GLASSTECH WORLD ASIA

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SHANGHAI OFFICE SERUES AS GLASSTECH POINT OF CONTACT FOR ASIA

Glasstech's established and growing customer base in China and the Pacific Rim is making good use of the firm's recently opened representative sales office in Shanghai.

"The new Glasstech office in Shanghai has brought us closer to our architectural and automotive glass customers and provides more timely response to their needs, as well as quickly reacting to new sales opportunities," said John Baxter, Glasstech's Senior Vice President, Marketing & Sales.

Country Manager for China and Shanghai Office Manager Yang Ping and his staff provide sales and service support as well as information on Glasstech aftermarket services to Asian customers in local time.

According to Ping: "There continues to be a strong market demand for Glasstech automotive bending and tempering systems, especially the DB $^{\text{\tiny TM}}$ 4, and there is likely to be a growing demand for the EPB-SL $^{\text{\tiny TM}}$. Also, there is an excellent opportunity for the FCH2 $^{\text{\tiny TM}}$ architectural tempering system in view of the construction projects underway and planned in Asia."

Qingyu "Simon" Wang, Sales Manager, and Yun "Angel" Yin work along with Ping to ensure the Shanghai office is responsive to all inquiries. Wang previously worked in sales for a Shanghai-based glass machinery company, while Yin's experience includes positions at several multinational corporations.

"We're very encouraged to note the positive impact that the Shanghai office is having on Glasstech's business in a very short period of time," Baxter said.



SHANGHAI OFFICE GRAND OPENING: Glasstech officials greet representatives of China's Fuyao Glass Industry Group Co. during recent grand opening ceremonies for the Glasstech Representative office in Shanghai. Representing Fuyao Glass were Madame Li Wei Wei, foreground right, Vice Chairman, and Liu Zhang Hua, with back to camera, General Manager. Glasstech officials included, from the left, Yang Ping, Country Manager, China; John S. Baxter, Senior Vice President, Marketing & Sales; Mark Christman, President; and Jay K. Molter, Director, Marketing & Sales.

GLASSTECH FCH2TM OFFERS MOST EFFICIENT PROCESSING OF LOW-E GLASS WHILE REDUCING ENERGY COSTS

China's commercial building boom continues, and indications are that residential and nonresidential construction in China will grow at or above 7 percent from 2003 to 2008.

This continued growth translates into an expanded market for Low-E glass, which is processed most efficiently on Glasstech's gas-fired, forced convection FCH2 $^{\text{\tiny M}}$ Tempering System for architectural glass.

"The Shanghai government could require use of energy-saving Low-E glass in all commercial buildings within the next five years, and China's central government could follow Shanghai's requirement soon after," Glasstech President and CEO Mark Christman said. "The Glasstech FCH2 provides the ideal solution for the efficient processing of Low-E glass."

The coating, which gives Low-E glass its energy-saving capability, also makes it more difficult to temper. Low-E glass resists electric radiant heating. As a result, many existing radiant systems require more time to heat the glass, translating into reduced system efficiency.

A comparison of a similar-sized FCH2 and an electric radiant system, based on Chinese energy prices, indicates the FCH2 processes Low-E glass at a cost 35 to 45 percent less than the electric radiant system. This comparison is based on the cost per unit area of product processed on each system. For uncoated glass, the FCH2 processed the glass for I0 to 20 percent less cost than the comparable electric radiant system.

"Even with increasing natural gas costs, the FCH2 still offers the lowest potential cost per unit area of glass produced because it embodies shorter cycle times and greater heating efficiencies than standard electric radiant heaters," said Jay K. Molter, Glasstech's Director of Marketing & Sales.

Under normal circumstances, the FCH2 can heat clear glass at a typical rate of 30 seconds per millimeter of thickness and high-performance, soft-coat Low-E glass at a typical rate of 33 seconds per millimeter. This reduced heating time provides for higher quality with less distortion and dramatically improves productivity and reduces processing cost.

GLASSTECH DB™4 HELPS CHINESE AUTOMAKERS MEET INCREASED DEMAND FOR AUTOMOTIVE SAFETY GLASS

Amidst speculation that China could become the world's leading automobile producer by the end of the decade, auto sales again increased in China during 2004. Forecasts for 2005 call for approximately 10 percent growth to 5.6 million units, up from 5.07 million units in 2004.

As China's auto industry continues to grow, so also does the industry's need for advanced glass processing technology for the efficient production of increasingly complex-shaped glass parts. Glasstech has been supplying such advanced glass processing systems to Chinese glass companies for more than 25 years.

Today, Glasstech's auto glass systems produce glass sidelites, quarterlites and backlites for eight of the country's top 10 glass processors.

The DB[™]4 Advanced Bending and Tempering System has set the standard worldwide for the production of complex, press-bent sidelites, quarterlites and backlites of high optical quality. Glass from these efficient systems is used in a wide variety of vehicle models built in China, including Audi, Buick, Honda, FAW, Ford, Peugeot-Citroen, Suzuki and Volkswagen.

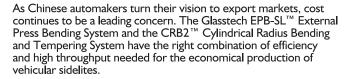
As glass processors around the world continue to require higher productivity, higher quality and higher efficiency for their bending and tempering systems, Glasstech continues to add innovations to the DB 4.

According to Norman Klatt, Vice President, Sales, Asia/Pacific: "Recent enhancements to the DB 4 have improved optical and shape quality as well as increased glass yield. A new quick-change tooling system and a fast cycle development have dramatically reduced tooling changeover time from the traditional 6 to 8 hours to 90 minutes and increased production by 20 percent or more."

The DB 4 Quick Change and the DB 4 Fast Cycle options can be ordered on new DB 4 systems or retrofitted to existing models.

In addition to the system enhancements, Glasstech has made significant efforts to improve its tooling support. Glasstech has reduced tooling delivery time in Asia by as much as 30 percent.

EPB-SL^{IM} AND CRB2^{IM} IDEAL FOR BENDING AND TEMPERING AUTO SIDELITES



"The glass processors that supply the automakers require systems that produce parts having very accurate peripheral and body shape and the highest optical quality," said Norman Klatt, Glasstech's Vice President, Sales, Asia/Pacific. "They also require systems that offer reduced operating costs, improved productivity and minimized tooling costs. The Glasstech EPB-SL and CRB2 are able to meet these requirements."

The EPB-SL and the CRB2 systems bend, temper and heat-strengthen sidelites and other glass parts.

The EPB-SL has exceptional versatility that enables it to form cylindrical-, compound- and complex-shaped parts as well as symmetrical or asymmetrical parts. An advanced model EPB system utilizes the patented Glasstech FanRoll System to preform glass inside the furnace, reducing the final press motion and decreasing cycle time.



By reducing processing time at the external pressing station, glass can be processed at a lower temperature, improving optical quality.

Parts produced by the EPB meet stringent automotive quality standards, including those of Audi, Volkswagen, Mercedes, Peugeot, Renault, Honda, Toyota and Nissan.

The EPB-SL can be configured as a high-capacity system with cycle times of approximately 7 seconds per part, or as a moderate capacity system with cycle times of approximately 15 seconds per part. The standard EPB processes parts ranging in length from 381mm to 1220mm and width from 406mm to 864mm. A small-parts option allows processing of parts as small as 254mm by 228mm.

The CRB2 can achieve similar cycle rates. It can process loads up to I 220mm wide and I 200mm long with cycle times of 7.5 seconds. It forms cylindrical shapes to exacting tolerances with the highest level of uniformity and excellent quality control. The glass produced meets all automotive standards. The CRB2 does not require part-dedicated tooling and offers part changeover in a matter of minutes

The EPB-SL and the CRB2 can be equipped with an electric radiant heater or gas-fired forced convection heater, depending on customer preference and the power supply available.



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