

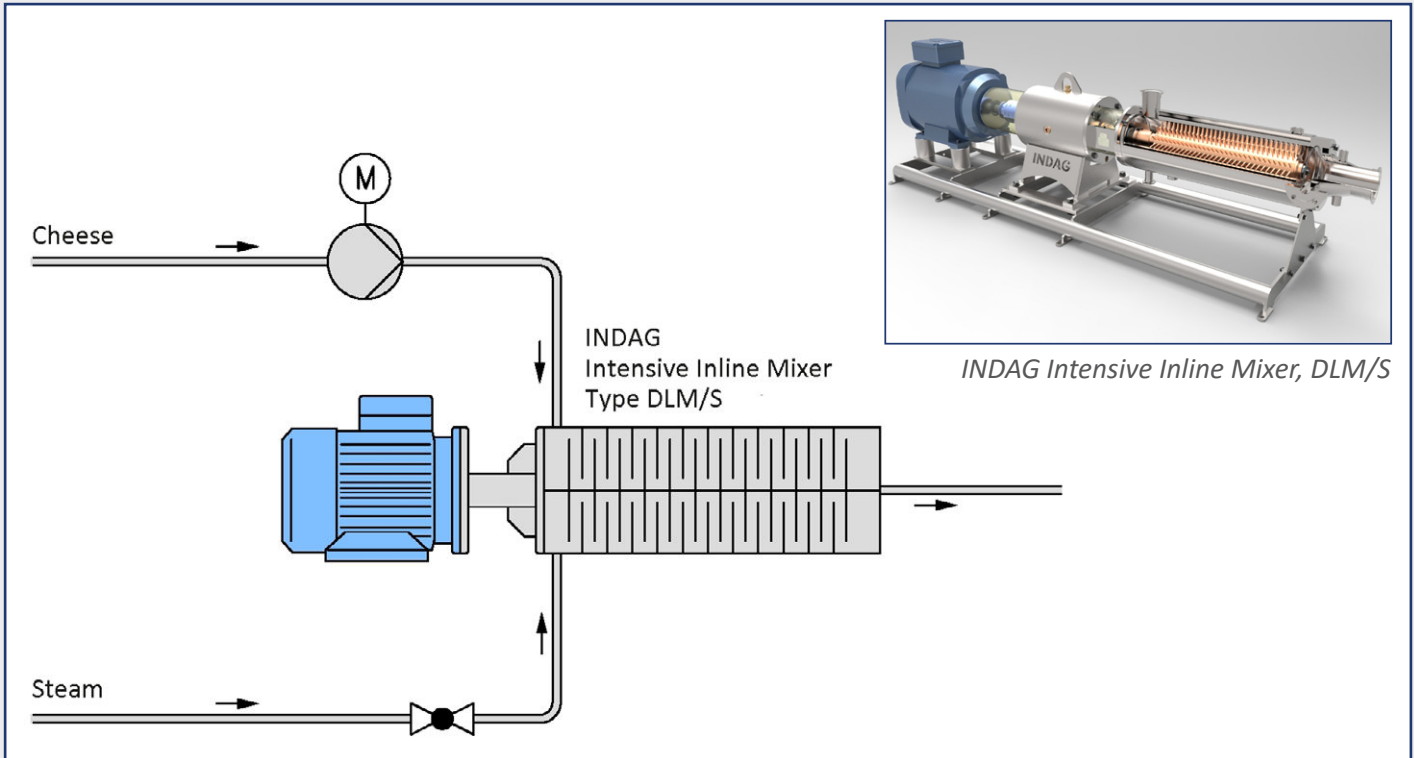
# Case No. 109A

## Processed Cheese

### cooking with Water Steam



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Flow scheme example for inline cooking with the Intensive Inline Mixer, DLM/S

#### Process Description

The raw cheese mass is continuously fed to the mixer by a pump, mostly rotary lobe or screw pumps, at a temperature of about 20°C. The water steam has a temperature of about 120-160°C, so that the temperature of the mixture is about 100°C.

The INDAG Intensive Inline Mixer, type DLM/S, is perfectly suited for this mixing task due to its high shear rate input. In addition, the incoming cheese mass is homogenized during the boiling process, so that no lumps or other inhomogeneities remain. The steam entered condenses 100% in the product. This guarantees that the complete thermal energy of the steam is used without losses.

To prevent the cheese from burning at the steam injection point, the metallic surfaces in this area are specifically cooled. The geometry of the steam injection cover, developed by INDAG, not only ensures that no product burns, but also prevents steam hammering at the injection point. →

#### Advantages

- Substitution of part of cheese by milk powder. Massive cost reduction per t of cheese.
- Healthier food/cheese due to 25% salt reduction.
- Better and more intensive mixing leads to better cheese structure.
- The complete thermal energy of the steam is used without losses.
- Increase of production time between two cleaning cycles from 6 hours to one week (between static and dynamic mixing).
- Cost reduction due to less cleaning work.

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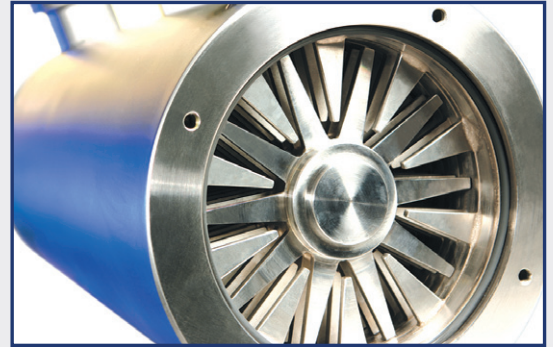
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→ A hygienic design of the mixer is obvious for this application. Electropolished surfaces, FAD or EG 1935.. certificates, hygienic flushed mechanical seals are standard. Stainless steel drives for IP 67 and stainless-steel bearing blocks can be offered as an option.

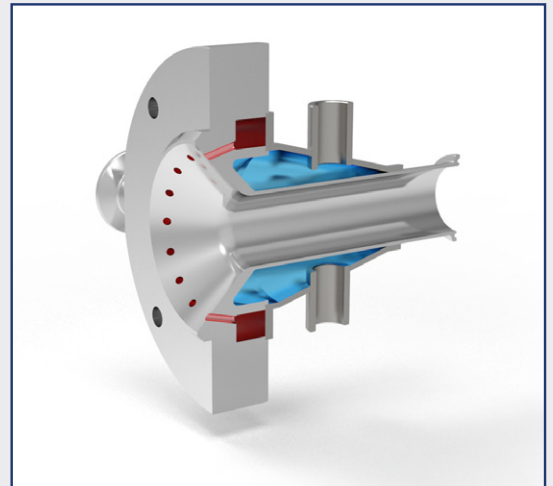
The standard cleaning procedure is a typical 5-step CIP procedure, mostly used in dairy industry.



Mixing elements



INDAG Intensive Inline Mixer for inline cooking



INDAG Cooled Steam Injector

Comparable applications with a similar processes and same mixer

- General inline cooking or inline sterilisation processes.

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