



Soft Starter Retrofit Solution Saves Replacement Cost of 90kW Slip Ring Motor & Electrical Installation Space



The ability to replace a five stage, 90kW slip ring motor starter system with a Fairford QFE soft starter has enabled one of Europe's largest processors of mineral based products to update a Lopulco mill as part of a major capital investment programme, reducing cost, improving reliability and with minimum requirements on electrical installation space.

The mill is one of many operated by Viaton Industries Limited at its plant in Brassington, Derbyshire. Viaton is a major force in the processing of minerals and the contract processing of industrial chemical powders. The company's advanced technology enables coarse feedstocks to be milled to ultra fine products with mean particle sizes of less than 1 micron.

The refurbished Lopulco mill was installed as part of an additional processing line to meet increasing production demands. The job of recommissioning fell to site engineer, Andrew Polkinghorne and his team. One of their first tasks was to send out, for overhaul, the 90kW slip ring motor that drives the mill. Whilst this was being undertaken, the team took time out to consider the method of starting, which had previously been retained on the motor. The original arrangement was a slip ring starter system, which, with five stages, each with its own contactor and timer, was very complicated, not very reliable and very expensive of panel space.

Clearly the slip ring starter needed to be replaced for a more modern equivalent that would not only consume less panel space, but also operate with improved reliability over the longer term. The only problem was that any new starter would have to connect seamlessly with the existing slip ring motor, as replacement of the latter component was not within the refurbishment budget for the mill.

In his search for an alternative starter, Andrew Polkinghorne contacted soft starter specialist, Fairford Electronics. Fairford has a broad range of experience in replacing older systems of motor starting with more modern soft starters. One major reason for this is that Fairford's QFE starter connects directly into the six-wire delta connection of a Star Delta starter. As a result, motor users who are looking to replace Star Delta systems can avoid the considerable cost and time spent in system rewiring.

Although the starter system in Viaton's case was not Star Delta, the QFE soft starter was, nevertheless, able to provide the same simple and cost effective solution. Consuming just a fraction of the panel space of the slip ring starter, the compact QFE unit avoids any snatching of the motor upon start-up and overcomes the mechanical problems previously experienced with contactors, leading to greater overall long-term reliability.

The two-month project to refurbish the mill and bring it back into production is now complete and Andrew Polkinghorne and his team are very pleased with the outcome. "The fact that we were able to retain the original slip ring motor while reducing both the size and complexity of its starting system is a double bonus for us," said Mr Polkinghorne. "With the QFE unit we not only get smoother more controlled starting and improved reliability, but also other inbuilt features such as energy optimising. This is important to us as the mill motor operates continuously, throughout our working week."