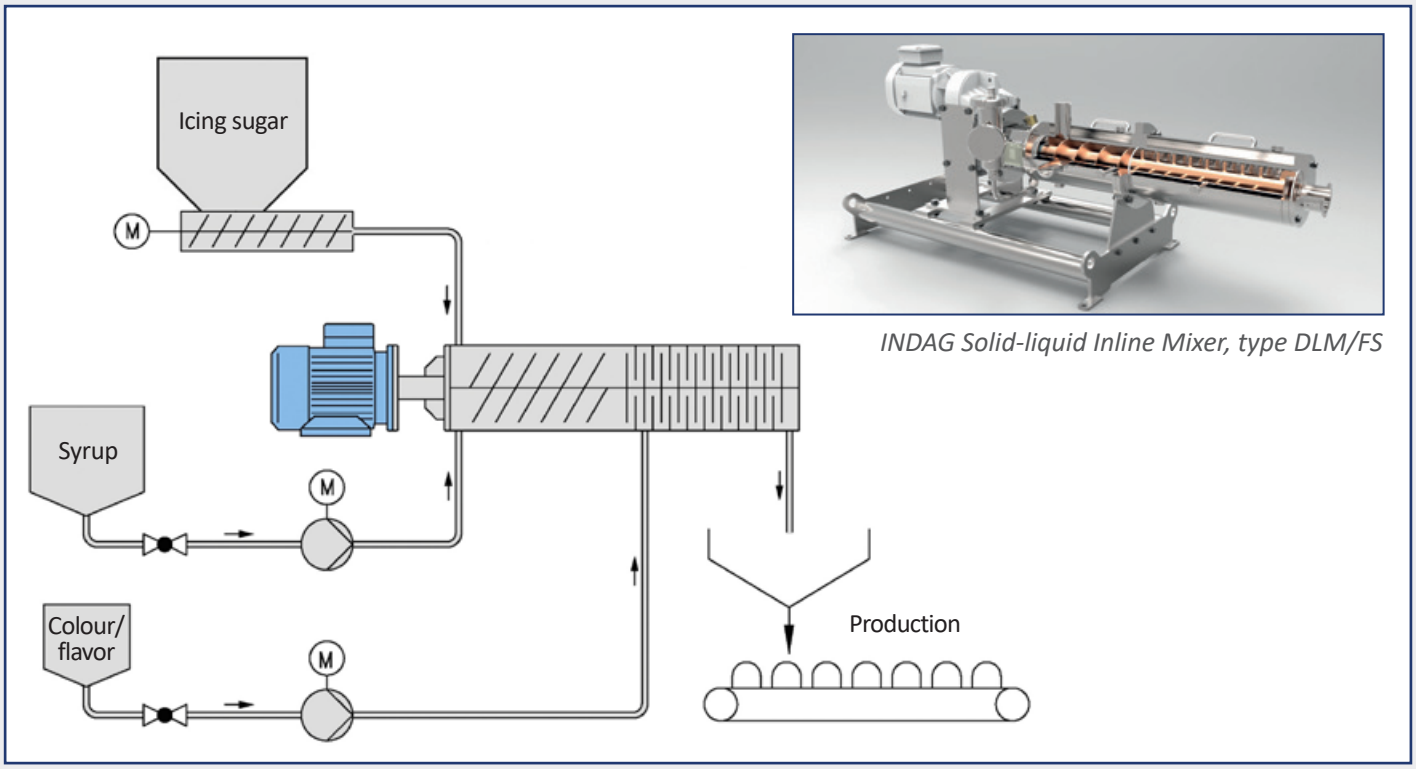
Case No. 113A
Mixing processes in the production of cheewing candy





INDAG Solid-liquid Inline Mixer, type DLM/FS

Flow chart example for an 'end-of-pipe' solution

Process description

Among other things, syrup at 130 °C, liquid fat, flavourings and large quantities of icing sugar are required to produce highly viscous masses for cheewing candy.

The dosing of the liquid components into the Solid-Liquid Inline Mixer is realised by external pumps. The dosing of icing sugar > 50 % is carried out gravimetrically, according to the percentage recipe proportions, from above into the radial dry material inlet of the Solid-Liquid Inline Mixer.

Under normal circumstances, rising vapours and vapours lead to the accumulation of powders in the inlet area, which is counteracted by the atmospheric discharge of the vapours through a coated vapour dome. Flavourings or food colourings can also be added via a separate liquid inlet.

All of the dosed recipe components produce a premix in the first part of the mixer, the conveying zone. →

Advantages

- **Significant improvement in mixture homogeneity compared to batch mixers**
- **High standard of hygiene due to CIP capability**
- **Temperature stability due to double-walled housing**
- **Highest viscosities possible**
- **Highly efficient mixing within seconds**
- **Different flow rates due to recipe changes have no influence on the mixing homogeneity**
- **'End of pipe mixing' minimises the cleaning effort when changing recipes.**

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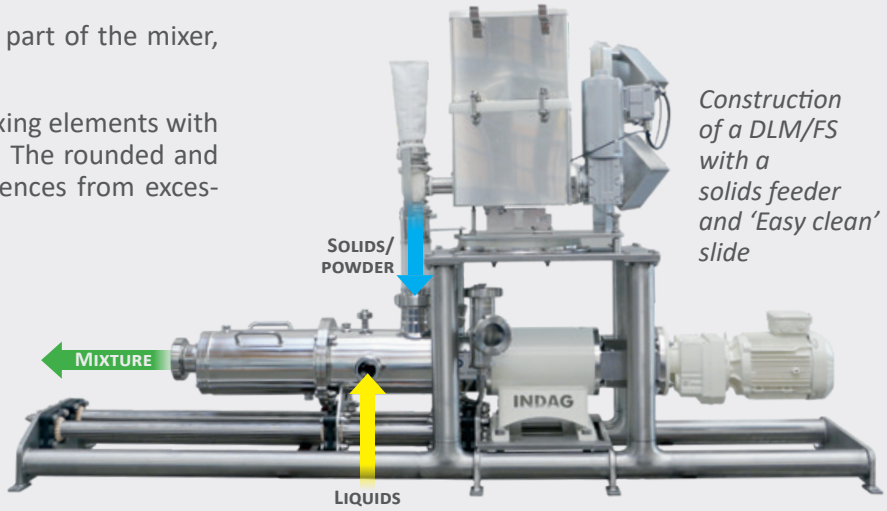
→ This is pressed through the entire second part of the mixer, the mixing zone, by a concave screw.

The mixing zone consists of pin-shaped mixing elements with rounded contours on the rotor and stator. The rounded and smoothed surfaces prevent negative influences from excessive shear on the product structures.

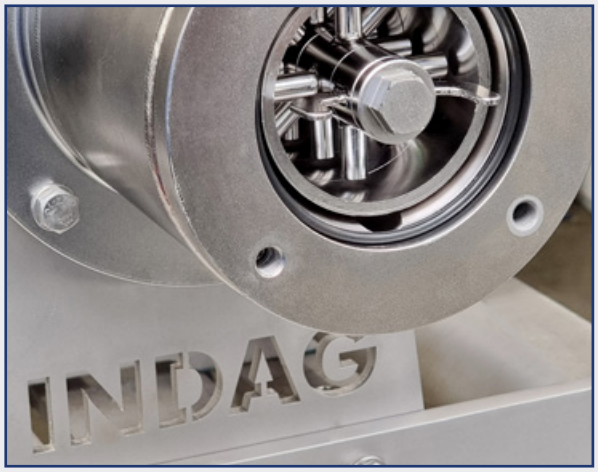
The finished mixture leaves the mixing zone as a homogeneous mass with uniform product properties and colouring at all production times. It is ready for further process steps such as aeration and moulding.

The mixer has a double jacket. It can be heated up before the system starts and the product can be kept at a constant temperature during operation.

Thanks to the electropolished material surfaces, the mixer fulfils the highest hygiene standards with a long service life and minimal use of wearing parts.



Construction of a DLM/FS with a solids feeder and 'Easy clean' slide



Solid-Liquid Inline Mixer with pin mixing elements

Comparable applications with a similar process and the same mixer

- Fruit gums with vitamins or calcium
- Hard candy with flavours, colouring and citric acid
- Caramel with protein powder

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