Case study

F4N Fit For Nuclear

NUCLEAR AMRC
ADVANCED MANUFACTURING RESEARCH CENTRE

Lion Engineering embraces the culture change

Norfolk-based Lion Engineering is winning new machining work in nuclear, and continuing to expand its capabilities after being granted Fit For Nuclear.

Lion Engineering offers a comprehensive range of precision machining services, complemented by specialist welding and hardfacing facilities. Established in 1968 to serve the first oilwells being drilled off the coast near Great Yarmouth, the company now boasts one of the largest and most modern machine shops in the region, and works in a growing range of industries.

"We've been in oil and gas for 50 years," says Ashley Sewell, quality manager. "We're known for the quality of our products that we produce for the oil and gas industry to high-end specifications. We manufacture and repair rotational down-hole drilling tools, with specialist wear resistance and hard-facing applications, and have developed a very well equipped machine shop to support that."

With the energy transition firmly on the agenda, and plans underway to build the new Sizewell C power station some 35 miles down the coast, managing director Geoff Kimber-Smith and operations director Tom Kimber-Smith took a strategic decision to diversify the company's offering.

"We're not looking to substitute existing customers, but what we are looking to do in the long term is diversify, and ensure that we're part of that net zero journey," Sewell says. "Given where we are based in the UK, nuclear comes up all the time."

Following initial discussions with the Suffolk Chamber of Commerce about what it would take to win work at Sizewell C, the Lion team made contact with both the National Skills Academy for Nuclear and the Nuclear AMRC. After taking the initial Fit For Nuclear assessment in 2021, the team spent over two years ensuring that they made the most of the opportunity to drive improvements across the business.

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>
> Ashley Sewell, quality manager

"It wasn't just a case of getting the certification, we really wanted to get into the ethos of Fit For Nuclear," Sewell explains. "It's taken a couple of years, but it it's been a good journey and it has helped us with other industries as well. It's helped us in aerospace and defence, and our existing customers are really pleased."

The assessment identified a number of areas for development, mostly around strategic planning and communication with the workforce.

"We've always been pretty forward-thinking as a company. but we just didn't write down a lot of what we were doing," Sewell notes. "What's really helped is the culture change, because when you're diversifying, you've got to bring everyone on board with you. The only way you can do that is by presenting them with something so they can understand targets and objectives. That's where F4N helped us the most, in bringing everyone on board along that journey with us."

Lion Engineering has a relatively young workforce for the subcontract machining sector, notes supply chain manager Troy Hollis, with an average age in the 30s. That meant that staff were aware of the need to embrace the change to low-carbon energy sectors, and were keen to develop their own skills.

"They're more interested in their future," Hollis says. "There can at times be uncertainty in the oil and gas industry, which helps gives the impetus for the team to embrace and support opportunities within new sectors."

People on the shopfloor are now driving a range of continuing improvement programmes, and actively supporting the move into new sectors with new customers. Lion has also invested in renovating the oldest parts of its sites, with new machines and staff welfare facilities, and secured a string of new quality certifications.

"It's really helped with audits and visits from customers – when we bring them round, the guys proactively talk about what they're doing and the training they've had," Sewell notes. "The customers then get that warm feeling that it's not just about paint on the walls and nice machines, we are actually implementing this with our people. People are the number one resource that a company could possibly have."

Lion has now secured some initial subcontract machining work in nuclear, and is continuing to engage with potential customers across the sector to develop its nuclear business.

"We've made a number of contacts visiting different events," Sewell says. "It is long term – with the amount of people we're talking to, we can see a long-term benefit for the company. It's really helped us when discussing some potential projects for Sizewell C."

"When we quote, it takes that fear factor out of it, and we now have the full body of documentation that the nuclear industry expects," Hollis adds. "We're now quite confident that there's really not much we can't do."

As well as targeting opportunities with nuclear customers for its subcontract machining services, Lion is developing new capabilities for emerging technologies in water treatment.

Lion continues to work with the Nuclear AMRC to develop its capabilities and contacts. "Working with the Nuclear AMRC has opened a lot of doors in terms of projects, funding and training," Sewell concludes. "There's a whole world of support out there for companies that most people don't know exists. One of the things we're finding is saying yes to these things can open doors to areas you weren't quite expecting – and that's been a massive benefit."

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namrc.co.uk

enquiries@namrc.co.uk 0114 222 9900

Nuclear AMRC, University of Sheffield,
Advanced Manufacturing Park, Brunel Way, Rotherham, S60 5WG

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