

Franconia Paper Reprint 115

Franconia Takes the Guesswork Out of Starch Cooking

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Franconia Paper Corp. of Lincoln, NH has obtained complete control over its starch cooking operations and now uses bulk starch instead of bagged starch. A full-control agitator-viscometer system and a new materials handling system did the trick.

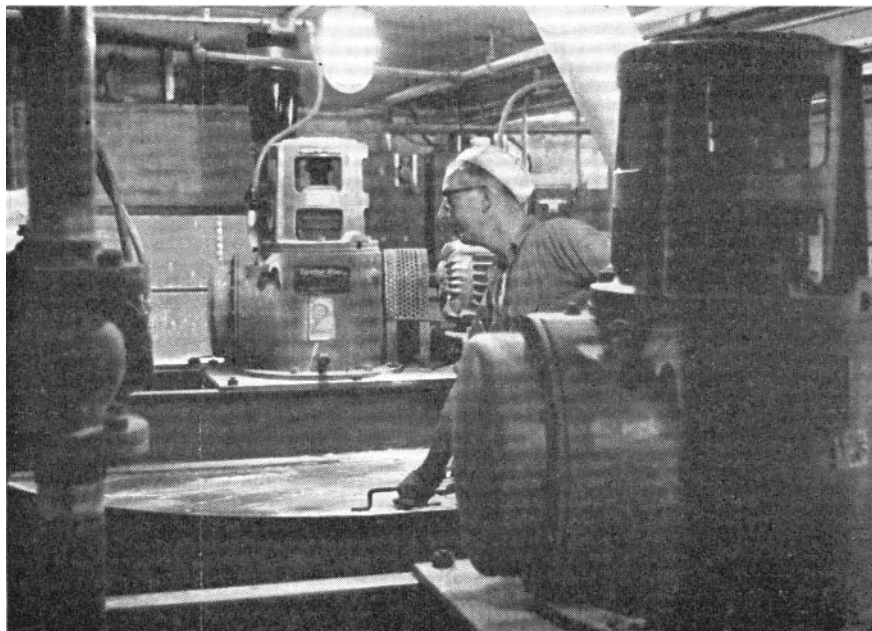
Further, by being able to control uniformity and viscosity of standard starch completely, the company has virtually eliminated the need for high-priced special starches.

Franconia tossed away the dice cup on its starch cooking operations by placing a 15 hp turbine-blade agitator on each of its two new starch cookers to insure uniformity, and by installing a viscometer to give full control over viscosity.

It thus did away with the old-time cooking vats with their air and steam jets, time-guessing, hot spots and unpredictability.

The new system is a lesson in simplicity. The two-speed Lightrnin 15 hp agitators are turned on high during the cooking operation. Steam, fed in through a sparge ring, brings the starch up to a gel point of 155°F, where it is held for 15 minutes.

The mixture is then taken up to 170°F and a viscosity reading made every minute until the desired viscosity is reached. The temperature then shoots up to 250°F to kill the enzymes and the agitator is switched to low-speed to keep the starch in suspension until it is used. Before use, water is added to bring the starch down to a workable 12 per cent consistency.

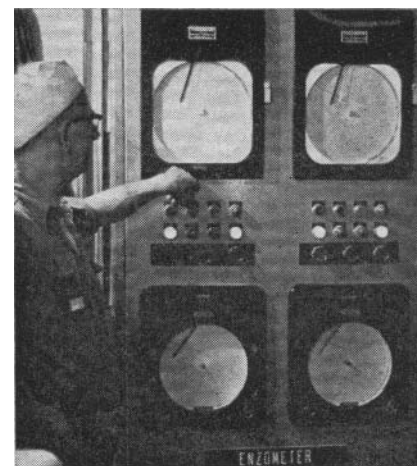


Complete uniformity in starch cooking operation is assured by two-speed Lightrnin 15 hp agitators located on the top of two new cooking vats.

In this way, Franconia now is able to prepare all the starch it needs in a day during a regular 8-hour shift. Previously, it required 16 hours of nearly constant supervision to produce the required amount.

In addition to the new agitation-viscometer concept, Franconia also installed a materials handling system that further augments the efficiency of its starch cooking operation. Railroad cars of starch are unloaded by a pneumatic system and the starch is blown to the top of a storage tank.

At the push of a button, a hopper at the cooking station is then filled with 1,800 lbs. of starch, and when needed, starch is distributed through an 8-in. swing spout to either of two stainless steel cookers.



A viscometer reading is taken every minute at the 170°F cooking cycle until the desired viscosity is reached.