

Application Profile

Parker SSD Drives saves Exopack Advanced Coatings from costly motor upgrades

When Exopack Advanced Coatings, a worldwide leader in the manufacture of coated papers, films and specialty substrates, urgently needed to install two replacement variable speed drives, it chose products from the Parker SSD Drives AC890PX range. Not only did the new drives prove easy to install and straight-forward to commission, they also provided an improvement in performance that saved the company from having to install larger and more costly motors to increase the capacity of its plant.

Exopack Advanced Coatings operates a large and effective pollution abatement plant at its manufacturing site in Wrexham. Central to the operation of the plant, which deals with the exhausts from the site's production machinery, are two fans, each of which is driven by a 250 HP induction motor.

The speed of the fans is continuously regulated so that there is zero pressure differential between the abatement plant intake and the machine exhausts – that is, the plant imposes no back pressure on the exhausts, nor does it actively

extract gases and vapors from them.

The abatement plant has now been in operation for a number of years and, because of Exopack Advanced Coating's success and resulting growth, an increase in capacity was needed. When the site was in full production, it was difficult for the fans to maintain the necessary zero pressure differential, even if they were

unreliable and, because they were obsolete, harder and harder to maintain. To guard against complete failure, which would have seriously impacted the manufacturing operations on the site, the decision was therefore taken to replace the drives immediately "We chose drives from Parker SSD Drives for this critical application partly because they are well specified and offer excellent value for money, and partly because of



operating at the maximum attainable speed.

To address this, Exopack planned to install larger fan motors. However, before this could be done, difficulties were experienced with the existing variable speed drives, which were becoming increasingly

our positive experiences with the company's products in other applications," said Dan Hitchcock, Project Engineer. "We've always found that Parker drives just work, and that they're completely bombproof – it would be hard to ask for anything more!"



The latest AC890PX modular drives were selected by Exopack Advanced Coatings. Available with ratings of up to 500 HP, these compact units are just 500mm wide enabling them to be installed easily into the limited space available. They use sealed plug in modules for all major functions, making them easy to service, and incorporate a wide range of features as standard, including line fuses, line reactors and a disconnect switch. In addition, they support V/f, sensorless flux vector and full flux vector modes of operation.

“Because everything we needed for our application was built into the drives themselves, installation was fast and straightforward,” said Dan Hitchcock. “Setting the drives up, using the free software provided by Parker SSD Drives, was just as easy. Within three days of them being delivered to site, we had the drives installed, configured and fully operational.”

Initially, the drives were set up

for V/f operation, as were their predecessors. Even under these conditions, Exopack Advanced Coatings noted that the motors were able to run close to their original maximum design speed, something that had never proved possible with the previous drives. They were then switched to sensorless flux vector operation.

This change enabled the fans to be operated under full control at higher speeds, increasing the capacity of the abatement plant by 5% without the need for other modifications of any kind. As a result, the engineers decided that it would no longer be necessary to install larger motors, thereby saving the company well in excess of \$14,000.

Nor is this the only saving that Exopack Advanced Coatings has made as a result of installing the new drives; it is also saving money because of their greater energy efficiency. “We monitor our energy usage very carefully,” said Dan Hitchcock, “but we

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didn’t need any instruments to tell us that the new drives were more efficient. When the old drives were in operation, the temperature of the switchroom in which they were installed was always around the 87° mark, which made it a good place to be when the weather was cold.”

Continues Dan, “With the new drives, the temperature is just a degree or two above ambient. That’s somewhat reduced its attraction on cold days, but it does instantly confirm that we’re now wasting far less energy than we used to.”



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