



Fairford's 6 wire 'in the delta' connection saves UK's leading animal feed manufacturer substantial rewiring costs



The ability of Fairford soft starters to connect directly into the six wire delta connection of a motor has improved system reliability and saved BOCM Pauls, both the considerable cost and the time of rewiring a complete motor starting system on a 1.5 ton (3.5m³) vertical mixer for animal feeds.

BOCM PAULS is the United Kingdom's leading animal feed manufacturer with modern mills strategically located throughout the UK producing either cattle or pig and poultry feed. The company's annual production and turnover exceed two million tons and £500m respectively.

Recently, a failure occurred at one of the company's mills in Leicester, in the delta connection of a Star/Delta starter. The starter was employed on a 15kW induction motor that drives a vertical mixer full of animal feed. The mixer operates continuously so the failure had to be rectified quickly. Militating against this, however, was the fact that maintenance staff at the Leicester Mill, led by John Kettle, could not locate a source for a six- wire starter to replace the unit that had failed. This was a major problem as the alternative was a complete rewiring of the motor starting system, with all the cost and lost production time that involved.

Still seeking to avoid these unnecessary costs, John Kettle contacted Brammer's local Leicester branch. Personnel at the branch quickly identified Fairford Electronics, one of Brammer's distribution partners, as the likely solution providers. Fairford was subsequently called in and was immediately able to recommend a product, the company's highly functioned QFE electronic starter, which would just slot into the six- wire delta connection of the mixer starter system.

"Finding the Fairford unit was a relief for us," said John Kettle. "Soft starters that offer six wire connections are hard to get hold of – or so we thought, but they offer all the convenience and cost savings advantages of not having to re-cable systems to accept 3-wire starter units."

As well as saving costs, the QFE electronic starter also improves system reliability with an electronic shear pin capability that obviates the requirement for mechanical shear pin overload devices. This provides useful protection on the drive motor of the vertical mixer the latter unit often being started under full load, which can be as much as 1.5 tons. If, under these starting conditions, one or either of the mixer paddles jams, a sudden rise in motor torque occurs, which is immediately detected by the QFE controller. The Fairford unit then decides upon a course of actions ranging from instantaneous shutdown of the process to monitoring for recurrences if the jam is released rapidly.