Blurred line between East and West

In terms of production philosophy and methods, the line between East and West is becoming less defined. An individual approach seems to be the trend.

By Petra Lodén
Illustration Björn Lundqvist

> East is east and west is west and never the twain shall meet, Rudyard Kipling once wrote. He was referring to the fact that the British tended to force their own conditions on the places they colonized rather than adapting themselves to foreign conditions.

In the industrial context, there has in the same way been a sharp line between East and West, Asia traditionally relying on relatively low levels of automation while the West tends to take a more comprehensive, automated approach.

Now, however, the sharp differences in production processes between the East and the West are disappearing. Instead of Asian production philosophies being pitted against those in Europe or North America, more and more each region, business or time period is requiring its own production strategy.

“European companies are aware of the fact that each country – and sometimes even each part of a country – requires a unique automation strategy,” says Dennis Fritsch, of the Fraunhofer Institute for Manufacturing Engineering and Automation in Stuttgart, Germany. “The strategy is influenced by many factors, such as economic aspects, but it is also determined by how easy it is to get the required specialists, how easy it is to get spare parts and so on.

“A robot is a very powerful machine, but it needs skilled labor for maintenance and programming,” he continues. “People must have sufficient education to work with robots. German companies, for example, have a lot of experience with robotics and automation. In many other countries this is lacking. As a consequence, these countries concentrate on less comprehensive applications of robots and automation technologies.

“Complex systems are more expensive,” Fritsch adds. “A robotic solution can be a good and economical solution in one country and a less economical solution in another country.”

But now in Asia the situation is changing, he says. Automation is booming and the demand for skilled staff is huge. And while there are increasingly more people in Asia with the requisite education to work with robotic solutions, still more are needed. The demand is higher than the supply.

Moreover, says Fritsch, as industries in Asia and elsewhere turn to automation, more and more complex solutions are being introduced. At the same time everyone is keeping a very careful eye on costs. Efficiency is the key word. How a manufacturing plant is organized very much relies on each individual need, the product, application and market.

The concept at the forefront is “lean production” – a production philosophy that can be adopted regardless of the location or business a company is in.
The rapid growth in China is enabling companies to invest in more advanced equipment and new facilities,” he continues. “Foreign companies are bringing their latest products and production technologies into China, and this will help China to be even more efficient in the future.

But, Rautavuori cautions, “maintenance aspects are not well known in China, and this will be one of the concerns as automation increases.”

For his part, Fritsch believes that the comprehensive and the simple ways of organizing production will continue to co-exist even as the East embraces automation.

“Both methods are good methods, because they are appropriate for the local constraints,” says Fritsch. “There are still a lot of companies in Germany and the West that are looking for simple solutions, and at the same time there are a growing number of companies in Asia that are looking for more advanced manufacturing technologies.”

First introduced by Toyota as the Toyota Production System, lean production dominates businesses and organizations worldwide – in all areas, from manufacturing through to R&D and administration.

Joni Rautavuori is in charge of ABB’s global robot production. Based in Shanghai, he has considerable experience with Asian and European markets.

“The Chinese people are said to be cost-conscious people and good at saving,” he says. “In the West, we tend to have a lot of ‘nice to have’ things in our products and factories. Chinese are good at doing ‘good enough,’ which keeps methods simple and costs down. Of course, this also brings with it a risk of low quality if it is not done properly.

“Due to the availability of low-cost labor, the level of automation in China is still relatively low,” Rautavuori says. “But we will see increases in the coming years as more focus is placed on quality, safety and increased production volumes.”

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