Quality Made in China

There are many producers of the large-scale equipment used in chemical plants, but which ones can deliver the quality standard required by Bayer for the best price? Finding them is a job for Bayer Technology Services – for instance, in China.
It is another one of those frequent gray days in Shanghai: 24° C or 75° F, a dull beige sky with, as nearly every day in this bustling Chinese city, poor visibility. Yesterday the temperature was only 8° C, or 46° F. “I find it very difficult to get used to this climate,” says Dr. Norbert Schweigler, as he climbs into his car. The air conditioner is operating at full blast.

Schweigler has already been working for Bayer Technology Services in Shanghai for three years, and he seems to have settled in. “Because in spite of the environment, it is really quite fascinating here.”

Schweigler is responsible for Process & Equipment. Together with his team and the materials specialists at Bayer Technology Services he is constantly on the lookout for producers of the various kinds of equipment that Bayer requires for its extensive manufacturing facilities – in China and elsewhere in the world. Schweigler sees his job as a “positive consequence of globalization”, as he describes it.

Some ten years ago he would not yet have been needed for this work – at least not at this location. In those days, the equipment for the construction of the Bayer plant near Shanghai was largely sourced from outside the country. To be more specific: some 90 percent of the equipment came from German or European manufacturers.

“In the meantime, however, the world has changed” says Schweigler, adding emphatically: “And the Bayer Group too.” Nowadays, the equipment for Bayer plants is manufactured all over the world. “It is our job to find out where the production is especially cost effective – as well as of particularly high quality.” After all, “Bayer standards for quality and safety are the same throughout the world.”

The Morimatsu (China) Group is on the program today. The Japanese manufacturer of plant equipment supplies a variety of industries. One of the plants is located in Jinwen Road, somewhere near the Pudong International Airport Industrial Park in the Eastern area of the megacity. The drive will take an hour and a half, Schweigler remarks completely unruffled. “In Shanghai virtually everything is far away.”

Initially, the excursion takes us past countless high-rise residential buildings, few of which are older than five years. New living space, which can be built quickly and inexpensively, is constantly required for the 25 million inhabitants of Greater Shanghai. This expanse is followed almost seamlessly by a whole jungle of high-tension pylons and power supply lines. After that, one industrial zone adjoins the next. “Ten years ago, there was nothing here,” says Schweigler, indicating with a stretch of his arm a wide expanse reaching to the horizon, but then immediately corrects himself: “What am I saying! It is more like five years ago!”

The Morimatsu (China) Group greets us in the middle of this former void: “Welcome Bayer” is written in illuminated lettering above the entrance of the company’s administration building. Behind this stands a production

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A close partnership and a commitment to quality: Windy Luo at Bayer MaterialScience and Sherry Zhao, Deputy General Manager of the Morimatsu (China) Group. Yangjie Lin at Bayer Technology Services in China (far left) is always on the lookout for the best and the most cost-effective producers.

Quality!” she exclaims, as a wide smile spreads across her face.

However, it is not as if this quality has simply fallen into Bayer’s lap. “Ten years ago, for example, you still could not find any good welders in China,” Schweigler recalls.

So, the company gradually set up a quality management hall, which is so enormous it could easily hold three or four jumbo jets.

Just a few years ago, the company proved it could handle even more expansion. In the available area of the new site there is enough space to recreate the Great Pyramid of Cheops twelve times over – each standing next to the other. “We are very pleased to have been able to build up such a strong business relationship with Bayer,” says Sherry Zhao, Deputy General Manager of the Morimatsu (China) Group. And she also knows the secret behind making this close relationship possible in the first place:
system, and from the beginning it was based on Bayer’s stringent requirements. At first this appeared to be a sheer insurmountable hurdle for suppliers in Asia. Schweigler: “Because the emphasis was simply always on the price, and almost never on the quality.” It is an experience that experts from Bayer Technology Services have made virtually all over the world. Whether in China, India or Brazil – at first their search for the required quality was almost always in vain.

However, in the meantime, the situation has changed significantly. Today, Bayer MaterialScience purchases about 60 percent of its high-quality equipment in China, and since 2011, also in India. With prices some 30 percent lower than those of European competitors, the cost advantage is enormous. But what does this mean in real terms? Schweigler does not take long to answer. “47 pieces of equipment were recently purchased here come to mind. We were able to save several million dollars as a result.”

With such significant cost advantages it is no wonder that the equipment is not only used in the gigantic TDI plant at Bayer’s site in Shanghai. A similar plant in Dormagen, Germany, is also fitted out with the corresponding equipment, as is the Baytown site in the United States. But why does Bayer MaterialScience rely on the expertise of Bayer Technology Services? Windy Luo, who is Head of Global Sourcing of Fabricated Equipment at Bayer MaterialScience, is quick to provide the answer: “The search for suppliers and, if necessary, their certification are very complex tasks, and Bayer Technology Services has the technical know-how to support us in this work.” We really have “had very good experience with the colleagues from Bayer Technology Services in the past”.

For instance, in the case of Morimatsu. Here, a 56-metric ton distillation column with an evaporator is currently being produced for a plant to be operated by Bayer MaterialScience, in which a raw material for polyurethane production will be manufactured. With sparks flying in all directions, the welders are working diligently to make sure the tight delivery deadline can be met. “Reliability is another very important criterion when choosing a supplier,” Schweigler stresses. “And of course the handling of our know-how as well.” What does he mean by this? “Well, to put it plainly, I mean intellectual property, which is a major issue here in China.”

Just how seriously this subject is taken is witnessed by the photographer on site. He is about to take an overview photo of the production hall when a Morimatsu employee gently pushes the lens of his camera to the side. So, he makes a new attempt, and again the man intervenes politely, but firmly. “We kindly ask you to photograph only Bayer orders,” is the explanation. “We owe that to our other customers.” It is clear that Morimatsu is one of the ex-
only constantly searching for new challenges, but also want to move up the career ladder quickly and earn higher salaries. The obvious consequence is that some 20 to 30 percent of all staff members have to be replaced every year – by people who usually have not yet achieved the required level of expertise.

Quality control will thus remain an important task for Schweigler and his team. Furthermore, at least one new production plant is added to the market every year, which means the same questions of quality, reliability and prices arise. Schweigler says: “The market is in a state of flux. Hence, there is little chance of reaching a stage when we can rest on our previous accomplishments.”

Bayer began its search for appropriate manufacturers very early on, and even today, the company is still playing a trailblazing role. Nevertheless, it is obvious that despite all the technical progress in China, India and other countries with fast-growing economies, there is no way that Bayer’s requirements can entirely be met in these markets. The reason is simple: the production of static equipment does not require as much know-how as the fabrication of, for example, special pumps or stirrers. Such components continue to be sourced in Europe. “Generally speaking, this rule applies to everything that moves in production facilities.” Schweigler’s prognosis: “It will most certainly take a few more years before these parts can be produced in Asia and still fully meet our quality requirements.”

The clock shows 11.30 a.m. in the production hall of the Mori-matsu plant. Where just minutes ago welders were busily working on the equipment for Bayer MaterialScience, everything has now suddenly stopped. Even the deafening background noise of minutes ago has fallen silent. From a distance, we briefly hear the sound of a door shutting, and then all goes quiet. “It’s the lunch break,” says Schweigler and adds, as an explanation for the visitors from Europe: “Lunch breaks are taken very seriously over here.” Not surprisingly, the Chinese thus have the saying, “To the people food is heaven.”

“To be perfectly honest, however, I prefer a different Chinese saying even more,” says Norbert Schweigler, because of its global relevance. The Chinese say learning is like rowing against the current: as soon as you stop, you drift backwards. “So, you see,” comments Schweigler with a smile, “That is the reason why I see China as a truly great nation of rowers as well!”

A set of rules for all suppliers

With more than 100,000 suppliers, Bayer purchases goods and services from all over the world. The respective principles for procurement are standarized.

The basis for Bayer’s sustainability-orientated supplier management is a guideline that is valid for the entire Group. These rules for the company’s sourcing policy are found in the binding code of conduct, describing the sustainability principles and requirements for suppliers. Suppliers who do not honor these principles cannot even take part in Bayer’s tendering process in the first place.

Those responsible check at regular intervals whether the suppliers actually implement the requirements specified in the code of conduct – and this review includes the entire supply chain. The checks are conducted with the help of supplier assessments and the appropriate audits. If the on-site audits show potential for improvement, mandatory action plans with firm implementation dates are agreed. After all, the goal of the company is to ensure stable and long-term relationships with its business partners.