)

Chemicals

Foodstuffs

Ceramics