

Value comes from professionalism

On the road to success with Tech-Long!



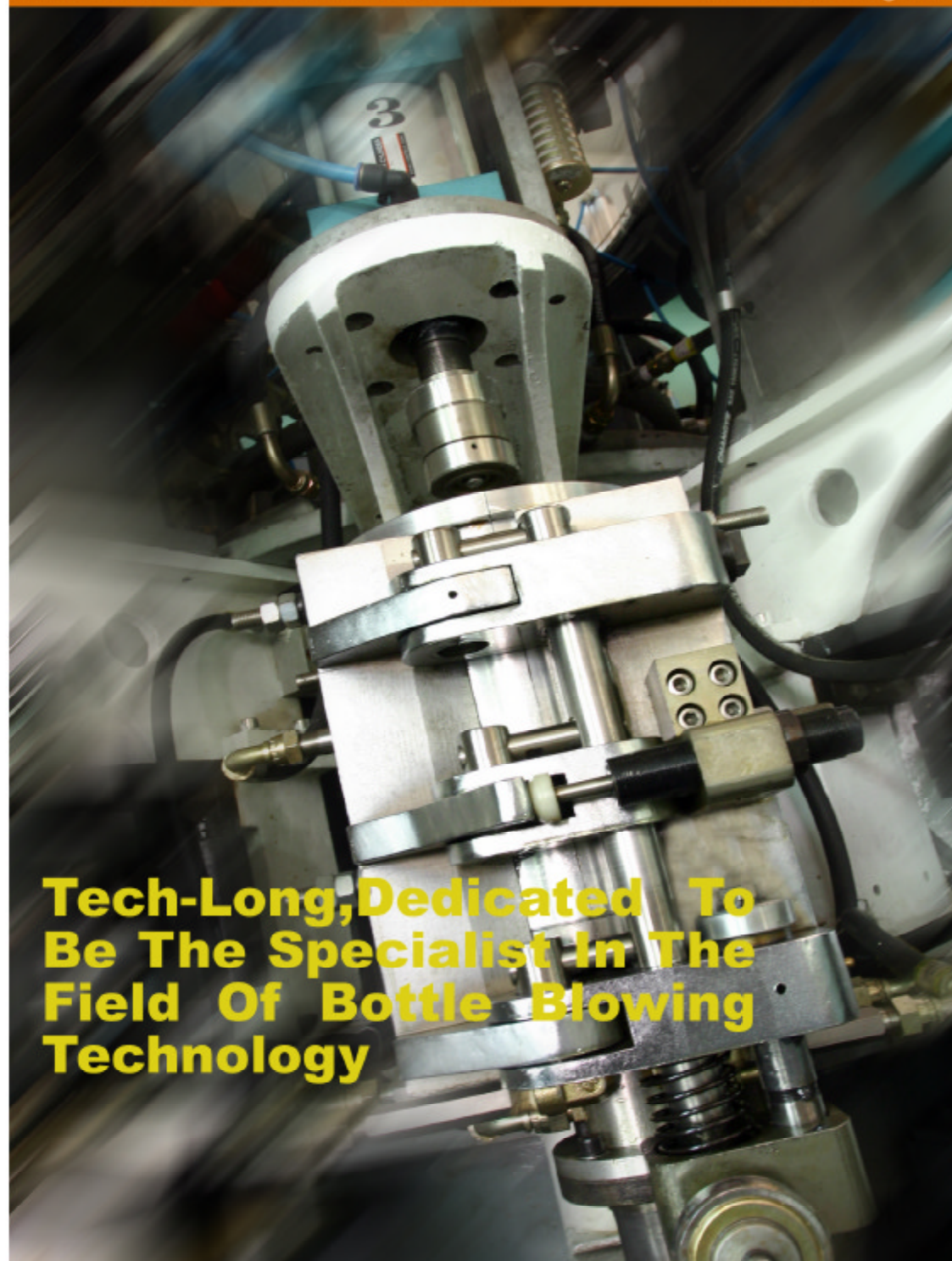
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Tech-Long, Dedicated To Be The Specialist In The Field Of Bottle Blowing Technology

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TECH-LONG

To Be The Specialist In The Field Of Bottle Blowing Technology

Tech-Long will always maximize our customers' value

Tech-Long has been dedicated to finding better solutions for our customers and to meet customer demands. We make our commitment come true with our quality products, reliability and security of our production techniques and management: Runs for you.

On August 13, 2004, Hong Kong Swire Coca-cola signed a contract with Tech-Long to purchase a RJM 10 fully automatic PET bottle blowing machine. This is the second cooperation with Coca-cola since Guangdong Swire Coca-cola had placed an order for a CSD bottling production line.

In May, 2004, the improvement for RJM 10 bottle blowing machine was completed successfully, with guiding rail and robotic arm upgraded, with the maximum production capacity of the machine reaching 12000 bottles/per hour and the stable production capacity reaching 10000 bottles/per hour. This solution has further met customer demand on working efficiency and product quality.

Every success is a story of hardship and challenge, and Tech-Long would like to share the story with you.

From October, 2003 to March, 2004, altogether 9 sets of RJM 10 bottle blowing machines had been sold to Runtian Company, among which 4 sets to Chengdu Runtian and 5 sets to Shengyang Runtian. By April, 2004, all 9 sets had launched into production, with production capacity reaching 8000-8500 bottles/per hour, with rate of qualified products reaching 99.5%, meeting all specifications from customers.

After two months' normal operation, problems came up on part of the machines. The problems include: impact from the open-close system is too great, the stretching bar within the stretching mechanism wears out quickly, the sliding block in the rolling guiding rail wears out quickly and too much noise is generated during machine operation.

Learning about this situation, an emergent meeting was called upon by the management of the company to find out the solution. The Technical Department of Tech-Long made up a solution basing on analysis on the problems, the Manufacturing Department started production and organized outsourcing operation, the Engineering Department dispatched components to customer site for



replacement, and the Quality Control Department collected necessary information about the problems and distributed to all departments. All the above was carried out in an efficient way.

By June, after on-site reconstructing and testing on the guiding rail and robotic arm of RJM 10 in Chengdu Runtian, the condition was improving. The problem of over-impact from the open-close system and noise had been totally solved. Though the operation

is not stable and has not reached the expected production capacity of 10000 bottles/per hour due to the impact and vibration caused, the general operation has been greatly improved. By July and August, normal operation has been resumed, the replaced machine is working in good condition, reaching the stable production capacity of 11000 bottles/per hour. Customers' maintaining cost is saved and the risk is minimized.

In September, our company decided to provide the same free upgrading for RJM 10 in Runtian. The RJM 10 to be delivered to Runtian is the second-generation machine. A series of improvements have been made on the guiding rail, robotic arm and new type of imported silencer is installed in the machine. After long-time test running in our company, the production capacity is maintained at the level of 11000 bottles/per hour.

Presently, the Tech-Long bottle blowing machines are running well in production site of our customers around the world. We have kept our promise that Tech-Long will always consider for our customers and will always help our customers create greater value.





Solicitude From Leaders of Guangzhou Municipal Government

Lin Shusen, Party Secretary of Guangzhou came to visit Tech-Long

Lin Shusen, member of the Standing Committee of Guangdong Party Committee, secretary of Guangzhou Party Committee, director of the Standing Committee of Guangzhou People's Congress, came to visit Tech-Long on October 18. Lin Shusen will have a two-day inspection in the industrial enterprises of Guangzhou City on October 18 and 21. More than 10 enterprises were selected as the objects of inspection, among which there are 6 private-owned enterprises. At 16:15 p.m. on October 18, accompanied by Ping Xinguang, director of Guangzhou Economic Committee, Cai Gangqiang, director of Guangzhou Science & Technology Bureau, Lin Shusen arrived at Tech-Long. Gu Yaowen, secretary of Party Committee of Baiyuan District, Ouyang He, head of the Baiyuan District, Liang Qun, general manager of Management Committee of Yunpu Industrial Zone, together with top management of Tech-Long, expressed their welcoming to the arrival of leaders from the municipal government. Zhang Songming, chairman of the board of Tech-Long, said to Lin Shusen that that day was a good day because it was the fifth anniversary of Tech-Long and Lin Shusen had come to visit Tech-Long at the right time.

started in April, 2003. Within a few months, it had launched into production. Having learned that the CSD bottling equipment of Tech-Long had been purchased by several bottling factories including Coca-cola and the fully automatic PET bottle blowing machine had been a breakthrough in this field and was selling very well in the market, Lin Shusen could not help nodding approvingly. In the component processing workshop, Lin Shusen looked at the imported equipment such as program-controlled working center and program-controlled machine tools. Then the visitors came to see the R & D center with an area of 3000 square meters.

In the conference room of the R & D center, Zhang Songming made an introduction to the history of the company, the management principle, the model of development, achievements in R & D as well as the strategic planning. Lin Shusen asked questions about the R & D team, the investment in R & D as well as the cultivation of talents. When Lin Shusen learned that the annual investment in R & D has taken up 10% of the revenue from sales, all products are developed independently, possessing our own patents, and that the R & D team is stabilized, Lin Shusen smiled with satisfaction.



Led by Zhang Songming, the visitors came to the third stage workshop, learning that this is supported by Guangzhou Economic Committee, which was

Ping Xinguang, director of Guangzhou Economic Committee, who is quite familiar with Tech-Long, told Lin Shusen that Tech-Long had been awarded as Top 20 of the Equipment Manufacturing Enterprises of Guangdong Province. Lin Shusen thought highly of the achievements made by Tech-Long in so short a time, and encouraged us to adopt the development strategy of emphasizing R & D and marketing, trying to build the R & D center into a provincial and even national center.

Before leaving Tech-Long, Lin Shusen took a photo with Zhang Songming and the top management of the company.

Tech-Long Is Awarded With Top 20 Of The Equipment Manufacturing Enterprises Of Guangdong Province



The Specialist Team are performing appraisal in Tech-Long



The Specialist Team is at the site of production, listening to Zhang Songming introducing the situation of production.

Since October 8, the list of Top 20 of the Equipment Manufacturing Enterprises of Guangdong Province had been published in Nanfang Daily, and Guangzhou Tech-Long Packing Machinery Co., Ltd. has been among the list.

The attestation for Top 20 of the Equipment Manufacturing Enterprises of Guangdong Province is sponsored by the Guangdong Provincial Economic Committee and supported by relevant governmental departments according to the policy issued by the provincial government of Guangdong regarding the support for development of equipment manufacturing industry, based on the principle of open, equal and fair.

The first step of attestation is responsible by the Guangzhou Municipal Government. Twenty-three enterprises meeting require

ments in Guangzhou will be reported to the provincial government. Appraisal will be performed on the reported enterprises by the Provincial Government together with experts. From all enterprises reported to the Provincial Government within Guangdong Province, 24 candidates will be selected for top 20. On September 2, led by the Provincial Government, many experts came to inspect and investigate our company. Zhang Songming, chairman of the board, and Chen Gang, vice-chairman of the board, made a detailed report to the inspectors about the R & D, production, marketing and prospect of the company. The inspectors looked around, asking questions, showing great interests in our company's capability in R & D and production. In the R & D center, the inspectors watched how the designers were working with the help of three-dimensional technology. The enterprises in the Top 20 List include the following: 1. China International Marine Containers (Group) Co., Ltd. 2. Guangzhou Guangri Elevator Industry Co., Ltd. 3. Guangzhou Digital Control Equipment Co., Ltd. 4. Guangzhou Machine Tool Co., Ltd. 5. Guangdong Keda Dynamo-electric Co., Ltd. 6. Guangzhou Tech-Long Packing Machinery Co., Ltd. 7. Shantou Ultrasonic Equipment Research Institute 8. Shenzhen Mindray Bio-medical Electronics 9. Guangzhou Heavy Machinery Group Company 10. Guangzhou Honda Automobile Co., Ltd. 11. Passenger Vehicle Company of Dongfeng Motor Co., Ltd. 12. Guangzhou Shipyard International Co Ltd. 13. Guangzhou Baiyun Electric Equipment Co., Ltd. 14. Zhongshan Mingyang Electric Equipment Co., Ltd. 15. Huawei Technologies Co., Ltd. 16. Shenzhen Zhongxing Telecom Co., Ltd. 17. Guangzhou Radio Group Ltd. 18. Guangdong Fenghua Hi-tech Group Co., Ltd. 19. Shenzhen Han's Laser Technology Co., Ltd. 20. Guangdong Zhicheng Champion Group.

Being one of the Top 20 of the Equipment Manufacturing Enterprises of Guangdong Province is the government's approval on the operation performance of those enterprises. It is learned that the provincial government will allocate annual funding to the awarded enterprises to help them grow faster and stronger.





In the Training Center of Tech-Long, Zhang Songming, chairman of the board of Tech-Long, and Chen Gang, vice-chairman of the board are answering questions raised by journalists from major medias.

To Be The Best Through Independent Research and Development

A look at the key projects of Guangzhou in year 2004, Tech-Long has become the focus of major news medias

At 14:00 on the afternoon of November 11, journalists from 40 news medias including Guangzhou Daily, Guangzhou TV Station and Nanfang TV Station gathered at Tech-Long. They took pictures and videos for the workshop, products, production facilities and the R & D center. In the training center of the Tech-Long, they had a one-hour interview with Zhang Songming, chairman of the board and Chen Gang, vice-chairman of the board on the achievements made by Tech-Long and the developmental planning.

This interview is organized by the Propaganda Department of the Guangzhou Municipal Government according to instruction from the Party Committee of Guangzhou. Started from November 5, the Propaganda Department of the Guangzhou Municipal Government organized the major medias in Guangzhou to have a concentrated interview and report on major projects of Guangzhou in the year especially the key projects. The objective of this activity is to create a favorable atmosphere of public opinion. As one of the key enterprises in Guangzhou, Tech-Long was listed as the interviewee enterprise together with the other three enterprises.

This media report mainly involved three fields: city construction projects, industrial enterprises and high-tech enterprises of mechanical & electrical. For the category of industrial enterprises, four enterprises are selected from 35000 enterprises in Guangzhou: Daikaxu Aluminum Casting Co., Ltd, Guangdong Dongyuan Turbine Co., Ltd. and Guangzhou Tech-long Packing Machinery Co., Ltd.

The report of this interview is published in Guangzhou Daily of November 14, introducing Tech-Long about its emphasis in R & D and the developmental model of leading by technology.



Representatives from major medias are gathering in Tech-Long

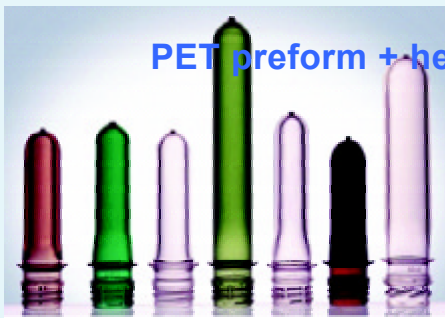


Report about R & D conducted independently by Tech-Long is published on Page A4 in Guangzhou Daily on November 14.

Tech-Long fully automatic rotating PET bottle blowing machine

A Masterpiece Originated From Persistent Innovation

PET preform + heating treatment + stretching + blowing = PET bottles



*The most important advantage of Tech-Long RJM 10 fully automatic rotating PET bottle blowing machine lies in: **Speed, Efficiency and Quality***

The successful development of fully automatic rotating PET bottle blowing machine is of great significance to Tech-Long as well as Chinese beverage packing industry. The development of Tech-Long bottle blowing machine can be divided into three phases, with representative models at each phase. It has changed the situation of this field, and bottle blowing machine made in China is replacing imported bottle blowing machines.

Phase One: 1999-2002, RJM 8 Series I

Based on the forecast for the great market potential for fully automatic rotating PET bottle blowing machine and the PET packing, in 1999, Tech-Long decided to invest heavily in the development of fully automatic rotating PET bottle blowing machine. After three years' efforts, the first model of Tech-Long, also the first model in China was made in year 2001. That was RJM 8 fully automatic rotating PET bottle blowing machine.

The designing and the technology employed have reached the international level. This machine is included in the National Torch Program. The emergence of RJM 8 has filled the gap in this field in China, signifying the end of a period for import of fully automatic bottle blowing machine.

RJM 8 has adopted the mechanical of rotation, thus reduce the process of conveying, increase production efficiency, and decrease waste generated in the conventional stepping blowing techniques. The employment of continuous heating techniques not only reduces power consumption but also ensure heating consistency.

Phase Two: 2001-2004, RJM 10 Series II

With the success with RJM 8, the development for RJM 10 started in 2001. By the beginning of 2003, RJM 10, the upgraded version for RJM 8 was made.

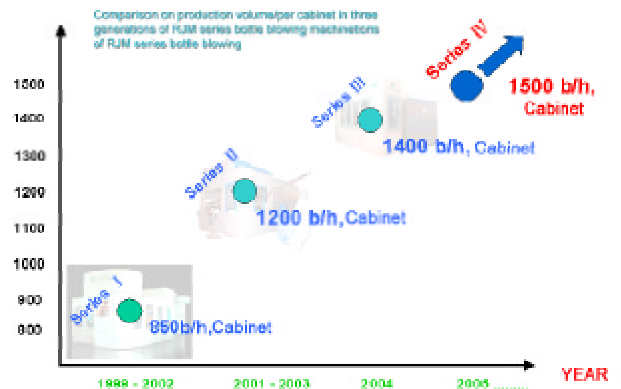
Compared with RJM 8, two more bottle blowing cabinets are supplemented in RJM 10. Moreover, the production capacity of single cabinet has increased from 850 BPH to 1200 BPH, the control system of the machine is greatly improved, the safe operation time is extended and the power consumption is further reduced.

Phase Three: 2004, RJM 10 Series III

The success with RJM 10 has caused great response from the market, receiving positive comments from the industry. Tech-Long resolved to continue the renovation process. In year 2004, cooperated with Coca-cola, Tech-Long completed the upgrading for RJM 10 Series III. In this model,

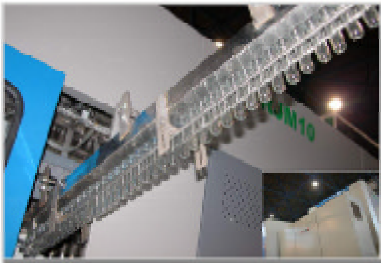
the production capacity in one cabinet has been increased to 1400 BPH, the application of highly efficient electromagnetic value has reduced the consumption of compressed air, the blowing process is controlled precisely, the design of multi-point monitoring has ensured continuity of production, and the rate of rejection has been greatly decreased. New design in external form, mould and heating head has shortened the time required for mould changing. The improvement in technology has made Tech-Long fully automatic rotating PET bottle blowing machine stay in the leading position in the field of beverage packing. The products of Tech-Long have gained certain competitiveness in overseas market. Tech-Long has gradually become the leading supplier for high-end customers of the beverage packing industry.

Hourly production volume per cabinet

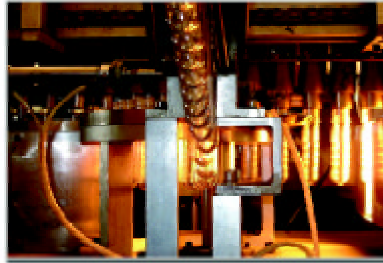


RJM 10 Working Process

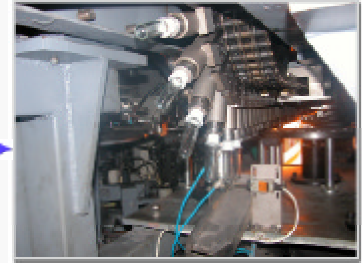
1.P.E.T preform loading



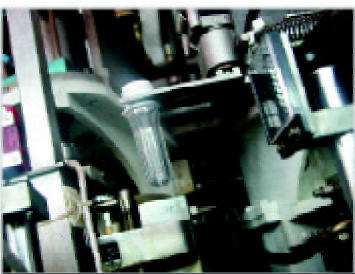
2.Heating and temperature adjusting



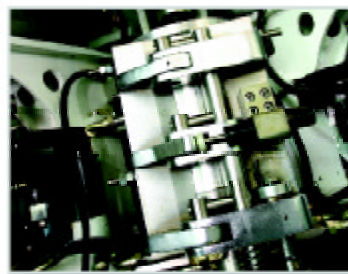
3.Temperature feedback



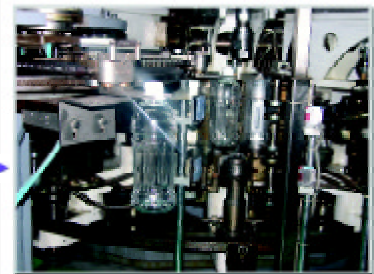
4.P.E.T preform positioning



5.Bottles blowing to shape



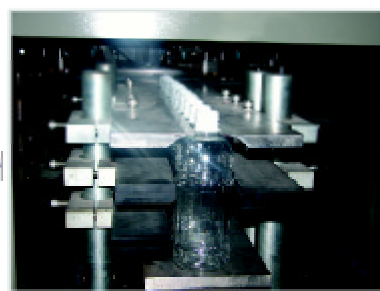
6.Bottles transfer



7.Bottles inspection



8.Bottles discharge



BEIJING

CHINA BREW 2004

CHINA BEVERAGE 2004

CHINA BREW 2004 & CHINA BEVERAGE 2004 is an important exhibition in the beverage industry, taking place every two years. The sixth event was opened on September 6-10 in China International Exhibition Center in Beijing.

The major beverage packing equipment manufacturers such as Kronen, SIG and KHS were present in the event. Exhibitor groups from Germany and Italy attended the show with strong lineup. Buyer groups from Korea and Japan also came to visit the show. Well-known Chinese enterprises of light industrial equipment such as Nanjing Light Industry were also present in the event.

The Tech-Long booth stood at prominent position in Hall No.5, occupying an area of 150 square meters. The booth construction employed a modern and concise style. All the exhibiting parts used in the booth construction had been imported from Germany, displaying its simplicity, practicability, good appearance and environmental-friendliness.

After sufficient preparation, the exhibit RJM 10 Series III fully automatic bottle blowing machine was able to demonstrate on-site bottle blowing at the exhibition, being the first time in China. The successful on-site demonstration with RJM 10 Series III has greatly increased the brand image and enterprise recognition of Tech-Long.



Li Diwei, general manager of Yanjing Beer, Wang Zhong (Left), vice chairman of board of Tech-Long, and Luo Wei-hai (Right), manager of Overseas Sales Department of Tech-Long.



Vigorous young men from South China Region of Tech-Long at Beijing exhibition.

The exhibiting booth of Tech-Long is located in Hall 5 of the exhibition center, with modern and concise style.



Guangzhou

The 96th Chinese Export Trade Fair

The 96th Chinese Export Commodities Fair was opened on October 15, 2004 at Guangzhou International Conference and Exhibition Center. Tech-Long has made careful preparation for this event and has achieved very good result.

The total exhibiting area of this event is 250 thousand square meters, and the division of exhibiting area is more reasonable than before. Tech-Long has taken up two standard booths. The basic color for the booth design is green and white, representing the idea of "Green, Environment and Nature".

Cooperated with China National Machinery Import and Export Corporation (CMC), Tech-Long exhibited a DS12A three-in-one bottling machine, displaying the whole process from bottle rinsing, bottling and capping. The fine workmanship, stable working performance and quality materials employed in the machine indicates that Tech-Long is standing out from the industry.

There are more visitors coming to the Chinese Export Commodities Fair than ever due to more exhibitions are held in Guangdong. In this event, there are more than 400 companies expressing the intent of cooperation, and many of them had come to visit Tech-Long. Many of customers of Tech-Long were present at the event, mainly from Australia, South America, Middle East, East Europe and South-east Asia. The objective of participation in this event is to let the world know that Tech-Long is No.1 in China.



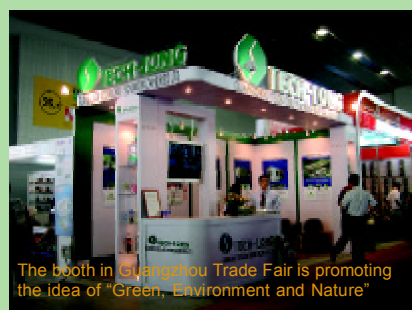
*Jointly sponsored by Tech-Long and Bottling
Water Division of Guangdong Light Industry Association*

Seminar on Application of PET fully Automatic Bottle Blowing Machine and Water Treatment Technology

On November 10, 2004, the Seminar on Application of PET fully Automatic Bottle Blowing Machine and Water Treatment Technology was held in the conference room of Yanling Building in Guangzhou. The objective of this seminar is to meet the request from member enterprises and was jointly sponsored by Tech-Long and Bottled Drinking Water Division of Guangdong Light Industry Association.

There were more than 170 participants from famous beverage factories in Shenzhen, Guangzhou, Shaoguan, Foshan and Zhuhai, among whom most of them are senior engineers, technical and managers from different enterprises. Luo Tan, director of the Bottled Drinking Water Division of Guangdong Light Industry Association was the host for the seminar. He Guiling from the association made a speech and Zhang Songming, chairman of the board of Tech-Long made the opening speech.

After that, Gao Jie and Wang Jianhui, the senior engineers from Tech-Long, provided a 3-hour training to participants on PET fully automatic bottle blowing machine and water treatment technology. In the Q & A section, they answered questions raised by the participants. In the afternoon, they had a discussion on bottle blowing machine and water treatment technology. Luo Tan, director of the association, was very much satisfied with the result of this seminar. This was a successful seminar and participants were expecting to attend such seminar in the future.



The booth in Guangzhou Trade Fair is promoting the idea of "Green, Environment and Nature"



Huang Tao (Left), sales representative of China Machinery Import & Export Company and Jiang Ming (Right), technician from Service Department of Tech-Long, are standing in front of Tech-Long bottling machine.



Upper left: Luo Tan, director of the association is the host of the seminar.
Upper right: Zhang Songming, chairman of the board of Tech-Long is making a speech at the opening ceremony.

Lower left: Participants from different enterprises are taking notes in the seminar.

Lower right: He Guiling, member of the association is making a speech.



A New Interpretation To Corporate Proverb of Tech-Long

Corporate proverb is the soul of an enterprise, as well as a powerful tool of marketing promotion. It is capable of initiating employees' enthusiasm for working, elevating corporate image, bringing about greater economic benefits, and promoting the development of corporate culture. With years of experience in the packing industry, Tech-Long has created proverb of the group and made it known all over the group.

Runs for you – Our Proverb

“For” means service. We provide our customers with quality, considerate and all-rounded service. Customer benefit is the center of our service, and customer demand is the objective of our service.

“You” refers to our customers, or every employee of Tech-Long. Externally, our operation is orientated by the market. Internally, we provide every one within the enterprise with the room of career development.

“Run” indicates the idea of ceaselessness, livingness and innovation. It coincides with the operation method of our

products: running. Furthermore, it means that we will run around customer benefits and keep improving.

The proverb of Tech-Long meets the demand of providing all-rounded service to our customers, indicating that the group is orientated with market demand and customer benefits. We will find out the model of marketing best suited to customer needs. The proverb will be extensively employed in various aspects including cooperate image building and product promotion.






New Interpretation To The Logo Of Tech-Long



Interpretation



New interpretation to the logo of Tech-Long

- A- 
- B- 
- C- 
- D- **Runs for you!**

- A The shape resembles a pair of joggled gears, representing the industry Tech-Long is in, machinery industry.
- A The shape resembles two clasped hands, representing tea work inside our company and cooperation outside our company.
- A The lighting shape in the middle represents the spark of thinking or innovation.
- B is the abbreviation for “technology”, indicating that Tech-Long is a high-tech enterprise.
- C means long-term, indicating that the goal of Tech-Long is a long-term one.
- B The lengthening of the T means Tech-Long’s products are high-technical.
- C The extended line of letter “L” indicates that the base of Tech Long is service and the style of enterprise operation is a down-to-earth one.
- D is the slogan of Tech-Long: “Runs for you”, with the core significance being customer benefit at the center.

Briefing

The Japanese expert foresees a bright prospect for Tech-Long bottle blowing equipment

In October, 2004, Fuyuan Liangzhi, the Japanese PET bottle blowing specialist signed an agreement with Tech-Long on technology cooperation.

At present, the Tech-Long fully automatic bottle blowing machine can only blow bottles with specification of 1.5 L. It is expected that with cooperation with Fuyuan Liangzhi, the machine made by Tech-Long will be able to blow heat resistance bottles of 2 L, and to reduce the weight of pet bottle to 60 grams. The invention of this model of machine will become the first one capable of blowing 2 L heat resistance low-weighted bottles.

Fuyuan Liangzhi will come to Tech-Long at regular basis to get involved in new product development and testing. He is confident that Tech-Long will become the focus of attention at Tokyo International Machinery Exhibition, which is an exhibition taking place every four years and is to be held in October, 2005.

Fuyuan Liangzhi has been engaged in the research in PET plastics for over 30 years. During the period of working in Mitsubishi Resin, he had been working as directors in many research departments including PET tube, multi-layer PET tube, heat resistance PET tube shaping, PET bottleneck crystallization, PET handled oil bottle, PET non-beverage bottles and PET containers.

In 1986, Fuyuan Liangzhi developed the first machine of blowing handled PET bottles and it had become nine day’s wonder in the industry. In 1993, he developed the machine of blowing PET bottles with heat resistance handles. After his retirement, he was still engaged in the research of PET in Japan and had been working as technical consultant for many beverage enterprises in Japan, Korea and China.

The cooperation between Fuyuan Liangzhi and Tech-Long will develop the first rotating machine capable of blowing 2L PET heat resistance bottles.

Multiple Functions vs Single High-speed

The Trend Of Beverage Packing Market

The demand for beverage keeps increasing with the increase of life standard and the development of the economy. The Chinese beverage industry is developing rapidly. The production volume of beverage in China in year 2003 has surpassed 22 million tons, increased by 100 times compared with that in 1980. The beverage industry has become a major industry in China



Commodity packing is the best way of commodity promotion. One of the key factors for the rapid development of the beverage industry is packing. Selecting the appropriate materials and reasonable designing of the containers will provide convenience to consumers during using, handling and storing.

In recent years, the packing equipment used in Chinese beverage industry is developing in leaps and bounds. The two-piece aluminum can production line and bottling production line employing the techniques in the nineties have been introduced to China, as well as production lines for production of disposable flexible packing such as PET bottles, Tetra Pak packing and Combibloc packing, production lines for glass bottles of all specifications, production lines for concentrated fruit juice and pure water. The localization of beverage packing machinery is quickened. The packing methods with aluminum cans, plastics bottles and flexible packing have been accepted in China. The development of beverage packing production lines in China is meeting the increasing demand from the market.

A new situation for packing market

According to the materials employed, the beverage packing in China can be divided into polyester (PET), metal pop can, and paper-plastic compound material and glass bottles. The proportion of all packing methods is: 30% of glass bottles, 30% of PET bottles, 20% of two-piece aluminum cans, and 10% of three-piece pop cans and paper-plastic compound material bottles.

Polyester material refers to thermal saturated polyester resins

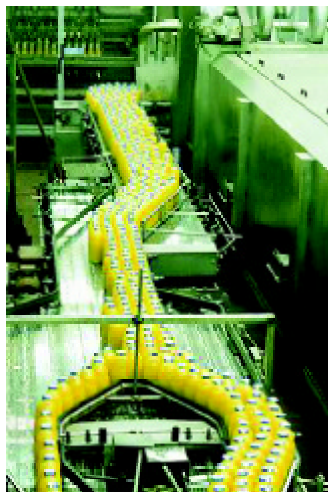
represented by PET, including PET, PEN, PCT and their copolymer materials. Among them, PET is the one developed at the earliest time, with the largest production volume and the most extensive application.

Application of PET bottles in beverage packing has become a trend. By looking at the beverage market in the world, including carbonated soft drink, fruit juice, tea and bottled water, we can find that packing with PET bottles have exceeded 70%.

The reason that the PET bottling is popular is that it possesses some advantages which are lack in other packing methods: large unit volume, transparency, direct view, easy opening, refrigeration availability, convenient handling, toughness and recyclable. On the other hand, it also has some disadvantages: possibility of gas leakage, especially for carbonated beverage such as Beer, infiltration of oxygen and loss of carbon dioxide gas. They have obvious influence on taste and flavor of the beverage. The major chemical property of materials of polyester category is that they are more active than glass, and so is likely to absorb part of the substance in the Beer, causing the change of flavor. During the process of rinsing, bottling and handling of PET bottles, they are easily scratched or cracked. Furthermore, the problem of sterilization for PET bottles has not been solved completely. This has become a restriction for the scope of its application.

The present situation of beverage packing equipment market

Beverage, Dairy and Beer belong to the product category



of large-scale production. Those products have the biggest demand for packing machinery. Ever since the eighties of the last century, every year China has had to import a great number of packing machinery for beverage, dairy and beer, and the situation remains the same till now. Most of the machinery is high-speed automatic production lines with high reliability, high production capacity. Some of them are machinery of

the latest models in the world. The introduction of the machinery has enabled some of the Chinese beverage, liquid milk and Beer packing industry to develop at the same pace with the developed countries. At the same time, the Chinese packing machinery industry has made great progress. Some of the three-in-one fully automatic bottle blowing machinery has reached a high level, being able to meet demand from large enterprises, with part of them being able to compete with imported equipment. The amount of export for some of the equipment is increasing year by year.

Presently, the pre-treatment equipment for drinking water,

carbonated drink and tea drink made in China has already been able to meet the market demand. For low and medium speed bottling and carton packing machinery, there are also some matching products. For hot bottling machinery, the leading manufacturers can solve the problems of techniques related to controlling and sealing under hot bottling condition. Whether on carbonated drink, bottled water, fruit juice or tea drink, the domestic manufacturers can supply qualified equipment for PET bottling, with some of the equipment capable of meeting demand from high-end customers.

In the coming years, the beverage, dairy and Beer making industry is coming into a period of integration. Cooperate merging or restructuring will become more and more frequent. Whether in the area of beverage, liquid milk or Beer making, mega-enterprises will emerge and will take up a much larger market share. To keep up with this trend, the packing machinery will be developing in the direction of multiple function and single high-speed.



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The demand from the beverage market is great

Most people engaged in the beverage industry still remember clearly the dramatic change taken place in the Chinese beverage industry. This happened in the nineties of the last century, when both Coca-cola and Pepsi-cola entered China market at the same time. Seven out of eight beverage making enterprises in China came to their end except one, which had become a joint-venture.

The strength of the foreign beverage enterprises, together with their enormous efforts given to marketing promotion had caused great shock to the Chinese beverage industry which was still at the early stage of development. All of a sudden, beverage made by foreign producers had taken up half of the market share. With the increase of life standard of the people and the lack of confidence in quality of the drinking water in China, together with the promotional efforts made by the bottled water producers, the production volume of bottled water has surpassed that of carbonated drink. Danone Group had made an important move in the field of non-carbonated beverage to take up half of the non-carbonated beverage market in China. By now, the market structure consists of four categories of products made by Coca-cola, Pepsi-cola, Danone and Taiwanese-invested enterprises. The globalization of the Chinese beverage industry is high because all major brands overseas have set up factories in China.

The development of the Chinese beverage industry is late, but its development in China is rapid. The production volume in 2001 was 16.69 million tons, increasing by 11.94% compared with that in 2000. From then on, the annual increase is maintained at the level of over 10%.

Owing to over 20 years' development, the varieties of products and the packing have been improving. During the period from the setting up of new China to the opening up to the outside world, there is only one category of beverage, that's carbonated drink. Now it has developed to 10 major categories of products, including carbonated soft

drink, fruit juice, vegetable juice, milk drink, vegetable protein drink, bottle water, tea drink, special-purpose drink, solid drink and other drinks.

It is estimated that by year 2005, the annual production volume of beverage in China will reach 24 million tons, among which carbonated drink will take up 30% of the total amount, while bottled water will take up 30%, fruit juice and fruit juice drink will take up 10%, and tea drink will take up 15%. By year 2020, the total demand for fruit juice will increase from 33 billion liters to 73 billion liters. The gap between Chinese beverage industry and that of developed countries is still great. The current average consumption amount of beverage in China is 12 kilograms, being 1/4 of the average amount in the world and 1/24 of the average amount in developed countries.

According to report made by professionals in the industry, the demand from beverage market is strong, and the speed of development of the soft drink industry is greater than that of GDP and beverage making industry. The market of soft drink in China keeps expanding. As early as year 2001, the demand for soft drink is RMB 43.059 million, the annual sale revenue is RMB 47.2 million, and the total amount of revenue is RMB 2.66 million. The speed of development of the Chinese industry will be maintained at 10%. It is estimated that by year 2005, the production volume will reach 24.007 thousand tons, and by year 2010, the production volume will reach 38 thousand tons.



Presently the sales volume of soft drink in the world has exceeded USD 192 billion, and the speed of increase will be maintained at 7%. Looking at the product structure, carbonated drink will still take up a dominant position, taking up 54% of the total sales volume in the world. Fruit juice comes second, taking up 13.6%. Seen from the tendency, the dominant position of carbonated drink is facing great challenge, because the proportion taken up by fruit juice drink and tea drink is increasing.

- Source: China Packing Net

Tech-Long blow moulding machine

Milestones

- 2000.10** The first Tech-Long fully automatic rotating bottle blowing machine came into being.
- 2002.9** Eight-cabinet fully automatic bottle blowing machine RJM 8 was shown at Beijing Beer & beverage exhibition, the first emergence of the fully automatic bottle blowing machine made in China.
- 2002.10** The first Eight-cabinet fully automatic bottle blowing machine RJM 8 was sold to Changda Group in Luohe, Henan Province.
- 2003.5** Ten-cabinet fully automatic bottle blowing machine RJM 10 was awarded as Project of National Torch Program.
- 2003.5** The first double-cabinet fully automatic bottle blowing machine RJM 2 came into being and was used in oil product industry.
- 2003.8** The first ten-cabinet fully automatic bottle blowing machine RJM 10 was exported to the Middle-east.
- 2003.9** Runtian Company in Jiangxi placed an order for 8 sets of ten-cabinet fully automatic bottle blowing machine RJM 10.
- 2004.1** The Agreement of Strategic Partnership was signed with Hong Kong Swire Coca-cola, and machinery made by Tech-Long including ten-cabinet fully automatic bottle blowing machine RJM 10 were sold to Hong Kong Swire Coca-cola.
- 2004.3** The first ten-cabinet fully automatic bottle blowing machine RJM 10 was exported to South-east Asia.
- 2004.3** Cooperation was started with Hong Kong Swire Coca-cola in the field of fully automatic bottle blowing technology.
- 2004.3** Specialists from Hong Kong Swire Coca-cola came to Tech-Long to provide on-site guidance.
- 2004.6** The design drawing for sixteen-cabinet fully automatic bottle blowing machine RJM 16 was completed and came into manufacturing process.
- 2004.6** Cooperation with Eugenseitz Company in Switzerland in the field of high-pressure air valve started, increasing the bottle blowing efficiency of single cabinet in ten-cabinet fully automatic bottle blowing machine RJM 10 III to 1400 bottles/per cabinet.
- 2004.7** Contract for ten-cabinet fully automatic bottle blowing machine RJM 10 was signed with Hong Kong Swire Coca-cola, signifying that RJM 10 II was recognized by Coca-cola.
- 2004.7** First stage cooperation was established with a multi-national company of home cleaning products in the field of fully automatic bottle blowing technology.
- 2004.8** The first double-cabinet fully automatic bottle blowing machine RJM 2 was exported to South America.
- 2004.9** Ten-cabinet fully automatic bottle blowing machine RJM 10 Series was shown at Beijing Beer & Beverage exhibition, and the on-site demonstration for bottle blowing achieved great success.
- 2004.9** Bottle blowing specialists from Evian Mineral Water Plant of Danone Group came to Tech-Long to conduct bottle blowing testing, giving good comments on performance of the machine.
- 2004.10** Cooperation with the biggest Chinese bottle making factory Zijiang Group on ten-cabinet fully automatic bottle blowing machine RJM 10 HR started.
- 2004.10** Fuyuan Liangzhi, the specialist in the field of PET bottle blowing technology became technical consultant of Tech-Long Group.

Industry Dynamics

2004 PET nology Asia Forum opened in Shanghai

On November 1-2, the first PET plastics technology Asia forum sponsored by PETnology Co., Ltd. in Germany took place in Shanghai Four Seasons Hotel.

With the development of the industry of foodstuff and foodstuff packing, the Chinese PET industry especially the PET packing industry is going through an unprecedented development. The increase of oil price has resulted in the price increase for PET packing products. The focus of this forum is the market and application of PET technology. All major market participants were gathering in the forum to display their company, the PET technology and to discuss the change in the market. On November 3, Sidel Company of France invited all participants to visit its technical center in Shanghai.

From year 2001 on, this forum was organized by German company PET nology Co., Ltd. in Europe once a year. The objective of this forum in 2004 is to share information about this fast-growing field of PET, focusing on market and application of PET technology.

Source: Information Center of National Plastics Industry

The 9th South China International Beverage Technology Exhibition is to be held in March 2005 in Guangzhou

The 9th China International Beverage & Brew Exhibition (South China International Beverage Technology Exhibition) is to be held on March 8-11, 2005 in Guangzhou International Conference & Exhibition Center. Well-known suppliers from all over the world will be gathering in this annual event to exhibit their technology and equipment.

The exhibition is supported by more than 30 organizations within the industry, including Drinking Water Division and Beer Division of Guangdong Light Industry Association, Britain Processing and Packing Machinery Association, China Foreign Trade Center (Group) and Adsale Exhibition Services Ltd.

Source: China High-tech Industry Report

A new idea in the market of foodstuff and beverage packing

With the development of the economy and the increase of life standard, the Chinese foodstuff and beverage industry is developing rapidly. New trend is coming up in the market of foodstuff and beverage packing.

Personality: Foodstuff of the same category is displayed at one location of the shelf in the supermarket. What can attract the attention of the consumers is the packing besides its brand and product quality. Packing with powerful design can influence consumers' decision of buying. Manufacturers have become aware of this fact and are trying every means to be special in packing, hoping to attract the attention of consumers with pleasant and eye-catching packing.

Asepsis: According to statistics, there are more than 300 sets of asepsis packing machines in China, with an annual production capacity of 1.5 million tons. Percentage of asepsis packing for foodstuff is not so large, but it takes up a large percentage in packing of beverage. It is over 80% for large packing and over 50% for small packing. The annual consumption amount in the world for paper asepsis packing box is 100 billion pieces. Tetra Pak from Sweden, SIG Combibloc from Switzerland and International Paper from the United States are three giants in the field of paper asepsis packing.

Intelligence: Intelligent packing refers to packing with the function of identifying the environmental factors. Most of the intelligent packing today make use of packing materials with the function of photoelectrical sensitive, temperature sensitive, moisture sensitive and air sensitive. The packing can identify and display some important parameters of the packing space such as temperature, moisture, pressure as well as the degree and time of sealing. This is a functional packing method with great potential, especially important for products requiring long-term storage.

Green packing: In the revolution for green packing, the waste of packing is usually recycled and reused. However, for flexible compound plastics film, categorized recycling and reuse remain a problem. If the treatment method of burning or burying is used, the harmful substance such as dioxide or heavy metals will still cause pollution to the environment. Therefore, research in this field is done in foreign countries and film of environmental-friendly type is developed.

Sour: China High & New Technology Report

There is a great potential for the market of asepsis packing in China

According to statistics, there are more than 300 sets of asepsis packing equipment in China, with an annual production capacity of 1.5 million tons. Percentage of asepsis packing for foodstuff is not so large. China still has a great potential for asepsis packing because globally the asepsis packing for beverage is over 80% for large packing and over 50% for small packing.

With the development of the economy and the increase of life standard, the market demand for milk, fruit juice and fruit juice drink will increase substantially. At the same time, foodstuff producers have the demand for production expansion and equipment upgrading. With the emergence of foodstuff making enterprises, the development of the asepsis packing will be further developed.

Source: China Industry Daily

The prospect of biodegradable plastics in the global market

The production volume of biodegradable plastics has increased by 35% compared with that in year 2004, with sales volume reaching 167 million pounds, with the sales value reaching USD 15 million. The existing biodegradable plastics in Japanese market and US market include biodegradable polyester such as polylactic acid, biodegradable PET, PBS/ acetate, polyethylene succinic acid, Polyamide, polycaprolactone/mixture, starch and its mixture, as well as other biodegradable plastics with additives improving the biodegradability. The reason for the growth is the increased consumption of environmental-friendly plastics as well as the decrease of production cost. The manufacturers will reduce their price by production expansion. The obstacle for the existence of biodegradable plastics in the market is the high cost of biodegradable resins and the stable market occupation by conventional plastics products.

Source: China Packing Net

Price increase of fructose corn syrups in global market

Fructose corn syrup is made from corn is cheap in price and possess a great number of users. Recently the price for fructose corn syrup has increased substantially to a record high due to the increased cost of ocean transportation. Normally the freight for one ton of fructose corn syrup from UK to Japan is around USD 30, but now it has increased to USD 70.5. The reason is that most of the ocean vessels have been used to carry construction materials for Beijing Olympic Game in 2008 and for 2010 Shanghai World Expo. It is estimated that the ocean freight will be increased to USD 80-90/ton.

Source: China Beverage Industry Association

The dairy product packing market has the tendency of diversification

In recent years, the development of liquid milk in the milk product industry has attracted much attention from the market. There are two major reasons for that. The successful operation of the milk product industry has been playing an important part, but the diversified packing for dairy is another reason for the rapid development of this industry. Dairy can be put into three major categories according to the term of quality guarantee: short term for refrigerated milk with pasteurization, medium term with asepsis packing bag, long term for UHT milk with asepsis packing of packing box. If divided by their shape of packing, they can be put into the categories below: bag packing, can packing, plastics bottle packing, glass bottle packing and paper box packing. According to statistics, in the dairy market in year 2002, bag packing took up 45%, paper box packing 25%, plastics bottle packing 17%, plastics cup packing 7%, glass bottle packing 5.5%, and other packing such as iron can packing 0.5%. The diversification of packing methods is caused by various preferences of the consumers.

Source: China Beverage Net