

Mitsubishi Heavy Industries Machine Tool Launched toward Strengthening of Global Competitiveness



Seiji Shirao, President

Mitsubishi Heavy Industries Machine Tool Co., Ltd.

On October 1, 2015, Mitsubishi Heavy Industries, Ltd. (MHI) spun off its machine tool business as wholly-owned subsidiary Mitsubishi Heavy Industries Machine Tool Co., Ltd., through a company split and to be taken over by its wholly-owned subsidiary Mitsubishi Heavy Industries Machine Tool Sales Co., Ltd.

This company was established with the aim of boosting the MHI Group's organizational mobility and establishing a structure for swift decision-making through the unification of manufacturing and marketing toward the strengthening of global competitiveness. This is a result of dedicated machine tool manufacturers striving for enhanced competitiveness by promptly making decisions following the drastic changes in the demand structure of the machine tool market – both inside and outside Japan – over the last few years.

1. Background to the establishment

Japan's machine tool industry has recovered from the Lehman Crisis in 2010, with 2015 orders expected to hit a record-high level of 1.55 trillion yen at the beginning of this year. However, the environment surrounding the machine tool industry has drastically changed over that period. For example, the ratio of domestic and overseas demand in orders for the industry switched places before and after the Lehman Crisis, amounting to 70% overseas and 30% domestic, reflecting the rapid growth of the emerging markets in China and Southeast Asia, as well as the revival of manufacturing in the U.S. In respect to technology, amid the qualitative changes that have recently emerged following the advancement and anticipation of customer needs inside and outside Japan, a new technical tide of manufacturing innovation based on information-communication technology such as IoT (Internet of Things) is being acknowledged. At the same time, high-spec automation and energy-saving technology are also in demand in both developed and emerging countries.

Given such an environmental change, the MHI Group's machine tool business is also expected to boost its competitiveness by improving organizational agility in terms of customer facing and business operations under the current circumstances where machine tool manufacturers all over the world are fiercely strengthening their competitiveness. As such, we established a subsidiary that integrates manufacturing and marketing as a structure to clarify our business responsibility, accelerate decision-making and enable us to enhance our ability to respond to changes in the market environment and customer needs. Although MHI has already endeavored to develop the industry and infrastructure inside and outside Japan through manufacturing pursuing high precision and high productivity in the form of one department in the company and a pioneer manufacturer of machine tools, our higher agility brought about by this corporate spinoff is expected to further strengthen and expand the business moving forward.

2. New company outline

The outline of the new company is shown in **Table 1**.

Table 1 New company outline

Name	Mitsubishi Heavy Industries Machine Tool Co., Ltd.
Address	130 Rokujizo, Ritto, Shiga, Japan
Name and title of representative	President Seiji Shirao
Business content	Design, manufacturing, marketing and consulting of machine tools, cutting tools, engine valves and related products, as well as the installation, operational instruction, repair, renovation, inspection and maintenance of said products
Capital	3 billion yen
Number of Employees	Approximately 1,000 employees
Operation/service bases	Japan : Tokyo, Nagoya, Osaka, Hiroshima The Americas : U.S.A., Mexico, Brazil Europe : Germany Asia : China, Thailand, Indonesia, India, Philippines, Taiwan, Korea
Overseas manufacturing bases	U.S.A. : Design, manufacturing and marketing of broach tools and broaching machines (Federal Broach Holdings, LLC) India : Design, manufacturing and marketing of gear cutting tools (Mitsubishi Heavy Industries India Precision Tools, Ltd.) China : Assembly of gear cutting machines and large machines Mitsubishi Heavy Industries (Changshu) Machinery Co., Ltd.

3. New company's business development

As its management philosophy, the new company advocates "optimal proposals to meet goals and solve issues concerning customer production activities, as well as contribute to boosting the value of customer manufacturing." The company is operating in the following three areas, aiming to be the top global manufacturer in each of them.

(1) Gear manufacturing system business

Dealing with gear cutting tools along with the full range of gear machine tools such as hobbing machines, gear shaping machines, gear shaving machines, gear grinding machines and helical broaching machines, the company has the advantage of being able to propose optimum solutions for the diverse gear processing-related challenges that the customers face. MHI has taken a solid stance as a leading company in the gear milling area, launching a dry-cut gear hobbing machine that uses no cutting oil at all ahead of the rest of the world in 1997, and recently developing the world's first internal gear grinding machine for volume production (2009) and Super-Skiving System (2014) as new products and technologies.

The new company will aim for the world's highest position by continuing to develop machines and tools that boast the greatest product strength, enhance collaborations for such development and establish the optimum global production framework.

(2) Total solution business

Adapting to the changes in the business environment, the new company is converting its business model with the aim of expanding its total solution business as the second pillar following special-purpose machines and large machines (vertical precision milling machines and horizontal boring mills, etc.) that are core facilities developed through its abundant experience of delivering products to energy, environment and aerospace manufacturing plants of MHI and automobile manufacturers (engine transmission production sites), one of Japan's mainstay industries. Specifically, the new company will shift its focus from the previous hardware sales by unit to a solution proposal-type business, share in customers' diverse issues and challenges at manufacturing sites from the discussion phase and offer customers optimum solutions that make the most of its engineering, processing technology and tooling capabilities. In addition to adapting to new facilities and production lines, the new company will focus on the overhaul, retrofit and maintenance service businesses in accordance with customer needs.

(3) Advanced Manufacturing System business

To realize innovative manufacturing for both customers and the MHI Group, the new company is approaching the research, development and commercialization of cutting-edge and new material milling technologies, as well as new methods and production facilities, through

