

Indian Ocean manufacturing

When engineering companies think low-cost manufacture, Mauritius does not usually come to mind. One company has made just that choice. Machinery found out why

When a West Country-based engineering Hymec decided to create a low-cost offering for its aerospace customers, it didn't follow the conventional route of adding a sourcing operation to its manufacturing activities.

The group, which includes Hymec Precision Engineering, Hymec Aerospace Fasteners and Harbourne Design, decided to form its own low-cost manufacturing company. But again, rather than following the path others have taken of setting up a subsidiary in India or China, it chose to base the new company in Mauritius. To help make this a success, it worked in partnership with machine tool supplier Matchmaker M/C of Kingston, Surrey, and aerospace alloy supplier Metalweb.

"When we thought about setting up a low-cost operation we thought, 'Do we go to India, China or Dubai?'" explains Richard Elliott, director of Hymec CNC Mauritius. "But Mauritius was as good an option as anywhere. Although it is more commonly thought of as a holiday destination, it does have some advantages as the base for an engineering company. It certainly offers a low-cost base, with little competition from local companies.

"We see Mauritius as being able to offer a 20 to 25 per cent cost-down on current pricing structures for components made onshore, and as expectations rise in China and India, so will pay and overhead rates. People will then start looking elsewhere –

particularly Africa, most of which has yet to see any significant industrial development.

"Mauritius is strategically placed off the coast of Africa (see box item), and because there is very limited demand for engineers and engineering there I believe that our pay scales and structures will stay relatively low in relation to the rest of the world."

Yet, as he points out, Mauritius has one of the largest engineering training facilities in the region – with around 100 students at any one time – giving the perfect combination of location, wage structure



Hymec CNC Mauritius has opted for 12-off Matchmaker 800 VMCs. Already used by the company in the UK, it offers flexibility, while programs/set-ups can be proved in the UK



and a pool of trained potential employees.

"A lot of aerospace OEMs are looking for low-cost production, particularly where high volumes are concerned, and are venturing to the four corners of the earth. By creating a low-cost environment that is built on our knowledge and experience of supplying these customers we can offer them something that our competitors can't offer and provide the basis for solid long term partnerships."

SOLE SUPPLY AGREEMENT

Having decided to create a company in Mauritius, the group first of all negotiated a sole supply agreement for the supply of aluminium with Metalweb, which Metalweb supported by providing an automatic saw for the new facility. Hymec then started looking for a machine tool partner for the project.

"We spoke to various machine tool companies and decided to create an alliance with Matchmaker M/C to be our sole supplier of machine tools for Hymec CNC Mauritius," says Mr Elliott. "In our dealings with Matchmaker in the UK we always found them to be a proactive rather than a reactive company – looking at our needs rather than theirs – and they have been very flexible with financial packages."

The core competence of Hymec CNC Mauritius is the CNC machining of aluminium, primarily for components such as light rail chassis for the Airbus A380 and A320, and other interior components for galleys, seats, toilets and so on. The operation has just received ISO 9000 accreditation and has about 25 employees.

Mr Elliott highlights that the manufacturing strategy and choice of machine tools was

based on the lessons learnt in the UK: "Over the past five years we have purchased a number of machines from Matchmaker, including Mitsubishi MK5 horizontal machining centres, Kiwa 5-pallet horizontal machining centres and eight of Matchmaker's own VMC 800 vertical machining centres. We have found these to be reliable, high quality and relatively fast machines at a good price. And on the basis that we had run them successfully for three or four years in the UK we decided to purchase 12 of them [VMC 800] for Mauritius."

The Matchmaker VMC 800 offers a 820 by 520 by 510 mm working envelope with a 8,000 rpm 7.5 or 11 kW BT 40 spindle and a FANUC OiMC control. Rapid traverse speeds in X, Y and Z are 20 m/min and the automatic toolchanger holds 20 tools with a maximum tool diameter of 100 mm and a maximum tool length of 300 mm.

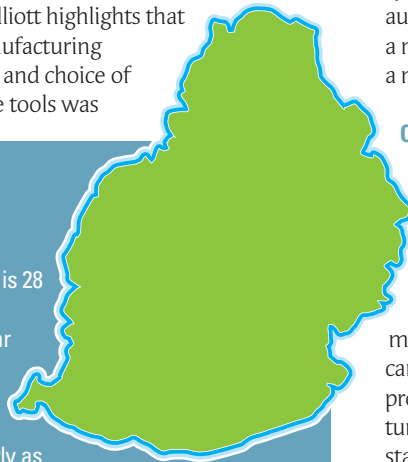
Mauritius in brief

Located approximately 1,250 miles off the south-eastern coast of Africa and lying east of Madagascar, Mauritius is 28 miles wide and 40 miles long. It has a population of 1.2 million, and its main industries are textiles, tourism, sugar and services.

Of volcanic origin and generally sheltered by barriers of coral reefs forming natural, safe, crystal clear lagoons, Mauritius was known to the Arabs as early as the 10th century, but was officially 'discovered' in 1505 by the Portuguese navigator Pedro Mascarenhas.

The island was occupied successively by the Dutch (1598-1712) and the French (1715-1810), and was ceded to Great Britain in 1814 through the Treaty of Paris. On 12 March 1968, Mauritius became independent, becoming a republic within the Commonwealth on 12 March 1992.

Mauritius is a blend of diverse cultures and religions. The population comprises Hindu, Creole, Chinese, Muslim and European. The country also sees cars driven on the left-hand side of the road, as in the UK.



COMPLETE FLEXIBILITY

"We wanted to have a fairly simple set of machine tools in Mauritius to begin with," says Richard Elliott, "with common programs so that we can put any part on any machine. That gives us complete flexibility in terms of which machines we use and the quantities we can make at any one time. We currently program the components in the UK, fine-tune them and the set-ups until we have a stable process, and ship it to Mauritius for them to do the volume manufacturing."

He says that, in the longer term though, his aim is to expand to maybe 70 employees in a 26,000 ft² factory offering CNC milling, turning, fabrication, assembly and treatments, and the partnership with Matchmaker will facilitate this growth.

"The evolution of Hymec CNC Mauritius has been very much a partnership with Matchmaker M/C and Metalweb." □