Success Story

Boone Mixers at Novidon Work Together for Perfect Scale-up

Boone Mixers

Manufacturers of Industrial Mixers and Blenders

Wrexham-based Novidon have chosen Boone Mixers for both laboratory test and factory production of carboxymethylated starch products, for use in oil and other drilling applications. The performance of the production unit, a 4000 litre Horizontal Paddle Blade Mixer, is accurately modelled in the laboratory by a Boone Universal Lab Mixer. Both mixers feature contraflow paddle blade design, and each is designed to allow pressurised steam injection, a critical part of the process.

Boone's relationship with Novidon dates to 2007, when the company needed to replace a mixing system that was beyond repair. Engineering Manager Mike Shoemark approached Boone. The highly viscous nature of the materials suggested a horizontal mixer and Boone proposed a Horizontal Paddle Blade Mixer (HPBM) complete with pressurised steam addition, which 'cooks' and gels the starch mix, at five points in its semi-omega shaped mixing shell. The semi-omega is a 'short and tall' shape shared by all horizontal Boone mixers that ensures highly efficient mixing with easy clean and energy efficiency. Mike Shoemark commented 'Despite the batch size going from 1300 to 4000 litres, the drive power reduced from 110Kw to 55Kw, with obvious energy savings, and were able to reduce from 24 batches per day to 11.'

Novidon's Boone HPBM Paddle Blade mixer

To meet research and development challenges, Novidon subsequently purchased a Boone Universal Lab Mixer (ULM). The variable speed ULM allows process conditions to be replicated perfectly, so that quality checks, formulation adjustments and research can be conducted on a manageable scale without taking up valuable production time. To allow Novidon to fully create the conditions encountered by the production mixer, Boone supplied the ULM as a pressure rated unit complete with steam addition. The lab mixer allows Novidon to research different methods of carboxymethylation, of potato starch for the production of oil well and other industrial drilling fluid loss inhibitors/lubricants. Mike Shoemark said 'We are very impressed with the mixer. The cooked starch is very high viscosity and the lab mixer turns it with ease.'

The on-going success of both the Boone mixing systems and of Novidon themselves has been further underlined with the recent award of an order for a further 4000L HPBM mixer to double production at the Wrexham site.

Modified Boone Universal Lab Mixer allows Novidon to research new materials and scale-up accurately

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