Shifting sands

With a company name like The Di-Spark Group, it's not too difficult to make an educated guess as to where this particular Hampshire, Hampshire-based subcontractor’s sphere of expertise lies. But whilst a heavy focus on EDM certainly was the case 30 years ago when the company began, today Di-Spark is an all-round precision subcontractor offering a range of services including 5-axis milling and multi-axis turning.

When Di-Spark was founded in 1980 by current managing director David Light's father Bob, the manufacturing world was a totally different place. Di-Spark actually evolved from a toolmaking company heavily involved in the manufacture of press tools for the printed circuit board industry; but when Bob attended an exhibition in the mid-1970s and came across a Fanuc wire erosion machine, this proved to be a game changer.

"Today, EDM is an established technology and still used extensively where intricate features need to be machined - often to tight tolerances and with excellent surface finishes," David Light explains. "In those days however, EDM was still in its infancy but my father instantly recognised its potential for a toolmaking company. He actually bought two machines and they contributed significantly to the formation of Di-Spark as a dedicated EDM specialist – servicing the local toolmaking community which thrived in this area in those days."

It's somewhat difficult to think of EDM as a rapid process but 30 years ago in a world where the manufacture of highly complex parts often involved significant levels of manual labour it was actually something of a revelation. "We evolved into a specialist EDM subcontractor," Mr Light reveals, "and our investments into dedicated wire erosion and spark erosion equipment meant that we could remove much of the expensive manual labour aspect from the process. It proved to be very successful – the first 10 years of Di-Spark's existence focused almost entirely on EDM."

Traditional values

In 1997, Bob Light retired and David took over at the helm. Although keen to make his mark, he recognised that the basic foundations at the very heart of the company would need to be maintained. "My father was very old school," he says. "He built Di-Spark around an ethos of taking real pride in your work, putting quality first and investing regularly in new equipment and technology. He had clear aspirations to make Di-Spark a well run, world class manufacturing company, and although we've expanded the company significantly over the years, these basic principles are as relevant today as they were then."

Getting the entire workforce to ‘buy-in’ to these philosophies is a challenge to any company but Mr Light is a firm believer in running a tight ship in terms of quality systems. "We're not the sort of company that simply plays the game after just any business," he declares. "We have a number of loyal customers in some pretty high tech industries so their expectations from a quality standpoint are very high."

"Moreover, I firmly believe that it's important not only to have approved quality systems but also to integrate their principles into the day to day running of the company. Any business can buy good quality machines but this is only part of the equation - other elements like finance, training and staff development are just as important."

Not surprisingly therefore are Di-Spark's ISO9001 and AS9100 registrations and its participation in the Investors in People programme. Taking things a stage further, the company is also on SCC1 signatory demonstrating its commitment to the aerospace and defence supply chains.

In the balance

In terms of development it would be true to say that the Di-Spark Group in 2011 is much more of a general precision subcontractor. EDM still plays an important role in the overall scheme of things but only represents around 50% of its total business. Investment in these days is much more likely to be made in machine tools – a statement evidenced with the recent purchase of an Ineqix 2500 millturn centre from Yamazaki Mazak.

But that's only part of the story. Since November 2010,
nearly £750,000 has been invested in new equipment and machine tools. As Mr Light explains the transition from being a pure EDM subcontractor to an all-embracing precision engineering company was evolutionary.

“We’ve always had some machining capability but the catalyst for change materialised around 2000,” he says. “An aerospace-based customer came to us with a job requirement that involved machining a five-faced prismatic part from solid. The work involved not only wire and spark erosion but also a significant amount of machining and the problem was at the time, we only had a 3-axis milling machine so the number of set-ups was horrendous. Whilst we made a really good job of the component, our methods were far from efficient.”

This duly prompted the purchase of a Mikron 5-axis machine from Agie Chammlites – a supplier with whom Di-Spark had built a longstanding relationship on the EDM side. “I think we were one of the earliest adopters of 5-axis machining,” Mr Light recalls. “The company’s strategy changed at that point – we had a number of key customers in high tech industries like motorsport, aerospace, oil and gas, medical and defence and we decided to focus on offering a superior, all encompassing service to those customers. We could have chucked every piece of business that came up but that approach simply didn’t fit our business model.”

This is reflected in Di-Spark’s current financial figures. Five years ago, 75% of Di-Spark’s work was EDM focused. An analysis in 2010 reveals an exact 50/50 split between EDM and machining. “The EDM business is very steady but static,” Mr Light declares. “The real growth recently has been in our advanced machining capability.”

Ten year itch

As a Group, Di-Spark currently employs 30 members of staff and occupies three business units with a fourth soon to be acquired. Although there is some obvious interaction between the three units, essentially they are set up as distinct manufacturing cells: wire erosion; advanced machining; and spark erosion. The plan is to move the entire spark erosion cell into the new building leaving space for a dedicated milling cell. Mr Light elaborates: “From a development perspective, we seem to take an evolutionary step forward every ten years: 30 years ago we took our first steps into wire erosion; 20 years ago we ventured into spark erosion; 10 years ago we focused on 5-axis milling and now we’re looking at setting up a manufacturing cell dedicated to multi-tasking milling machining.”

In the same way that Mr Light likes to build strong, long lasting relationships with customers, the same can be said for suppliers. Over the years he has remained loyal to Chammlites for wire erosion equipment, Agie for spark erosion and Mikron for milling machines. The supplier of choice on the milling front is looking to be Yamazaki Mazak. “I recently purchased an Integrex J200 multi-tasking millturn centre and it’s an excellent machine,” Mr Light enthuses. “For the new unit, I’ve got an eye firmly on another Integrex but this time the new I200. The great thing is that it accommodates HSK tooling which means compatibility with our other machines.”

As previously mentioned, Di-Spark is a company that takes a serious approach to training. “We work closely with PETA (Portsmouth Engineering Training Association) to recruit apprentices and trainees. In fact of the company’s 15 direct members of staff, six have been through an apprenticeship programme. Two new apprentices have recently been taken on. “I believe in the period from 1992 to 2000 the industry effectively lost a generation of engineers,” Mr Light affirms. “Even back when my father was running the company. Di-Spark has always placed the utmost emphasis on training and through our partnership with PETA we’ve managed to bring new talent into the company on a regular basis.”

Offshore activity

Although active across a number of high technology market sectors, the oil and gas industry is one area worthy of note. For a down pipe inspection product developed by GE Energy, Di-Spark manufactures two parts that form part of a larger assembly: Fingers, which are made from beryllium copper and closing sleeves made from 17-4PH stainless steel. Both parts involve machining and EDM in their manufacture: the Fingers are entirely wire eroded whilst the sleeves are turned and then have a series of wire eroded slots positioned around the OD. With the Fingers the process also involves a subcontract operation that implants a hardened carbide tip onto the part.

“It’s a very innovative product,” Mr Light reveals. “Basically the whole tool is dropped down a pipe section and the Fingers are then actuated inside the closing sleeve causing them to protrude from the wire eroded slots. The tool is then pulled back up the pipe with the Fingers in contact with the pipe surface to measure the levels of corrosion that may be present. This information is then transmitted to the surface where a readout can be obtained.”

---

**DI-SPAR**

www.dispark.co.uk

---

**Hone All**

We’re precise... 12% Excellence Rating, 99% On Time Delivery, 99% Product Quality, 99% 24hr Quotes – from start to perfect finish.

Hone All Precision Limited, Chertycrop Way, Leigh ton Buzzard, LU7 6P4 Telephone: 01582 502011 E.Mail: sale@hone-all.co.uk hone-all.co.uk