

## Shanghai Daikin Air Conditioning Co., Ltd.

### Daikin Uses JP1 to Advance their Chinese Market Strategy to Expand Sales and Increase Earnings

Carrying out production in China to achieve maximum sales in that market. SHANGHAI DAIKIN AIR CONDITIONING CO., LTD. of the Daikin Group has achieved local production, local sales, and local service in China, which is simultaneously the world's largest production base and the world's largest market. We spoke with Mr. Tabuchi, the manager of the information system that is the backbone of the company, and Mr. Osoegawa of Daikin Information Systems Co., Ltd. They transferred systems developed by Daikin from Japan to China, to strengthen the production and supply systems there, and introduced Hitachi's Integrated Systems Management JP1 to support the operation of these systems. In this article, we examine the introduction of this support system.

#### Winning in China

This is the key to winning on a global scale. It can be said that the entire world is represented in China. Beijing is in a cold climate just like Russia and Northern Europe, while Guangzhou is in a subtropical region similar to Singapore and Thailand. Daikin believes that the development and expansion of products that are applicable to any region in China is the key to winning in the global market.

The success of Daikin's operations in China is due to effective business expansion through concentration on the company's strengths, transferring Japan's best sales and manufacturing know-how, conquering the world's largest market in Shanghai, creating strong brands by improving name recognition, and the quick infusion of resources. However, more than anything else, their success to this point is due to top management's deep understanding and strong will.

#### Technology transferred to China

The technology is the ALPHA system developed by Daikin, which forms the backbone of the company's manufacturing know-how. ALPHA (Advanced Lean Production system for Highcycle Action) is a production management system for flexible production in response to the 3-5 day short-cycle market fluctuations in Japan. In other words, it implements a high-cycle production method that uses the sales results from today's market to make modifications to the production plans for 3 to 5 days in the future. It uses information sharing for operations that work in parallel and a short-cycle management system, rather than serial links with conventional organizational units, to respond to the rapidly changing market. This requires a transition from mixed production for a single product (high-mix low-volume production), synchronous production both inside and outside the company, and consolidated management of production information, to a just-in-time production method that produces only what is needed, when it is needed, in the volume that it is needed. In other words, the ALPHA system functions as an IT system that supports production that does not cut into minimum

product inventory, while also functioning as a production management system for establishing production that can always respond to rapid changes in market trends.

#### Daikin Group's 17 Companies in China

The group has more than 5500 employees throughout its companies and businesses in China. One of these, Shanghai Daikin Air Conditioning (Shanghai) Co., Ltd., was established at the end of 1995. Eight years later, in November 2003, the ALPHA system was introduced in the Shanghai factory to strengthen the production and supply systems in China. The three companies Shanghai Daikin Air Conditioning Co., Ltd., Daikin Air-Conditioning System (Shanghai) Co., Ltd., and Daikin Central Air-Conditioning (Shanghai) Co., Ltd. are all located within the same 130,000m<sup>2</sup> lot. However, the systems of all three of these companies are managed by the Information Systems Department at Shanghai Daikin Air Conditioning Co., Ltd. To achieve the short-cycle production discussed above, part orders and other process that use large volumes of data are performed at night when comparatively more resources are available. In addition, for the ALPHA system used in China, parallel processing management/control and system shutdowns are not allowed, to prevent the mixing of data during the limited 8-hour period at night when the data for the three companies is processed. However, automated machine processing (unmanned, scheduled startup) was required to implement night-time processes regularly without procedural mistakes, since they are too complicated to perform manually.

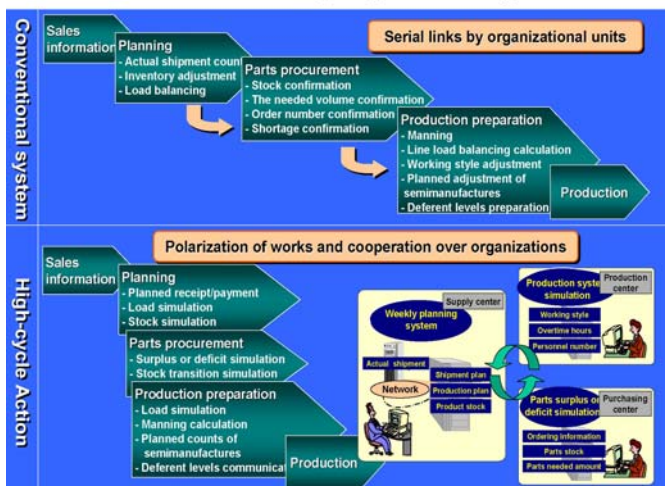


Mr. Tabuchi,  
Information Systems Manager,  
Shanghai Daikin Air Conditioning Co., Ltd.

*"The fact that JP1 had been introduced in Daikin's Thailand factory in 2002, plus the fact that JP1 has a support base in Shanghai, led to our decision to introduce it here. The work at the time the system was introduced actually went very smoothly, and we found no trouble when connecting with other systems. The after-sales service provided by the Hitachi staff has been sincere, quickly adaptable, and they have provided a good support system."*

Mr. Tabuchi

### The Overview of High-cycle Management

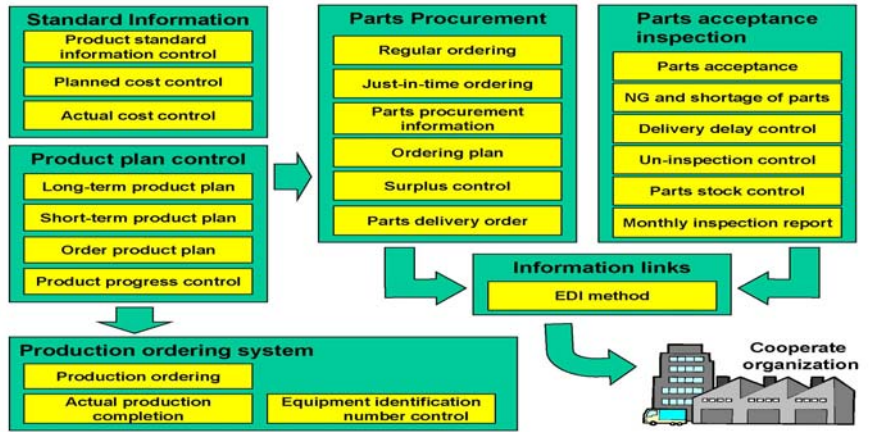


# JP1



New Product "E-MAX"

### Subsystem configuration of ALPHA



Mr. Osoegawa (right).  
Daikin Information Systems Co., Ltd.

Kyoko Koizumi (center),  
JP1 Sales Manager,  
Hitachi Information Systems (Shanghai)  
Co., Ltd.

*"Even when monitoring the system operation conditions for these three sites from Japan, the viewer is very easy to use. In addition to schedule management functions, the crisp operation of the viewer on the GUI is extremely useful for an environment where work is performed overseas by WAN."*

Mr. Osoegawa

### Shanghai Daikin

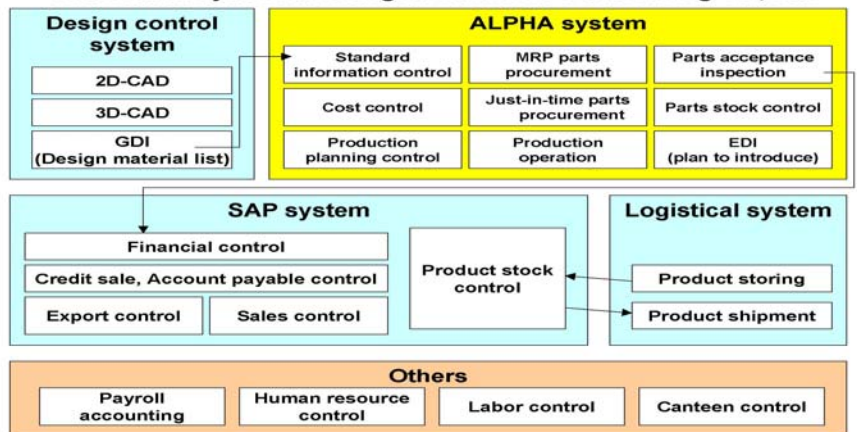
Shanghai Daikin selected Hitachi's Integrated Systems Management JP1 to support the ALPHA system for short-cycle management. JP1 is a tool for the maximum support of system operations that never shut down. Shanghai Daikin recognized the superior job scheduling functions of JP1, and introduced it as one of the components in the ALPHA system. JP1 primarily manages the scheduling that controls night-time batch processing. With the ALPHA system and the JP1 support tool, the relationship between online service time and night-time batch processing can be maintained continuously, throughout their 24-hour operations. Mr. Tabuchi said, "The fact that JP1 had been introduced in Daikin's Thailand factory in 2002, plus the fact that JP1 has a support base in Shanghai, led to our decision to introduce it here. The work at the time the system was introduced actually went very smoothly, and we found no trouble when connecting with other systems. The after-sales service provided by the Hitachi staff has been sincere, quickly adaptable, and they have provided a good support system." Daikin Industries introduced JP1 in its Thailand factory in 2002, its Shanghai factory in 2003, and its Czechoslovakia factory in 2004. Mr. Osoegawa, who takes business trips to local sites to manage their systems, said the following about the introduction of JP1 at

these three sites: "Even when monitoring the system operation conditions for these three sites from Japan, the viewer is very easy to use. In addition to schedule management functions, the crisp operation of the viewer on the GUI is extremely useful for an environment where work is performed overseas by WAN."

### Daikin's Strategy in China

Daikin's strategy is to use the strong support of JP1 to implement non-stop, stable operation of the ALPHA system transferred from Japan as the backbone of the company's manufacturing know-how, to provide local production, local sales, and local service in a market that will expand their sales and increase their earnings. China is seen as the world's largest production base and the world's largest market. With the ALPHA system and the JP1 support tool, the relationship between online service time and night-time batch processing can be maintained continuously throughout their 24-hour operations. They will use around-the-clock system operations to respond to the continuing and intensely rapid fluctuations in the Chinese market. Business in China is nothing if not rapid - only those companies that can offer a tremendously rapid response to the severe fluctuations in the market will survive there.

### Information System of Shanghai Daikin Air Conditioning Co., Ltd.



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