

F4N helps Fairford motor ahead

Specialist manufacturer Fairford Electronics has driven business improvements and is targeting new nuclear opportunities after completing Fit For Nuclear.

Based in Ivybridge, Devon, Fairford designs and produces soft starters for electric motors. Without a soft starter, electric motors try to accelerate to full speed in an instant, drawing a significantly greater current and creating higher torque.

“That puts a huge amount of strain on the electrical system and the mechanical load, which can appear as screeching belts, broken gearboxes or heat,” says Mark Shepherd, managing director at Fairford. **“A soft starter gradually increases the amount of energy available to the motor, allowing the motor to accelerate over a defined period – that can be a few seconds, or up to 15–20 minutes for a large centrifuge.”**

Typical industrial applications include pumps, conveyor belts and fans. In a nuclear power station, they have numerous applications outside the primary circuit such as secondary pumps and ventilation systems, as well as turbine starter systems where they are used to bring the rotor up to speed before the steam is applied.

The Fairford team learned about F4N from contacts at the South West Manufacturing Advisory Service. **“They came and talked to us about F4N and, with Hinkley Point C being only 85 miles away, it seemed like a good opportunity to develop the business and to expand into new markets,”** Shepherd says. **“We considered the business to be well managed, but when the F4N assessment came back it was quite an eye-opener. We could understand the level of expectation in the nuclear**

industry, but we had never considered it from that viewpoint before.”

The main areas identified for development were around employee engagement and management of continuous improvement. **“We’re a small company with 35 employees on one site, and we’d taken employee engagement pretty much for granted,”** Shepherd notes. **“And we were continuously improving things within the business, but there was little structure to it or evidencing of it.”**

Head of quality Jonathan Atkins led the development programme, including adopting the Basecamp online collaboration tool to let all staff share and discuss ideas and information. The firm also put three employees through a nine-month programme of training in business improvement techniques, with more colleagues now beginning the course.

“One of the big features of F4N for me was it helped us raise our expectations,” Atkins says. **“We looked at what’s used in other industries and how we could appropriately apply those techniques within our business.”**

Health and safety probably caused the least concern, Shepherd says: **“We had a good health and safety system which was fit for our purposes, but it just needed some minor tweaks to bring it in line with the expectations of the nuclear industry.”**



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The F4N programme was originally designed for manufacturers operating in various areas of mechanical engineering, but the Fairford team found no problems in working through the programme as an electronics manufacturer.

“Our main production activity is product assembly – whether you’re handling a welder, a mill or a screwdriver, you still have a person making a product,” Shepherd notes.

“It would have been slightly different for us as an electrical manufacturer, but for the fact that our product is already highly regulated,” Atkins adds. “When the nuclear assessors started talking about traceability, we already knew about that as we’d been doing it ever since the company started.”

F4N has hugely benefited the business by driving business improvements, the team say. “It’s always useful to have an overarching objective, and that’s what F4N has given us,” Atkins says. “It’s a really useful way of engaging everybody and showing that we know how to work to higher standards.”

Fairford primarily sells its soft starters to OEMs and through distributors, with over 85 per cent being exported, and the team doesn’t foresee significant direct sales to nuclear buyers. “For us, F4N is a good accolade to have, but we’re not going to generate huge amounts of extra business or margins from it,” Shepherd says. “The value for us is the improvements it’s made to the business, and being able to show to OEMs and brand label customers that our business processes do meet this level. And it has improved the general business.”

The programme has raised the team’s awareness of opportunities in and around the sector, Atkins adds. “When you look at the infrastructure around Hinkley Point C there are many opportunities for our products,” he says. “They’re building Europe’s biggest concrete mixing plant on-site – our products could be used there. Our products can be used anywhere there’s an electrical motor, and the number of motors being used to build Hinkley Point is going to be huge.”

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Fit For Nuclear (F4N) helps UK manufacturers get ready to bid for work in the civil nuclear supply chain.



F4N was developed by the Nuclear AMRC and its leading industrial partners. The service lets UK manufacturers measure their operations against the standards required to supply the nuclear industry, and take the necessary steps to close any gaps.


Over 600 companies have completed the online F4N assessment, with most receiving ongoing support and development from the F4N team of nuclear specialists and experienced industrial advisors.

Begin your F4N journey: namrc.co.uk/services/f4n



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