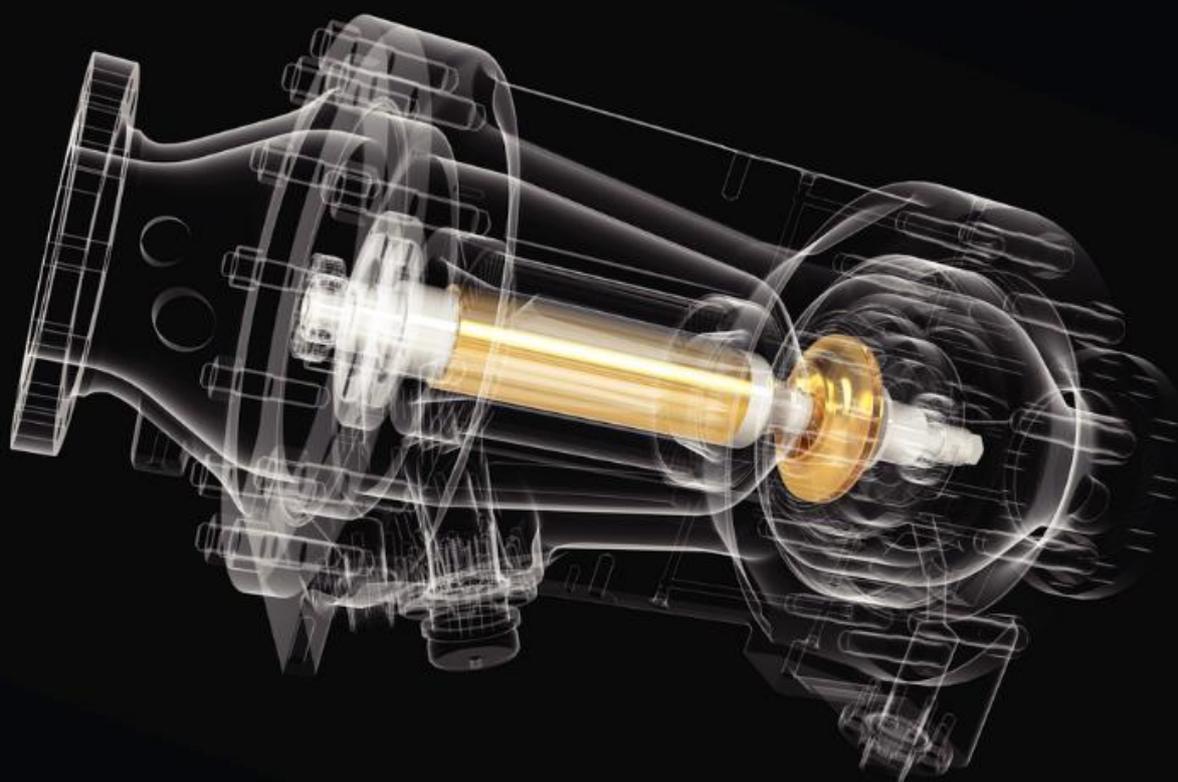


An Inside Look at EXPANDERS

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Facts at Your Fingertips:
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Focus on Analyzers

Viscous, pasty and sticky! How to dry?

Buss-SMS-Canzler's Combined Fluidization Technology Dryer (CFT)

Some wastes and products are hard to dry, because they undergo multiple changes of their state from liquid through high viscous, pasty, sticky, crust-forming



and finally to solid state.

Such feed materials can be handled by **Buss-SMS-Canzler's**

Combined Fluidization Technology (CFT) Dryer. This type of dryer combines the advantages of fluidized bed drying with contact drying. The CFT dryer can handle liquid, semi-solid or solid feedstock in continuous operation because of its working principal.

The CFT works with a hot mechanically fluidized bed of solid product particles, which is fluidized mechanically by a rotor equipped with blades. The dryer is heated through the dryer shell and optional via the rotor shaft. The feed material is distributed to the fluidized hot particle bed. Because of the intensive contact of the bed particles and the feed material, the volatiles evaporate instantly. Thus no viscous, pasty or sticky phase exists inside the hot particle bed and no wet product gets into contact with the heated surfaces.

The working principle of the CFT allows processing in the solid phase at any time. Single train process solutions for large capacities can be realized with high flexibility in respect to capacity and composition of the feed material. CFT processing results in easy to handle solid products.

Typical applications of the CFT dryer are the drying of coal slurry, the treatment of industrial tar and paint sludges, the drying of yeast, the processing of crust forming salt solutions or slurries and the recovery of valuable material from waste streams like TDI from distillation residue. New applications can be tested in Buss-SMS-Canzler's test centre on a pilot scale plant.

www.sms-vt.com

Fully heated agitators

EKATO SYSTEMS refined the portfolio of the proven SOLIDMIX vacuum contact drying systems by means of fully heated agitators which results in significant shorter batch times and maximized discharge yields.

Quick and efficient drying of pasty to free-flowing products with high solid contents is always a challenge.

Drying at vacuum conditions allows the removing of solvents almost residue-free without a significant increase in product temperature.

With the help of over 85 years of experience in mixing technology, **EKATO** developed fully heated agitators for the SOLIDMIX product line, which set new standards compared to the usual heat exchange via the vessel wall. The moving surface of the heated agitators increases the overall contact and heat exchange area by more than 25%.

Production scale trials and applications show a 25% to 60% reduction in drying time:

The reduction of the drying time corresponds to the increase of the heat exchange surface. In most cases, the improved heat transfer of the moving stainless steel to the product as well as the constantly exchanged product around the agitator shortens the

drying time immensely.

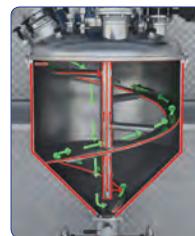
This is also valid for the heating and cooling of products where significant process time reductions can be reached as well.

Furthermore remarkable improvements in discharge yield and product quality are possible when using the heated agitators.

This is especially valid when drying products with strong adhesive properties and the tendency to stick to cool and wet surfaces. Material losses due to sticking material on agitator shafts after drying and lumps in the product caused by condensing fluids are reduced significantly.

In combination with other heated surfaces e.g. a fully heated lid, drying processes of hard to dry materials are possible while reaching high discharge yields and homogeneous products.

Get in contact with our process experts in order to benefit of our technology.



EKATO SOLIDMIX fully heated PARAVISC agitator

www.ekato.com

Clean Processing for Laundry Product

Granulating high value perfume additive on IPCO Rotoform 4G

Today's laundry products are expected to do more than just remove dirt. Watch any TV commercial and the first thing the actor does on taking a clean garment out of the washing machine is smell it and smile. A fresh smell equals cleanliness.

The chemical products that impart this perfume are a key component of modern laundry products and their high value means that it is important that they are produced to precisely the right specifications. Manufacturers want the product supplied in form of pastilles of a specific and consistent size.

Another key consideration in the manufacturing process is hygiene. As a product that comes into direct contact with the skin, laundry perfume needs to be produced under GMP-like conditions.

IPCO's Rotoform 4G meets both of these requirements and has become one of the most widely used systems for the production of laundry perfume. And with consumers across the world – the Americas, Europe and

Asia – all looking for laundry that is pleasant smelling as well as clean, this is a growing market.

The product is created by combining the chemical perfume with a carrier material, for example a fatty alcohol selected for its good solubility in water.

Once combined, the perfume additive is delivered to the Rotoform system in melt form. The Rotoform itself consists of a heated cylindrical stator and a perforated rotating shell that turns concentrically around the stator. Precisely metered drops of the product are deposited by the nozzle bar across the whole operating width of a continuously running stainless steel belt, its speed synchronized with that of the belt.

A system of baffles and internal nozzles built into the stator provides uniform pressure across the whole belt width. This ensures an even flow through all holes of the perforated rotary shell and produces uniformly sized pastilles from one edge of the belt to the other.

