

Dairy Custard

CHALLENGE

Dairy custard is a thick and sweet product used in many different ways. The challenge is to reduce the usual long processing time, improve the finished product colour, texture and mouth feel and most importantly remove burn-on contamination. The CIP time for this type of product is very lengthy if using traditional steam jacketed vessels as even if produced with low pressure steam burn-on will still occur.

SOLUTION

Using our Patented Steam Infusion units combined with our powder entrainment system, the liquids are recirculated around the system with our Steam Infusion units whilst the powders are inducted into the process flow. As the powder hits the liquid process flow they are accelerated to 1000mtrs per second whilst also being heated giving the best combined heating and mixing system in the food industry. This simultaneous mixing and heating ensures complete distribution of the MP, Sugar, liquid egg, Starch, emulsifiers and Flavours in seconds. The action of accelerating the mix also creates very small droplet sizes which are evenly distributed in the mix, and as the product thickens there is no burn-on as you would normally see in traditional jacket as the vessel skin does not get any hotter than the product itself. Even when producing high quality custards with fresh egg, cream and milk the Steam Infusion unit ensures they are mixed and cooked evenly ensuring the egg does not scramble. As there is no direct heat the colour, texture and flavour of the finished product is first class every time.



"The technologies developed and installed by DCN are ground breaking, and combined with their 45 years of product and process experience make them a world class process solution provider. We look forward to a long and mutually beneficial partnership with DCN."

Ronnie Miles

Managing Director

Bells Food Group Ltd

OUTCOME

A rich, smooth, light yellow and high gloss premium product produced in a fraction of the traditional producing time using a significantly reduced footprint.

We are producing custard in many countries around the world with batch times of 1000ltrs in 25mins and are able to run batch after batch without clean down due to zero burn-on. This also reduces the amount of water usage which in countries such as Africa, Australia, and Saudi Arabia gives a significant financial benefit.