

A coalition of manufacturing, sales and research to earn customer trust

Here at Mitsui Chemicals, we are committed to improving the marketing capabilities of all of our employees. To do that, it is essential to build trust with our customers, by understanding their difficulties and providing them with advice, particularly via sales departments. One frontline staff in particular have breathed new life into their operations and are continuing to take on new challenges based on an integrated, wholly customer-oriented approach to business, a coalition of manufacturing, sales and research.

Success in business depends on the strength of your relationships with the customer

One of the products handled by the Functional Film Div., part of Mitsui Chemicals' Fabricated Products Business Sector, is Mitsui Pellicle, a dust-proof film designed to keep semiconductor photomasks clean. Made from a unique ultra-thin dust-proof membrane, it is used by semiconductor manufacturers as part of the photolithography* process. Films vary in thickness from 0.8 to just 0.3 micrometers.

"The key thing about pellicles is that they are custom-made products," explains head of pellicle operations Fumiya Miyata. "Pellicles vary in size and thickness depending on the semiconductor photomask being manufactured by the customer. We have over 100 different products at Mitsui

Chemicals alone. The only way to maintain sustainable growth is to precisely identify customers' needs and continually refine and improve your products. That's the sort of business it is."

Mitsui Chemicals was one of the first companies to enter the pellicle sector and has already built up a track record dating back almost 30 years. The global pellicle market is estimated to be worth around ¥10 billion. Although it isn't a huge market, that makes it all the more profitable for the leading companies. Including Mitsui Chemicals, there are currently six companies in competition with one another within the global market. "Shortly after joining the company, I spent three months training with the company's pellicle manufacturing department and was amazed to witness the development of such cutting-edge products." (Miyata)

Before he knew it, Miyata found himself back on the frontline in October 2007 as the head of Mitsui Chemicals' pellicle operations. To his dismay however, those same cutting-edge products seemed to have lost their shine.

Know your customers and learn from them

"It just didn't feel right," recalls Miyata. "The sense of pride in working on cutting-edge products had gone, especially amongst younger members of staff." It turned out that Mitsui Chemicals had been left far behind in this particular cutting-edge field by its rivals.

There were numerous reasons, including the fact that the company had previously experienced nothing but success in its position as industry leader, the fact that manufacturing, sales and research staff had lost sight of their roles and connection to one another, and the fact that cracks had started to appear in terms of quality control.

The department responsible for manufacturing pellicles at the Iwakuni-Ohtake Works includes a production manager, a production technology team, a development team and an R&D team to name but a few. Miyata told them all to focus on two specific objectives. The first was to get to know their rivals as well as possible. The second was to go out to see customers and ask them about how they felt about the company's products in person. "In both cases, the aim was to get members of staff to understand the position they were in and work out what needed to be done. I hoped that process would restore their sense of pride in



1 Some of the latest photomask products can cost several hundred million yen per set
2 Pellicles are manufactured and checked in a clean-room environment

* Photolithography is a light-base process that involves transferring photoresist (light-sensitive resin) into a specific pattern or design.



Fumiya Miyata

Manager, Pellicle Team Leader and Package Team Leader, Specialty Film Dept., Functional Film Div., Fabricated Products Business Sector



Kenji Kuwahata

General Manager, Pellicles Sect. Manufacturing Dept.-2, Iwakuni-Ohtake Works

working on world-leading cutting-edge products.”

Miyata actively organized workshops focusing on technical trends at rival companies and continued to discuss what they were doing differently. This also

served to reaffirm Mitsui Chemicals’ primary objectives in the pellicle sector.

He also organized frontline networking events to give members of staff responsible for manufacturing pellicles the opportunity to talk to manufacturing, technical and quality control personnel from semiconductor photomask manufacturers. This enabled them to ask their customers directly about matters such as handling and inspecting pellicles. Dealing with tough questions and harsh criticisms repeatedly underlined the importance of good manufacturing practices and ensured that the quality of the company’s pellicles continued to improve day after day.

Miyata placed his old friend Kenji Kuwahata in charge of manufacturing pellicles. Having previously worked for a semiconductor component manufacturer, Kuwahata brought with

him a unique perspective in terms of quality. He put his quality control expertise to good use on the shop floor and set about establishing an improved manufacturing framework.

Kuwahata wouldn’t accept improvements unless they were backed up with supporting data. His determination brought a sense of ambition back to the shop floor. “There is a saying, ‘if you know your enemy and know yourself, you can win a hundred battles.’ It is my job to translate that into the process of manufacturing on the shop floor.” (Kuwahata)

Kuwahata also made manufacturing and R&D staff work in the same office and installed a conference call system for talking to customers, to ensure that everyone would have the same understanding of what their customers were thinking. “Our role is to take customers’ technical requirements and run them past manufacturing staff straight away,” explains R&D team leader Takashi Kozeki, “whilst also providing the necessary support to make quick decisions and take

decisive action.”

Getting customers to openly confide in Mitsui Chemicals

“When you’re working on the frontline with cutting-edge technologies like semiconductors, the issues you face become very specialized,” explains Miyata. “Customers will only confide openly in people who understand those issues and can translate that understanding into a quick, organized response. That’s how business works with cutting-edge technologies. The only way to survive is to earn customers’ trust based on real environments, real products and real situations. That has to be part of your own love of manufacturing too.”

Sure enough, Mitsui Chemicals is on its way to recapturing the top spot in the cutting-edge pellicle sector, having previously been on the back foot. With overseas sales accounting for well over 50%, it has been transformed into a genuinely global business. This is yet another example of Mitsui Chemicals’ customer-oriented approach based on the realities of business.



Takashi Kozeki

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