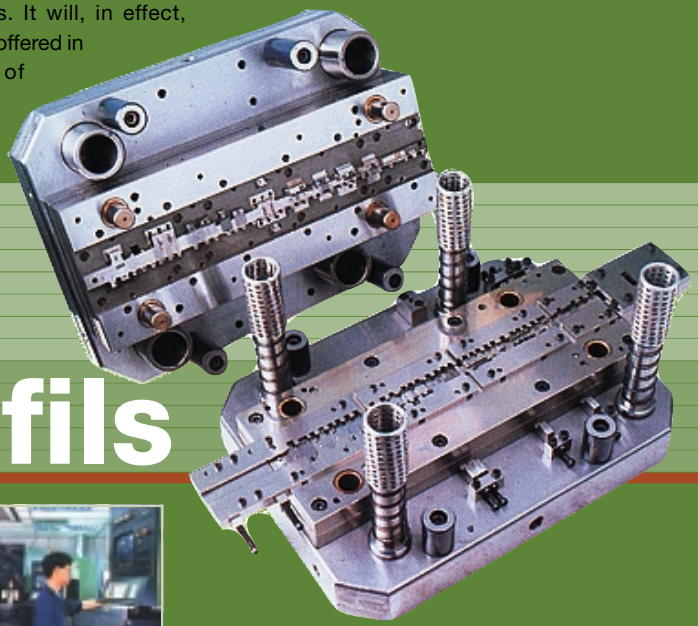
Full Skil Fulfils

Quality service, innovation and cost-competitiveness – these three factors have enabled Full Skil Wire Cut Services to grow from a S$250,000-a-year outfit into the multi-million dollar contract manufacturing plant it is today. **Gloria Seow** has more.



Located in the heart of Singapore, **Full Skil Wire Cut Services** is a full-fledged manufacturing service provider despite its name. Since its start in 1988, the company has grown many fold, posting a turnover of between S$18 million (US$10.40 million) to S$19 (US$10.98 million) million in 2002, which is a far cry from its first-year turnover of S$250,000 (US$144,508). Beginning with just three employees, today, Full Skil hires some 160 personnel.

The company underwent a rapid expansion between 1996 to 2002, by acquiring CNC machining centres, wire-cut EDMs, grinding machines, prototyping machines and high speed stamping presses. It has ventured beyond just providing wire cut services to also offer precise and complex wire cut services; fabrication of precision components, spares and inserts for tool and dies; prototyping services; design, fabrication and assembly of conventional and high speed progressive toolings; as well as contract manufacturing of connectors. These facilities have enabled it to better serve its clientele base in countries like China, Indonesia, Malaysia, the Philippines, Thailand, the US and Europe.

In 2002, the company's expansion culminated with the opening of a sister manufacturing facility in Shanghai offering high speed precision stamping services. "As our customers were opening up manufacturing plants in Shanghai, we decided to follow suit so as to be close to them. This will enable us to continue providing value-added and timely service to fulfil their production goals," said Full Skil's general manager **Chin Kong Tad**.

Full Skil has plans to expand its Shanghai plant in the area of product and service offerings. It will, in effect, replicate the services offered in Singapore. In light of this, the company's Singapore operations will focus more on offering higher value-added services as well as more precise tooling for high-speed stamping, which is one of its fastest growing divisions.

Chin admitted that manufacturing in China does not accord much cost savings, as the operational cost, in terms of investing in **Bruderer** stamping machines, remains pretty much the same as in Singapore. The only difference is labour cost, but since all machines are automated, this factor does not play a huge part in cost savings.

On its contract manufacturing operations, Chin revealed that the main challenge today is to meet tight lead times and still fulfil the quality demands of its customers. "Many of our customers only launch their products close to when they want it, which greatly compresses the production cycle," said Chin.

In most cases, Full Skil's engineers have to work closely with the R&D department of its customers in terms of producing and testing the prototype part before commissioning takes place. After that, the company typically has between four to five weeks to proceed from part drawing, to designing, fabricating parts, testing and assembling tools, producing the first piece and finally running the actual production. Some of its customers include **Tyco Electronics** and **Molex**.

For 2003 and beyond, Full Skil aims to go up the value chain by producing and packaging end products instead of just manufacturing parts. For example, instead of just making connectors, it could also produce the housing for these connectors. The firm would need to acquire new technology to do this. It is also plans to network its machines to facilitate data transfer between them, which will further reduce set-up times.

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Bruderer's high-speed stamping presses have enabled Full Skil to become one of Singapore's largest producers of connectors and lead-frames.

Precision Engineering Key To Singapore's Economy

Singapore has built a strong competitive advantage in precision engineering (PE) which has caught the eye of MNCs the world over, according to a report in The Straits Times. As a vital element of the island's economy, the PE sector posted an output of S$13 billion (US$7.51 billion) in 2001, representing about a fifth of Singapore's total electronics output.

It started in the 1970s when leading MNCs such as **Philips**, **Rollei** and **Tata** invested in Singapore-based manufacturing plants that made everything from TVs to cameras. Local entrepreneurs then set up their own PE firms offering these MNCs the exact services they required. But it was in the 1980s that things really took off for the fledging industry, said the report. This period witnessed a bigger push by MNCs into Singapore as it developed a name for itself as the place to be for disk drive manufacturers such as **Seagate Technology** and personal computer makers such as **Apple**.

Today, Singapore's PE industry has attained such a reputation that MNCs invest in the country because of it, said Singapore's **Economic Development Board** director **Tan Choon Shian**. For example, local precision engineering firm **MMI Holdings** did so well in supplying the disk drive industry that it rose in 1996 to become the world's largest provider of aluminium extruded base plates, a key component of disk drives, with a market share of 86 percent.

Full Skil

Local PE companies with the capability of producing quality parts have contributed to Singapore's strong hard disk drive industry.

In recent years, the PE sector has been critical to the country's ability to move up the value chain in manufacturing said Tan of the EDB. "PE has a role to play in new emerging industries such as photonics and medical equipment, not only in manufacturing production equipment for these industries, but also in the production of key components and modules," he said. **Seksun**, another local PE firm, reckons that Singapore's strength in PE will cushion it against the rising tide of competition from lower-cost manufacturing locations in Asia.

Food For Thought

Choo Yoo Keong of Bruderer Presses has brought up some concerns with regards to Singapore's PE sector's future, particularly in the area of stamping.

1. Would it be possible to identify and group together those involved in stamping work in Singapore? I feel that the stamping community can benefit from greater networking. It would be good if we could get together to share pertinent market information and discuss technology trends, so that we can determine together the direction that the stamping business is heading towards. This could be useful when formulating our own company plans.

2. When the semiconductor business picks up again, will local PE firms be able to react fast enough so as to cater to big boys like Chartered Semiconductor and its business chain?

3. Are there other worthwhile business areas that the Stamping community in Singapore can target?

For those with suggestions to any of the above points, please write to men@epl.com.sg.

inventory and performance through a supplier's portal. People within the company and throughout the network can collaborate simply and quickly.

Flexible Machining Via Multi-Tasking Machines

Today, manufacturers face a unique set of challenges as assembled products have reached a level of complexity unanticipated a few years ago. Market dynamics are forcing product changeovers at an unprecedented rate. Variations required for smaller, more specialised product lot sizes call for a new level of flexibility in manufacturing operations.

The supply chain is key in examining production efficiency.

Can companies leverage the strategic potential of today's multi-tasking machines? Job specific equipment may offer job shops low costs on a per-part basis, but are limited in the range of things they can do. Multi-tasking machining centers, on the other hand, are extremely flexible and can handle a variety of tasks with greater flexibility. They can dramatically reduce work-in-process and enable production processes to quickly adapt to the need for more frequent product changes. In the US, technology leaders among the contract manufacturing community are apparently abandoning the traditional in-line approach for the flexibility of these multi-functional machines. MEN