



Fairford Soft Starters the cure for 'Excessive Torquing'



The application of Fairford soft starters to a number of 22kW mixer motors at Kernow Coatings in Cornwall is overcoming a problem of excessive torque on start-up that was causing stress and fracture of the motor mounting frames, and affecting the overall reliability of the mixing process itself.

Kernow Coatings, part of the Sensitisors Group, is located in Penryn Cornwall. The company is one of the largest specialist coaters and converters of design and graphic film and paper in the UK. Kernow lighting filters are used widely in the television and film industries, and the company also provides the widest range of UK manufactured materials for use in the inkjet and toner fusion digital imaging materials market.

Kernow has a total of five coating machines and a dedicated thermostabilising unit, developed and built by its own staff. Each machine has a different combination of features, enabling both aqueous and solvent coatings to be performed on film and specialist papers, including lamination of pressure-sensitive adhesives.

The lacquers, used in the coating process, both water-based and solvent, are mixed by the coating machines in a formulaic process that lasts from 1-5hours. The mechanism that performs the process comprises a vertically mounted 15kW or 22kW electric motor driving through a vertical shaft, which is itself connected to the main mixer shaft.

As a means of ensuring rigidity in the mixer drive train, the vertically mounted motors are supported on frames and tensioned by chains. Generally this arrangement works well. However, under some operating conditions with certain types of lacquers, problems were encountered with the frames twisting, and, in some cases, fracturing.

John Trethewey, Maintenance Engineer at Kernow Coatings, suspected that this problem was due to excessive output torque from the motor on start-up.

Believing that a solution to the problem could be achieved using a soft starter, Mr Trethewey contacted his local BSL Branch office for advice on suitable units. BSL personnel recommended a unit from Fairford Electronics, and, following a site visit, one of the company's soft starters was installed. This provided a simple and cost effective solution, overcoming excessive torque on start-up and ensuring overall long-term reliability. Following this success, Fairford soft starters have been installed on the drive motors of all the remaining mixers.

"The mixing process is a lot more reliable since we fitted the Fairford starters," said John Trethewey, Maintenance Engineer at Kernow Coatings. "As a result, we are benefiting from greater continuity and certainty in our production process."