



Ryuichi Kitajima, 73, president of Kitajima Shibori Seisakusyo, located in Keihinjima, Ota Ward, Tokyo. Kitajima, a craftsman through and through, sets a fine example for his employees, who currently number 35.

something completely different to do."

Yoshimi struck on the idea of developing products using so-called shape-memory alloy. There were then only two companies in Japan that made this special alloy, and because of difficulties in the production process, it had not yet been mass-produced outside Japan.

Yoshimi, who had at one time used shape-memory alloy to make complicated metal molds, decided to stake the future of his company on it. As luck would have it, one of the two Japanese companies capable of making the metal was a firm he had once worked for.

Through his contacts—former colleagues and superiors—Yoshimi made a proposal for the joint development of the shape-memory alloy. At first, because of the small scale of his firm, Yoshimi had doubted his proposal would even be considered. But remembering the old adage "Nothing ventured, nothing gained," he went ahead with the plan anyway. He received a reply that while the properties of the alloy had already been studied, it was still not fully clear how it might be used. That is, the

potential of the alloy was largely unknown. So Yoshimi decided to devote all his time to developing applications.

The first product Yoshimi came up with was a piece of fishing tackle, which enabled anglers to fish with previously unthinkable effectiveness. Yoshimi marketed his new product as the "high-tech" fishing

gear. Its reputation spread through word of mouth and it was taken up by a number of fishing magazines.

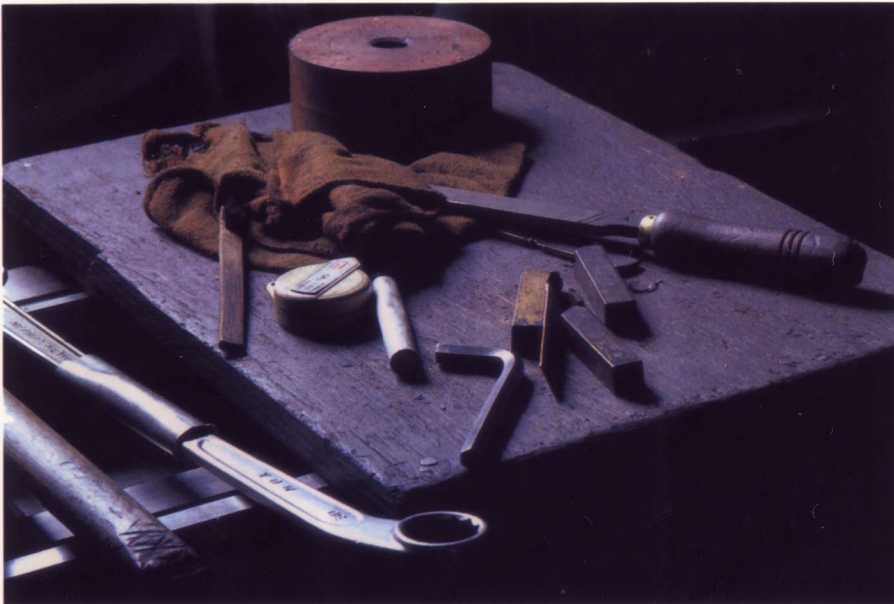
Yoshimi followed this up with another type of fishing tackle, which now commands a market share of 99 percent. Its new line of tackle has enabled Yoshimi Inc. to open up its own market as well

Kitajima Shibori Seisakusyo's factory. A host of products, ranging from a parabolic disc over 2m in diameter to a product not more than 3mm in diameter, is made by applying spatulas to rotating discs of metal.





A spatula tool is used to apply pressure to the rotating metal disc to force it into a cylindrical shape. It takes about 10 years to learn exactly how much pressure to apply.



Various tools used in spinning metal

as make its own products.

In addition to developing products using the shape-memory alloy, Yoshimi Inc. pioneered one new application after another for the alloy—brassieres, spectacle frames and artificial blood vessels for the heart among them—and approached the appropriate manufacturers. Yoshimi Inc. is still developing new uses for its shape-memory alloy with more than 20 other companies.

A group of craftsmen with special skills The Omori/Kamata area in Ota Ward, Tokyo, is famous for its 8,000 or so small factories, all boasting their own original technologies.

There was once a TV documentary which showed what could be done when an assembly line of a major automaker broke down and the company stood to lose tens of millions of yen unless complicated replacement parts were obtained that

same day.

The man in charge of the assembly line, without hesitating for a second, rushed to Ota Ward. The proprietor of the first factory he visited said he could not make the damaged parts but that his next-door neighbor might. So the man rushed to the factory next door, but was again turned down, this time being told the factory was too busy. But he was again introduced to another factory. While hopping to one factory after another, he received a call from one factory telling him that it could go to work immediately on the desired parts. One of the workers, with oil-smeared hands, made the parts with no trouble whatsoever—the same parts the large automaker could not make itself.

We, too, marveled at the wonderful strengths of the Omori/Kamata area network and realized anew just how much Japan's high-tech products are supported by the technologies of small-scale factories.

Kitajima Shibori Seisakusyo, a resident firm in the area, boasts the world's highest standards in metal spinning technology. A dozen or so parts of the first of Japan's H-2 rocket series—the first major rocket