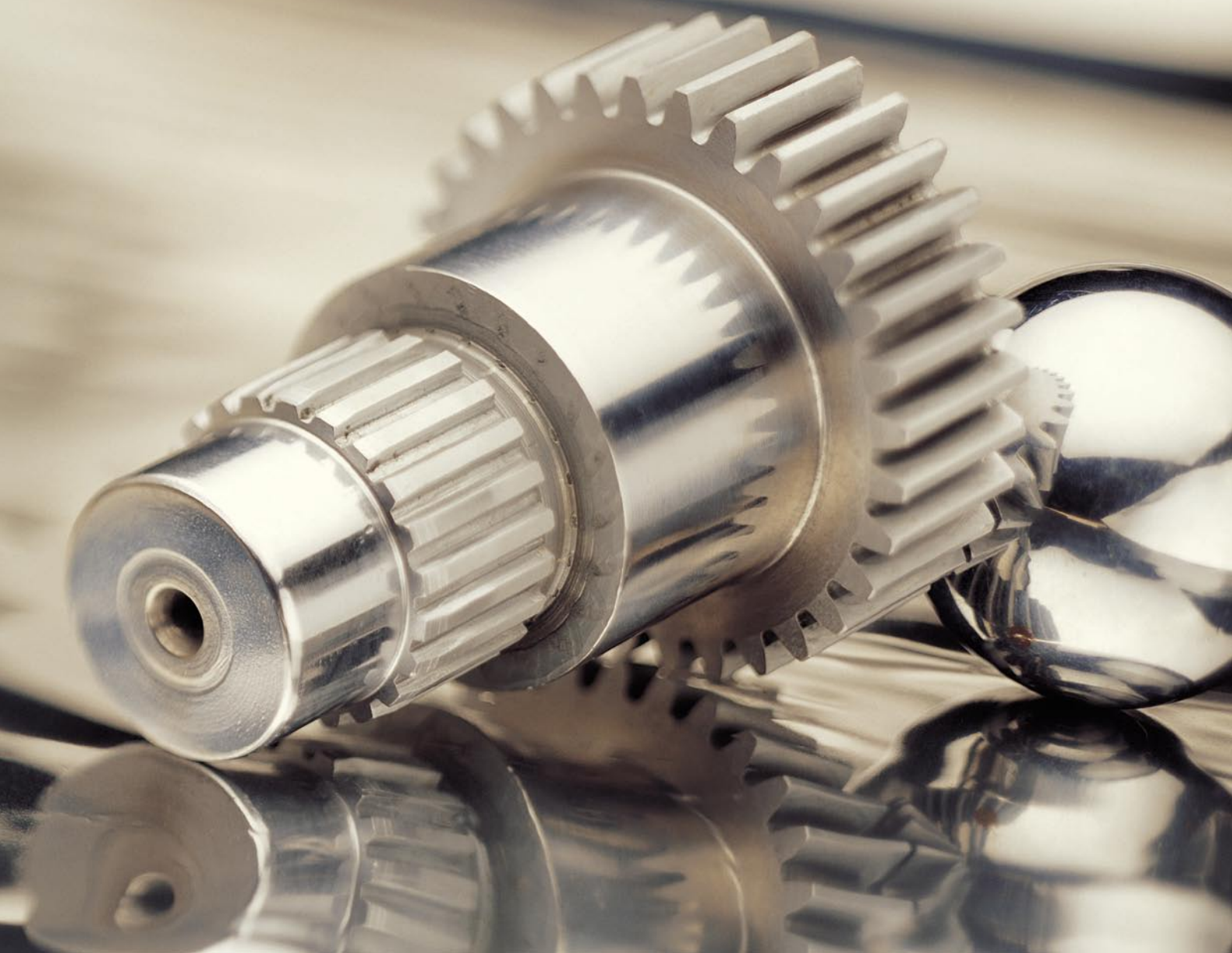


用心铸就优良品质，是我们不变的追求
It's our eternal pursuance to be dedicated to achieving high quality



达意隆机械 TECH-LONG

广州总部-生产基地
Headquarter (Guangzhou)-Manufacturing base
广州市云埔工业区云埔一路23号
23# Yunpu 1 Road Yunpu Industrial Zone,
Guangzhou
电话Tel:(0086 20)62956888
传真Fax:(0086 20)82266288
E-mail:market@tech-long.com

北京代表处
Beijing Office
北京市朝阳区朝外大街乙12号昆泰国际大厦2312A
Rm 2312A Kun Tai International Building Yi NO.12,
Chao Yang Wai Street, Chao Yang District, Beijing
电话Tel:(0086 10)58797991
传真Fax:(0086 10)58797990

上海代表处
Shanghai Office
上海市肇嘉浜路777号青松城大酒店819室
Rm 819 Pine City Hotel Zhaojiabang
Road, Shanghai
电话Tel:(0086 21)64438097
传真Fax:(0086 21)64438216

成都代表处
Chengdu Office
成都市二环路南三段15号天华大厦A座706室
Rm 706 Tower A Tian Hua Building No. 15
Nan San Duan Er Huan Road, Chengdu
电话Tel:(0086 28)66035128
传真Fax:(0086 28)85120486

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打造最具国际竞争力的民族品牌， 引领饮料机械行业发展新方向

*Construct the national brand with highest competitive force in international market,
Lead the development of beverage machinery industry*

TECH-LONG
Runs for you!



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Examined and revised by:
Robin.Jiang ,Yang.Yan
电话：(86 20) 82266688-234
Tel: (86 20) 82266688-234
传真：(86 20) 82266288
Fax: (86 20) 82266288
电邮：mukee.wei@tech-long.com
E-MAIL:mukee.wei@tech-long.com
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2006中国、酿酒饮料机械行业大事记

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之达意隆专题

Tech-Long Special Topics

关键字: 荣誉、达利集团、可口可乐、中国、北京、股份制公司、
高粘度液体定量灌装机、国际市场、技术交流

KEY WORDS: honors, Dali Group, Coca Cola, Beijing.China, , Stock Company,
High viscosity liquid quantitative filling machine, International
market, Technology communication

>>> 荣誉 Honors

2006年一年里，达意隆分别荣获由中国包装联合会颁发的“中国包装龙头企业”、广州市人民政府颁发的“广州市优秀民营企业”、“广州市自主创新优秀民营企业”、广州市饮用水协会颁发的“瓶装饮用水行业金牌产品”、广东省瓶装饮用水行业协会颁发的“广东省名牌”等称号，充分证明了达意隆在研发、制造、管理实力等方面取得的显著进步。

In 2006, Tech-Long awarded as “China Packaging Leading Enterprise” issued by China Packaging Federation, “Guangzhou Outstanding Private Enterprise” and “Guangzhou Outstanding Private Enterprise in Innovation” issued by Guangzhou People’s Government, “Gold Medal Product in Bottled Drink Water Industry” issued by Guangzhou Drink Water Association, “Guangdong Province Famous Brand” issued by Guangdong Province Bottled Drink Water Industry Association, which have powerfully proven that Tech-Long has obtained obvious progress in such aspects as R&D, manufacturing and management.

>>> 达利集团 Dali Group

2006年6月15日，达意隆与福建达利集团正式签订了6条整厂热灌装生产设备定单，这是达意隆国内迄今为止单一合同金额最大的订单，合同的签订无论对于达利集团和还是达意隆，都是一个具有历久意义的新里程。达意隆人用自己的执着、专业、实力再次印证“中国民族产业本土造”已是大势所趋，饮料企业对包装整线整厂解决方案的需求时代已经到来。

On June 15th, 2006, Tech-Long and Fujian Dali Group formally signed the contract on ordering six whole factory hot filling production equipments, which is the biggest order with the highest single contract value for Tech-Long at home, this contract is a new milestone for both Dali Group and Tech-Long. Tech-Long proves that it is the trend for “developing national industry in local” with out persistence, profession and strength, and the times of beverage enterprises on whole line whole factory solution is coming.

>>> 可口可乐 Cocacola

自2004年达意隆与香港太古可口可乐开始合作以来，达意隆成为了可口可乐的长期友好合作伙伴，随着与可口可乐合作项目的不断增长，双方的配合更加默契，2006年一年里，达意隆为全球的可口可乐工厂提供的设备涵盖了从水处理设备、前处理设备、全自动吹瓶机、三合一灌装机、后段包装设备及整线设备，自此，达意隆与可口可乐的进入了一个全面合作的崭新阶段。12月16日，澳大利亚可口可乐公司（CCA）与达意隆正式签定了24000BPH的灌装线设备定单，此设备将用于生产运动型饮料、绿茶饮料和果汁饮料。

Since from the cooperation of Tech-Long with Hong Kong Swire Coca Cola in 2004, Tech-Long has become the long term and friendly partner of Coca Cola, As the increase of cooperative project with Coca Cola, both

parties have achieved better cooperation. In 2006, Tech-Long provided such equipments as water treatment equipments, pre-treatment equipments, fully automatic bottle blowing machine, 3-in-1 filling machine, back section packaging equipment and whole line equipment for world wide Coca Cola factories, and the cooperation between Tech-Long and Coca Cola has stepped onto a new stage. On December 16th, Australia Coca-Cola Amatil (CCA) and Tech-Long formally signed the contract on ordering 24000BPH filling line which will be used for producing sports beverage, green tea beverage and fruit juice beverage.

>>> 中国. 北京 Beijing.China

2006中国啤酒、饮料制造技术及设备展

2006年9月5日-9月9日，亚洲最大规模的饮料包装行业盛会—第七届中国国际啤酒、饮料制造技术及设备展览会隆重在北京国际会展中心举行，达意隆以全新、专业、现代感十足的形象在展会中展现了中国设备制造企业特有的风采，达意隆在600平方米的展位上，以整线设备现场连线生产演示，充分展现了达意隆领先的吹瓶技术、灌装技术、包装技术，并在展会举行过程中现场签订多张订单，成为本届展会最大的亮点。

2006 China Beer, Beverage Manufacturing Technology and Equipment Exhibition

During September 5th-9th, 2006, The biggest exhibition for beverage packaging industry in Asia--- 7th China International Beer, Beverage Manufacturing Technology and Equipment Exhibition was held in Beijing International Convention Center, and Tech-Long showed the special style of Chinese equipments manufacturing enterprises with new, professional and modern image, Tech-Long thoroughly showed the leading bottle blowing technology, filling technology and packaging technology through on site demonstration of whole line equipments in the 600m2 booth, and signed several orders, which made Tech-long the most bright spot of the exhibitor.

>>> 股份制公司 Stock Company

“广州达意隆包装机械股份有限公司”正式成立，隆重召开股东大会及揭牌仪式

2006年11月28日，达意隆隆重召开“广州达意隆包装机械股份有限公司创立大会暨第一次股东大会”，股份制公司的创立是达意隆发展过程中重要的里程碑、为公司未来的发展搭建了良好的资本平台、为公司业务的发展提供资金支持，进一步提升公司的竞争力。12月22日，揭牌仪式隆重举行，揭牌仪式的举行标志着达意隆成功完成了股份制改造，达意隆的上市工作向前迈出了重要的一步，接下来，达意隆将在国内A股上市。作为中国饮料包装机械行业的先行者，达意隆股份公司将致力于追赶世界先进水平，打造国际一流企业。

“Guangzhou Tech-Long Packaging Machine Ltd.” is set up and holds the shareholder's meter and unveiling ceremony

In November 28th, 2006, “Establishment Meeting and the First Shareholder's Meeting of Guangzhou Tech-Long Packaging Machinery Ltd.” was held. The establishment of the Stock Company is a significant milestone of Tech-Long, which constructs the outstanding capital platform and provides the capital support for the future development, and can also improve the competitive force of the company. On December 22nd, the unveiling ceremony was held grandly, which shown that Tech-Long had successfully completed the share system transformation, and powerfully promoted Tech-Long to list into the stock market. In the future, Tech-Long will promote to list in domestic stock market. As the leading role of Chinese beverage packaging machine industry, Tech-Long is dedicated to achieving world leading level and constructing the first class enterprise in world.

>>> 高粘度液体定量灌装机 High viscosity liquid quantitative filling machine

2006年12月2日，全球日化领域某巨头公司工程总经理到访达意隆，为双方签订的第一台用于家庭及纺织用品护理产品的高粘度液体定量灌装机顺利交货庆功；2007年1月，双方开始共同开发用于BC的灌装机和用于洗发水、美容、护肤品的灌装机；预计在2007年6月，双方将进行整线设备合作。到目前为止，该日化企业还从未向任何一家设备供应商订购过整线，达意隆将成为第一家为该日化企业提供整线设备的供应商。这标志着达意隆的设备已经成功进入日化领域，这一成功，使达意隆向进入全面液态领域的目标又迈出了坚实的一大步！

On December 2nd, 2006, the General Manager of some in tycoon global daily chemical field visited Tech-Long for celebrating the smoothly delivery of the first high viscosity liquid quantitative filling machine for home and textile treatment products; in January, 2007, both parties started to jointly develop the filling machine for BC, shampoo, beauty and skin care products; it is estimated that both parties will started cooperation in whole line in June, 2007. Till present, this daily chemical enterprise has never ordered any whole line from any supplier, and Tech-Long will be the first one to provide whole line equipments for this daily chemical enterprise, which is the

symbol that Tech-Long products have successfully launched into daily chemical field. And Tech-Long advanced forwarding to the target of entering into complete liquid field.

>>> 国际市场 International Marketing

成为具有国际竞争力的民族品牌

2006年的一年里，达意隆加强了与信誉良好的代理商之间的长期合作，参加了一系列国际知名的展会及推广活动，包括泰国的AISA PROPAC 2006、印尼ASPIDIN 水协会推广活动、伊朗塑胶展、沙特饮料包装机械展会、哈萨克World Food等，获得了宝贵的客户资源与市场信息，成功地拓展了达意隆品牌，并取得了令业界瞩目的成绩，这将为2007年达意隆进一步扩大全球市场铺平道路。达意隆在积累了与世界优秀饮料企业的合作经验后，已成为国际饮料包装行业中最具国际竞争力的民族品牌。

Become the national brand with high competitive force in the international market

In 2006, Tech-Long strengthened the long term cooperation with renowned agencies and attended a series of world famous exhibition and promotions, including Thailand AISA PROPAC 2006, Indonesia ASPIDIN Water Association Promotions, Iran Plastic and Rubber Exhibition, Saudi Arabia Beverage Packaging Machine Exhibition, Kazakstan World Food, and obtained precious client resources and market information, successfully developed the Tech-Long brand with outstanding achievements.. With the experience on cooperating with world outstanding beverage enterprises, Tech-Long has become the national brand with highest competitive force in world beverage packaging industry.

>>> 技术交流 Technology communication

2006生产管理及设备维护技术交流联谊会

2006年11月28日至29日，达意隆主办的”2006生产管理及设备维护技术交流联谊会”在东莞明轩大酒店隆重举行。达意隆邀请了饮料行业著名讲师、企业家就当前饮料生产管理与设备技术的热点问题作专题报告。会议取得圆满成功，达意隆通过主办此次联谊会，搭建了与客户之间的沟通平台，进一步了促进饮料行业的稳步发展，并为饮料行业提供了新的发展方向。

2006 Production Management and Equipment Maintenance Technology Sodality

During November 28th-29th, 2006, the “2006 Production Management and Equipment Maintenance Technology Sodality”, undertaken by Tech-Long, was held in Dongguan Mingxuan Hotel. Tech-Long invited the famous lecturers and enterprisers in beverage industry to present special report to the hot issues on current beverage production management and equipment technologies. Through holding this sodality, Tech-Long has constructed the platform to communicate with clients, promoted the stable development of beverage industry and provided the new direction for the development of beverage industry.

Text and Pictures by:Tech-Long Mukee



达意隆股份制公司创立， 隆重召开第一次全体股东会议

暨广州达意隆包装机械股份有限公司第一次股东大会

Tech-Long Stock Company is set up, The
first shareholder's meeting is held,
The first Shareholder's Meeting of Guangzhou Tech-
Long Packaging Machinery Ltd.

2006年11月28日上午9点，广州达意隆包装机械股份有限公司创立大会暨第一次股东大会召开，会议由公司董事长张颂明先生主持。出席本次会议的有公司全体股东及代表，第一届董事会及监事会候选成员，以及广发证券股份有限公司、广大律师事务所、广东正中珠江会计师事务所有限公司及广东联信资产评估公司等中介服务机构的代表。

At 9:00 a.m., November 28th, 2006, the Establishment Meeting and First Shareholder's Meeting of Guangzhou Tech-Long Packaging Machinery Ltd. was held. The conference was held

by Chairman Zhang Songming, and all shareholders and representatives of the company, members of the first Board of Directors and Board of Supervisors, representatives of GF Securities Co., Ltd., Guangda Law Firm, GP Certified Public Accountants Co., Ltd. and Guangdong Lianxin Assets Assessment Co., Ltd. attended the conference.

股份制公司的创立是达意隆发展过程中重要的里程碑。是对达意隆公司自成立以来一直保持稳健而快速的发展的肯定。同时也表明达意隆公司在业务规模、赢利能力、财务状况、公司治理等方面达到了比较高的水平，得到了专业机构的认同。

The establishment of the Stock Company is the mile stone of Tech-Long and the recognition of the stable and fast development of Tech-Long. It also shows that Tech-Long has reached a high level in terms of business, profitability, finance and corporation government, and has received recognition from professional institutes.

股份制公司的成立，为公司未来的发展搭建了良好的资本平台，股份公司可以通过公开发行，在证券市场上直接融资，为公司业务的发展提供资金支持，进一步提升公司的竞争力。

The establishment of the Stock Company constructs the favorable capital platform for the future development, and the stock company can directly finance in the stock market through public issuance, provide capital support for developing our business and improve the competitive force of the company.

本次股份公司创立大会暨第一次股东大会开得非常成功。股东大会通过了全部提案，并选举了股份制公司第一届董事会。董事会成员中既有在公司创业、发展过程中做出了巨大贡献的企业家，又有在公司发展关键阶段发挥重要作用的高级管理人员。此外，还有在跨国公司管理、财务、法律等方面具有相当高专业水准的专家、教授。我们相信，在本届董事会的领导下，达意隆公司一定会抓住发展机遇、开拓创新、稳健经营，使达意隆在经营业绩、技术创新、管理提升等方面再上一个台阶。

The Establishment Meeting and First Shareholder's Meeting of Guangzhou Tech-Long Packaging Machine Co., Ltd. achieved great success. The Shareholder's Meeting passed all proposals and selected the first Board of Directors. Members of Board of Directors includes enterprisers who have outstanding contribution to the development of the company and the senior management staffs who are significant for the development of the company, experts and professors who have professional knowledge in such aspects as multi-national enterprises management, finance and law etc. We believe that under the leadership of the Board of Directors, Tech-Long will grasp the opportunity, develop and innovative for achieving stable operation, and promoting the achievements, technology and management of Tech-Long to a new stage.

“士不可不弘毅，任重而道远”。作为达意隆人，今天虽然取得了阶段性的成果，但我们非常明确未来的目标 and 责任。我们将通过我们的智慧、专业知识和不懈的努力，使达意隆在国际饮料包装机械市场占居前列，为股东创造价值、为员工发展创造机会，为社会做出贡献。

“A scholar must be resolute and steadfast, for his burden is heavy and his road is long.” As Tech-Long staffs, though we have gained stage achievements, we are clear to the target and responsibility in the future. We will promote Tech-Long to rank at leading in world beverage packaging machine market with out wisdom, professional knowledge and constant effort, will create value for shareholders, develop opportunities for employees and contribute for the society.

Text and Pictures by:Tech-Long Stock Reform Team



广州达意隆包装机械股份有限公司 正式举行揭牌仪式

Guangzhou Tech-Long Packaging Machinery Ltd.

Formally holds the unveiling ceremony

2006年12月22日，“广州达意隆包装机械股份有限公司”揭牌仪式隆重举行，达意隆股份公司全体股东、董事、监事、公司中层以上骨干和合作单位的代表参加了此次揭牌仪式。

On December 22nd, 2006, the unveiling ceremony of “Guangzhou Tech-Long Packaging Machine Co., Ltd.” was held grandly, all shareholders, directors, supervisors, backbones and representatives of partners of Tech-Long attended the unveiling ceremony.

达意隆股份公司董事长张颂明发表了揭牌仪式开幕讲话，广发证券股份有限公司总裁助理罗斌华代表相关合作单位为达意隆股份公司的正式成立致贺辞；达意隆股份有限公司董事长张颂明、副董事长陈钢、总裁王忠和广州科技创业投资有限公司总经理李明智代表股份公司产品、董事和经营班子共同为股份公司揭牌。

Chairman of Tech-Long Co., Ltd. Zhang Songming gave the speech on the unveiling ceremony, Chairman Assistant of GF Securities Co., Ltd. Luo Binhua presented the congratulation on behalf of relative partners; Chairman Zhang Songming, Vice Chairman Chen Gang, President Wang Zhong of Tech-Long Co., Ltd. and the General Manager of Guangzhou Venture Capital Limited Li Mingzhi unveiled for the stock company on behalf of the shareholders, directors and operation staffs of the stock company.

揭牌仪式的举行标志着达意隆已成功完成了股份制改造，达意隆的上市工作向前迈出了重要的一步；接下来，达意隆将在国内A股上市，这将为达意隆成功追赶世界先进水平，打造国际一流企业的目标奠定坚实的基础。

The unveiling ceremony is the symbol that Tech-Long has successfully completed the reform of stock system, and stepped forward for listing into the stock market; in the future, Tech-Long will strive for listing in domestic stock market, which may set solid foundation for Tech-Long to reach world leading level and construct world top enterprise.

Text by: Tech-Long Muker/Yan Changqing

Picture by :Tech-long Muker

搭建高效沟通平台 引领饮料行业发展新方向

达意隆2006生产管理、及设备维护技术交流联谊会

Construct the platform for effective communication, Lead the direction of the development of beverage industry

Tech-Long 2006 Production Management and Equipment Maintenance Technology Sodality

2006年11月28日至29日，达意隆主办的“2006华南区生产管理及设备维护技术交流联谊会”在东莞明轩大酒店隆重举行。参加交流会的有除了来自广州屈臣氏，深圳怡宝，东莞日之泉，深圳益力，珠海中富，广州乐白氏，珠海可乐，深圳景田等百余家华南地区知名水、饮料企业的专业生产管理及技术人员外，达意隆还特别邀请了饮料行业著名讲师、企业家就当前饮料生产管理与设备技术的热点问题作专题报告。作为中国饮料设备制造行业的领先者，达意隆组织此次大规模的技术交流活动，旨在通过与客户面对面的双向交流，高效、集中地获得“客户的声音”，从而为客户提供更具有针对性的、切实可行的计划，进一步密切双方关系，搭建有力的沟通平台，进一步促进饮料行业的稳步发展。

During November 28th-29th, 2006, the “2006 South China Production Management and Equipment Maintenance Technology Sodality”, undertaken by Tech-Long, was held in Dongguan Mingxuan Hotel. Production management staffs and technicians from nearly 100 famous beverage and water enterprises including Guangzhou Watsons, Shenzhen Cestbon, Dongguan Sunray Cave, Shenzhen Health, Zhuhai Zhongfu, Guangzhou Robust, Zhuhai Cola and Shenzhen Ganten attended the sodality, additionally Tech-Long also invited some famous lecturers and enterprisers in beverage industry to give speeches on the hot issues of beverage production management and equipment technology. As the leading role in beverage equipment manufacturing industry in China, Tech-Long aims to obtain “client’s feedback” through face-to-face communication with clients, provide targeted and feasible plan for clients, construct the powerful platform for communication and promoting the stable development of beverage industry.

28日下午，达意隆制造及工程总经理方恒先生就达意隆设备的使用、维护、技术交流和售后服务对在场客户进行了详细的讲解，强调了在当今产品价位特征和技术品质都相近的情况下，客户都愿意选择附加值高和服务质量好的产品，在为客户提供产品的基础服务时，如



何为提供给客户所需要的更多的附加利益，如对所购产品进行定期检查，维修及使用技能的培训，选购咨询，产品的不断改进，用途开发等等，使产品的购买投资得到预期回报，实现利益最大化，也使得公司产品和服务效果得到最好的发挥，实际上是使企业与客户共同受益等以客户利益为先的服务理念。随后，方恒先生介绍了自己的工程和设计团队，期望在未来的合作中，通过团队的共同努力，秉承达意隆人一贯的务实作风，通过一点一滴的实干积累，创建高于同行业其他企业的客户满意度，形成达意隆具有产品、服务综合性的竞争力优势。

In the afternoon of November 28th, Tech-Long Manufacturing and Engineering General Manager Mr. Fang Heng presented detailed explanation on the usage, maintenance, technical support and after engineering service for Tech-Long equipments, and emphasized that clients were would like to select products with high value, outstanding service under the situation that the price and technology of the products are similar, explained how to provide more benefits for clients when providing basic service for clients, how to fulfill periodical checking, mantainance of the equipments and technical training for operator, consultation on selecting products, constant improvement of products and purpose development, thus achieving expected return and max benefit, thoroughly exerting the product and service, which is for benefiting both our company and clients on the basis of “client’s benefit prior”. Later, Mr. Fang Heng introduced the engineering and design team, and expressed the expectation to create higher satisfaction through constant effort in the future, and improve the competitive force in products and service.

29日，原怡宝公司、云南山泉公司营销总监邓郁先生就“关于桶装水空桶-生产-水店市场营销客户-空桶回收整个流程”的专题报告，邓郁先生从桶装水的物流过程、配套物件及桶装水业务模块中各相关部门及重要环节的管理做了详细的阐述；随后，原乐百氏集团技术和生产总经理黄少坚先生主讲“成本，永远的话题”，从饮料生产过程中的瓶子、用电、瓶盖、用水、人工、标签等多方面向与会者道出如何在生产过程中正确、高效地控制成本的新理念；最后，美国GE公司资深专家罗博士发表了“膜在行业中的应用和水处理系统的维护”，与会者反响热烈，现场提出了多个在实际制造过程中经常出现具有针对性的问题，罗博士都给出了科学的、切实可行的解答，使与会者受益良多。

On November 29th, the Marketing Supervisor of former Cestbon Company and Yunnan Spring Co., Ltd. Mr. Deng Yu gave the speech on “Whole Procedure of Hollow Barrel – Production – Water Store Marketing Clients – Hollow Barrel Recycling”. Mr. Deng Yu gave a detailed description from the logistic, matching articles of barrel water, and relative departments and management of key procedures of barrel water; then the Technology and Production General Manager of former Robust Group Mr. Huang Shaojian gave the speech on “Cost, the Eternal Topic”, and explained how to correctly and effectively control the cost during the production process of beverage in such aspects as bottles, power consumption, bottle cap, water consumption, labor and label; finally, the senior expert from America GE Company doctor Luo gave the speech on “Application of Film in the Industry and Maintenance of Water Treatment System”, the participants presented targeted issues which may frequently occur during the producing process and obtained benefits from the scientific and feasible answer of doctor Luo.

通过几位讲师的讲解及与会者就生产管理、设备维护技术的进展、包装机械的最新技术以及饮料生产-营销-成本等议题进行了热烈的交流与讨，大家一致认为，生产管理及设备维护技术是饮料企业最重要的环节之一，应搭建好产、学、研、销、用平台，实施饮料企业品牌和产品推广，建立有效销售渠道、促进人才交流、达成项目合作，以满足高速发展的饮料行业需求。

Through the speech of several lecturers, the participants had warm discussion on production management, equipment maintenance technology, latest technologies of packaging machines, and beverage production – marketing-cost, and agreed that production management and equipment maintenance are one of the most important procedures for beverage enterprises, and it requires to construct the platform of production, learning, research, marketing and application, fulfill the beverage enterprise brand and products promotion for beverage enterprises, set up effective sales channels, promote talents exchange, reach cooperative projects for meeting the demands of the developing beverage industry.

此次联谊会取得圆满成功，举办联谊会的新理念、新思路也得到了与会客户和专家的认可，达意隆董事长张颂明表示，本次交流会的开展为饮料行业提供了新的发展方向，有利于引导饮料行业向更为健康、合理、正确的方向发展，达意隆将继续组织这种类型的交流会，促进整个饮料行业的交流与合作。

The sodality achieved success, and the new thought of holding sodality has also been recognized by the clients and experts, President of Tech-Long Zhang Songming expressed that the sodality provided the new direction for the development of beverage industry and benefited to lead the beverage industry to a healthy, reasonable and correct direction, and Tech-Long would continue to hold this kind of sodality for promoting the exchange and cooperation of the whole beverage industry.

Text by:Tech-Long Adong/Mukee
Pictures by:Tech-Long Mukee



交流会现场，达意隆工程师做灌装设备技术培训
Site of Sodality, Tech-L-ong engineer is providing technical training on filling equipment

原怡宝、云南山泉公司营销总监邓郁先生主讲桶装水的相关知识
Marketing Supervisor of former Cestbon and Yunnan Spring Co., Ltd. Mr. Deng Yu is giving speech on Barrel Water

达意隆从客户实际利益出发，为客户设置了定期免服务费及定额免使用零配件的特别奖项。
Tech-Long has set the special award for clients on providing periodical service without charging and using parts and accessories without charge.

技术交流过程中，与会者反响热烈，现场提出多个实际生产中常遇的问题，讲师都给出切实可行的对策，使与会者受益良多
During technical exchange, the participants have presented targeted issues which may frequently occur during the producing process and obtained benefits from the feasible answer from lecturers.



感受“中国制造”的设计魅力

—《世界饮料与酿造技术》专访达意隆
董事长张颂明先生

Feel the Attraction of the “Make by China”

--Interview President of Tech-long Mr.Zhang Songming by

“World Beverage and Brew Technology”

文章提供: 《世界饮料与酿造技术》
主编 王芬芬

Article offered by: “World beverage and brew technology”

Wang FenFen, editor in chief

编者按:

近几年来, 在中国PET吹瓶行业中最耀眼的不能不数发展迅猛的达意隆, 然而谈到它的成功, 不能不提它的产品设计。

我们说, 只有那些能真正驾驭设计的企业才能登上巅峰, 然而那些失败者就会掉入万劫不复的深渊……设计, 究竟有什么神秘而强大的魔力? 我们将在本期开辟的“设计”栏目中, 解读“设计”, 深入诠释优秀企业的设计理念, 倡导人们对设计的理解与尊重。否则, 再优秀的设计也会变得毫无意义。

我们特别邀请了达意隆公司董事长张颂明先生, 听听这位领军人物是如何为我们解读企业成功的秘诀, 或许达意隆的成功经验能带给您一些启迪。

Leaderette:

In recent years, Tech-Long is the most shining role in PET bottle blowing industry in China, it is necessary to mention the product design when talking about its success.

We say, only those enterprises who can really control design can achieve peak, and the losers may fall into the abyss.....what mysterious and powerful magician does design have? We will deeply explain the design thought of outstanding enterprises in the “Design” column, and advocate people to understand and respect design, otherwise, even most outstanding design will also become insignificant.

Let's enjoy the Chairman of Tech-Long Mr. Zhang Songming on how to explain the secret of success, maybe the success of Tech-Long may bring your some enlightenment.

Although, facing a lot of competitors in the market since 2001, Tech-Long who developed from high start point has taken leading technology as the treasure for success. For 6 years, with the key technologies in bottle blowing and filling, Tech-Long has developed into the outstanding role as whole line supplier. The bravely innovative private enterprise attended the world wide famous packaging machine exhibitions with the image of “Made by China”, and shown the attraction of “Made by China” to the global liquid foods enterprise.

虽然, 达意隆在2001年起步时市场上就已有许多竞争对手, 但以高起点出发的达意隆一直以来把技术领先作为企业制胜法宝。6年来, 凭借着吹瓶、灌装核心技术达意隆已经成为整线供应商的佼佼者。这家锐意创新的民营企业, 多次代表“中国制造”的形象出现在全球各地的著名包装机械展览会上, 使全球的液体食品企业感受到“中国制造”的魅力, 也成为国际同行不敢小视的竞争对手。

Although, facing a lot of competitors in the market since 2001, Tech-Long who developed from high start point has taken leading technology as the treasure for success. For 6 years, with the key technologies in bottle blowing and filling, Tech-Long has developed into the outstanding role as whole line supplier. The bravely innovative private enterprise attended the world wide famous packaging machine exhibitions

with the image of “Made by China”, and shown the attraction of “Made by China” to the global liquid foods enterprise.

WBT主编: 在欧美, 啤酒饮料及液态食品机械行业有较长的发展历史, 相比之下, 中国的啤酒饮料机械行业仍然很年轻, 因此中国想要赶超上欧美, 也不是一件短时间内能够完成的事。因此需要有志进行创新的企业每年进步、每月进步、每天进步。但是, 我们会经常发现中国啤酒饮料机械制造行业中的很多企业在“模仿”中迷失了自己。对此, 我们想请张颂明董事长谈谈达意隆是如何创建自己的“风格”?
Topic of Conversation One:

World Beverage and Brewing Technology Magazine (Referred to as WBT): In Europe and America, the beer, beverage and liquid food machinery industry has a comparatively long history of development. In comparison, the Chinese beer and beverage machinery industry is still very young. Therefore, if China wants to catch up and overpass Europe and America, it is also impossibly a matter that can be accomplished within a short period of time. Therefore, it is required that the enterprises that have high ideals to create the new will make progress every year, every month and every day, but we have often found that there were a lot of enterprises in the Chinese beer and beverage machinery manufacturing industry, which were lost in their “imitation”. Therefore, we would like to request Mr. Zhang Songming, Chairman of Board, to have a talk of how Tech-long was to create its own “style”?

张颂明: 企业自主创新是企业竞争力的关键。随着科技与全球化经济程度的不断提高, 企业必须注重自主创新, 才不会在市场经济大潮中迷失方向。达意隆自成立之初就立志于在世界饮料包装行业创立中国的民族品牌, 而这需要超前的创新战略。

Mr. Zhang SongMing: For the enterprise independent creation is a key of the enterprise kernel competitive force. With the continuous improvement of science and technology and globally economic progress, enterprises must lay stress on the independent creation of the new, so as not to lose its direction in the market economy. Since the initial stage for the establishment of Tech-long, it was determined to create the national brand of China in the world beverage packaging industry, which requires the leading strategy on creation.

应该说, 每个企业都有自己的“风格”, 达意隆的风格就是更专注于科技前沿以及

企业核心技术的开发, 企业非常注重科研队伍的建设, 从目前来看, 研发人员占了公司人数的四分之一, 现在有超过100多个科研人员。每年, 达意隆都会拿出当年销售额的10%以上作为科研经费。2005年11月15日, 达意隆“技术研发中心”正式升级为“广东省饮料包装成套设备工程技术研究开发中心”。

It should be said that every enterprise has its own “style”, and the style of Tech-long is to pay more special attention to the forefront of science and technology as well as the development of key technology of the enterprise, and to lay more stress on the construction of scientific research ranks. Viewing from the present conditions, the research and development personnel account for one quarter of the number of people of the company, having more than one hundred scientific research personnel. Every year, Tech-long has taken more than 10% of total sales for that year as the scientific research expanses. On 15 November 2005, Tech-long “Technical Research and Development Center” was formally upgraded to “R &D of Guangdong provincil Packaging Equipment”.

作为自主创新的主体, 达意隆不仅重视新技术、新产品的开发, 还注重新市场的开拓。这样才使得达意隆能够引领市场潮流, 获得技术创新所带来的超额利润, 实现可持续发展, 并领先于竞争对手。As a main body of independent creation, Tech-long not only attaches importance to the development of the new technology and new equipment, but also to lays stress on the exploitation of new market. In this way, it enables Tech-long to lead a trend of market, and to obtain the super-profit which was brought about by technically creation the new, to realize the sustainable development, and to be in the lead among the competitive opponents.

在上月刚结束的2006（第七届）中国国际啤酒、饮料制造技术及设备展览会(China Brew & Beverage 2006)上, 首次亮相的CPXX22吹瓶机, 是达意隆自主研发的当今最先进制瓶技术的最新力作, 一经展出便在业界同行引起了强烈震动。很小很微弱的噪音和震动使在现场的客户亲身感受了这台设备在高速运行下的良好状况。
In the (7th) China Brew & Beverage 2006 completed in the last month, CPXX22 bottle blowing machine which was exhibited for the first time was the latest production of Tech-Long by applying most advanced bottle making technology and has aroused intensive shock in the industry. Clients have realized the outstanding work of the equipment at high speed with extremely low noise and vibration.

WBT主编：达意隆作为定位在替代国外进口设备水平的供应商，请介绍一下国际吹瓶技术发展的情况，达意隆目前处于什么水平？从设计角度出发怎样才能体现产品的先进性？我们的设计依据是什么？
Topic of Conversation Two:
WBT: Tech-long has been positioned as the supplier at the level of replacing the imported equipments. Please give an introduction to the conditions for development of the international bottle blowing technology. What level is Tech-long now in (introduce Tech-long bottle blowing technique in detail, including the new product to be specially put out in September exhibition)? To start from the angle of design, how can it showed the advancement of a product? And what is our design basis?

张颂明：在中国，我们是首家研制生产高速全自动旋转式吹瓶机的厂家。目前，拥有RJM10 RJM14 RJM16 RJM20 CPXX22等系列产品。CPXX22吹瓶机单模产量可以达到1600瓶/模小时，22模腔总产量高达33000瓶/小时（600ml），一台设备就可以满足一条中高速饮料线的制瓶需求。该设备广泛应用于瓶装水、茶、果汁、运动饮料、含汽饮料、功能饮料等的PET瓶容器的吹制，其具有自动化、智能化高、低成本、生产效率高的特点。我个人认为，产品的先进设计要融合现代科技成果，适应客户不断变化的设计。我们拥有各种先进的设计理论和方法，在产品的功能结构、造型、竞争力和经济效益上体现客户的价值。

Mr. Zhang Songming: In China, we were the first factory that researched and manufactured the high-speed fully automatic rotary type bottle blowing machines, and now possesses a series of products, such as RJM10, RJM14, RJM16, RJM20, and CPXX22, etc. The single-mould output of CPXX22 bottle blowing machine may reach 1600 bottles/h, and the total output of 22 moulds is highly up to 33,000 bottles (600ml)/h. One set of machine can meet the requirement for the manufacture of bottles by a medium and high speed beverage packaging line. This equipment is widely applied to blow and mold PET bottles for packaging of water, tea, fruit juice, sport drinks, carbonated beverage, and functional beverage, etc., which is characteristics of high automation, high intelligence, low cost, and high production efficiency. In my opinion, the advanced product design should have fusion of the contemporarily scientific and technological fruits, and should be adapted to the requirement for the uninterrupted changes of clients. We have the various advanced design theories and

methods which will embody the value of clients on the function structure, modeling, competitive force, and economic benefit of products.

在饮料行业激烈竞争的今天，用户更为关心的是如何购买到“质优价廉”的设备。达意隆吹瓶机已经与国际顶尖供应商相媲美，并且能为用户带来利益最大化。只有性价比最优才是真正的低价，达意隆公司一直将定位锁定在替代进口产品设备这一水平上，在技术性能达到国外同行90%水平基础的同时，价格远远低于国外进口设备的40%。
Today, in the sharp competitive beverage industry, users care more about how to purchase “quality products with substantial price”. Tech-Long bottle blowing machine can maximize client’s benefit due to world top technology. It is actual low price with highest ratio of performance and price, Tech-Long focuses on substituting imported equipments, when the technical performance reaches 90% of foreign suppliers, our price is over 40% lower than the imported equipments.

WBT主编：与国外吹瓶机械供应商相比，请描述从哪些角度进行产品设计才能体现低成本制造？
Topic of Conversion Three:
WBT: In comparison to the foreign bottle blowing machinery suppliers, please describe that from which angles to carry on the product design can embody the low cost manufacture (not confined to the manufacturing cost, there are also other aspects, such as manpower resources, etc.)?

张颂明：低成本制造是中国制造业最具竞争力的重要因素，概括地说，我们的低成本是贯穿在整个生产流程之中的。低成本制作应该体现在生产流程优化，而不只是强调设备的价格，应综合考虑低设备投入、高制造质量、高制造效率和低维护维修等几个方面。正是基于这一考虑，达意隆选择了世界知名公司作为供应商，组成供应链战略联盟，配合生产流程，创造新的利润增长点。
Mr. Zhang Songming: The low cost manufacture is the important factor that the Chinese manufacture industry mostly has the competitive force, to put it briefly, our low cost is to be

penetrated in the complete production flow-sheet. The low cost manufacture should be embodied in the superiority of a production flow-sheet, for which we do not merely lay stress on the price of equipment, but should have a comprehensive consideration of the following a few aspects, such as the low investment on of equipment, high manufacturing quality, high manufacturing efficiency, and low maintenance expense, etc. It is precisely based on this consideration that Tech-Long has selected the world well-known companies as its suppliers, composing a strategic alliance of supply links, coordinating the production flow-sheet, and creating a new profit increasing point

与国外吹瓶机械供应商相比，我们在低成本制造方面的优势还体现在生产管理、人才战备、供应链管理、企业制度等方方面面。
In comparison with the foreign bottle blowing machinery suppliers, our superiority on low cost manufacture is also embodied in the aspects of production management, talent preparation, supply link management, and enterprise rule and system, etc.

饮料市场的激烈竞争，使中外企业把目光瞄准了迅速崛起的“中国制造”，但产品质量仍然是这些饮料巨头的首选因素。中外饮料巨头纷纷选择了达意隆正是因为看中了其产品质量过硬和价格的优势能为他们带来长远的利益。
The sharp competition in beverage market promotes the domestic and foreign enterprises to focus on the flourishing “Made by China”, but quality is also the preferred factor for those beverage tycoons. Domestic and foreign beverage enterprises select Tech-Long who may provide long term benefit for them with high quality and substantial price.

WBT主编：从纯经济的观点来讲，为了减少维修费用，提高产品的利用率，高可靠性是非常必要的。但也不是可靠性最好时总的消耗费用一定最低，因为还有产品的制造成本问题，需要综合考虑优化选择，以找出使总费用最低的最佳可靠性。
Topic of Conversion Four:
WBT: Speaking from the purely economic viewpoint, in order to reduce the maintenance cost and to raise the utilization of product, the high reliability is very necessary. But it is also not that when the reliability is in the optimum state, the expense of gross pollution will certainly be the lowest because there is also a cost for manufacture of product. It is necessary to have a comprehensive consideration of preferential choice, so as to find the optimum reliability to enable the overall cost to be the lowest.

也就是说，在产品的可靠度与成本之间有个最优选择，这也要通过可靠性优化设计来求解。达意隆是怎样实现这一最优选择的？
That is to say, there is the optimum choice between the reliability of product and cost, which will also be solved by optimizing the design through the reliability. And how does Tech-Long realize this optimum selection?

张颂明：产品的可靠度和成本同等重要，产品质量是价值和尊严的起点，我们引进质量管理体系就是为了对产品的质量进行过程管理，提高产品的可靠性，但是这要涉及到成本问题，刚才我们也谈到了这个问题。因此，要系统的、综合的去考虑这个问题，以达到优化选择。由于可靠性指标涉及产品的成本，因此，在进行可靠性优化设计时，达意隆对产品的可靠度分配采用优化方法。首先建立可靠度分配的费用最少、维修费用最少，消耗最小的目标函数及可靠度约束条件，通过求优化解，最后求得产品的最佳设计方案和最优可靠度值。
Mr. Zhang Songming: The reliability of product was as equally important as the cost. The quality of product is a start point of the value and dignity. That we imported the quality management system is to carry out the process management on the quality of product, to improve the reliability of product, but it will refer to the cost. Just now, we had a talk of this issue as well. Therefore, it is necessary to systematically and comprehensively consider this problem, so as to obtain the optimizing selection. Owing to the reliability index that refers to the cost of product, carrying out the optimized design of reliability, Tech-Long adopted the optimized method for the distribution of product reliability. First of all, setting up an objective function of the minimum expenses for the distribution of reliability, minimum maintenance expense, minimum consumption, and the restraint conditions of reliability, through seeking optimized selection, it finally acquires both the optimum design scheme and optimum reliability of the product.

选择达意隆的产品，意味着你拥有了最可靠的产品和能给用户带来节省成本的整体最优投入方案。
Selecting the product of Tech-Long means that you have possessed the most reliable product and the overall most optimum input scheme that can bring about the cost saving for the user.

印尼达能采用达意隆设备灌装“脉动”生产现场
Tech-Long filling equipment running in MIZONE production site. Indonesia DANONE



目前，达意隆已成为亚洲最大、世界前列的系列饮料包装设备制造与研发基地。作为一个后来者达意隆能够在短短几年就能赶上甚至在某些方面超越了竞争对手，靠的是先进的制造技术，更得益于先进的管理理念。Currently, Tech-Long has developed into the manufacturing and R&D base for beverage packaging equipments which is the biggest in Asia and leading in the world. It depends on advanced manufacturing technology and advanced management for Tech-Long to reach and even exceed the competitors in a short period.

WBT主编：任何先进制造模式除了采用先进制造技术之外，更反映了某种全新的生产哲理和管理思想。中国制造商如果要想成为国际名牌企业，除了要拥有世界一流的制造技术外，更重要的是要有世界一流的组织管理模式和管理水平。当然其先决条件是企业内外必须建立比较完善的市场竞争机制。请您介绍一下达意隆在这方面的经验。
Topic of Conversion Five:
WBT: Any advanced manufacturing models, besides adopting the advanced manufacturing technology, also reflect some completely new production philosophy and management concept. If the Chinese manufacture suppliers want to become an international famous brand enterprise, besides possessing the world first class manufacture technology, the more important is to have the world first class organization management model and management level. Of course, its pre-requisite is that the inside and outside of the enterprise must establish comparatively perfect market competitive mechanism. Now please kindly give an introduction to the experience of Tech-Long in this aspect.

张颂明：达意隆在建立初期，就意识到企业管理对一个企业的重要性。为提高公司的运营效率，适应日益激烈的外部竞争，在长期的管理实践中，公司把卓越绩效管理作为一种基本的、基础的管理模式，并从领导、战略、生产、市场、资源、过程管理等方面付诸实施。虽然达意隆在管理能力和整体业绩上得到了提高，但是和国外的公司相比，还存在太多的不足，要想成为国际名牌企业，我们要不断地学习，实际上我们也正在不断地提高。
Mr. Zhang Songming: At the initial stage on the establishment of Tech-Long, Tech-Long was conscious of the importance of enterprise management to an enterprise. In order to improve the

operation efficiency of the enterprise and to adapt to fiercely outer competition with each passing day, in the practice of long-term management, the company took the management model of the outstanding achievement and efficiency as a kind of fundamental and basic management model, putting into effect from the aspects of leadership, strategy, production, market, resources, and process management, etc. Although Tech-Long has improvement in the management ability and overall achievement, in comparison with the foreign companies, there has also been too many deficiency. If want to become the international well-known brand enterprise, we must continuously study, and actually, we are also uninterruptedly improving ourselves.

WBT主编：设计出成功的产品，首先要了解市场需要什么样的产品，不同的市场它的需求状况也不一样，这就需要企业去了解和研究，最后才是创作设计。您觉得中国本土企业比国外企业在了解市场需求方面有什么优势？
Topic of Conversion Six:
WBT: Designing the successful product, it is necessary to firstly understand what kind of product the market needs. For different markets, their requirements are also not the same. It is necessary to request enterprises to go to understand and research, and finally to carry out the creation and design. What superiority the Chinese native enterprises have in the aspect of understanding the market demands in comparison with the foreign enterprises?

张颂明：我觉得这方面中国本土企业的优势是不明显的，因为国际化进程正在加快。但就中国市场来说，中国企业比外国企业更了解中国的政治、文化和经济水平，能更好地从客户的角度去考虑问题，并根据市场需求推出适合市场需要的产品。比如说瓶型，还有包装的形式，中国本土的企业更能从消费习惯的角度进行创作设计。
Mr. Zhang Songming: I think that the superiority of the Chinese native enterprises in this aspect is not obvious because the internationalized progress is just quickening. But speaking from the Chinese market, the Chinese enterprise has more understanding than the foreign enterprise of the Chinese politic, culture and economic level, and can much better consider the problems from objective angle, and put out the products that are suitable for its demands on the basis of the demand of market. Taking the shape of a bottle as an instance, also the way of packaging, the Chinese native enterprises are more able to carry out the creation and design from the angle of

consumption habits.

WBT主编：产品设计是体现品牌价值的的一个重要元素，如果要以百分比划分的话，达意隆的设计会占到品牌价值的多少个百分点呢？
Topic of Conversion Seven:
WBT: The product design is an important element to embody the value of brand. If it is expressed by a percentage, how much percentage does the Tech-Long design Account for in the value of brand?

张颂明：从某种意义上讲，产品设计是体现品牌价值的重要载体，作为制造型企业，产品就是最好的品牌宣传，这比任何广告都有效，别人一看到这个产品就马上知道这是达意隆的。
Mr. Zhang Songming: Speaking from some significance, the product design is an important carrier to embody the value of brand, but as a manufacturing type enterprise, the product is just the best propaganda of brand which is more effective than any adverts because other people immediately know that this is Tech-Long as soon as they have a look at that product.

说到设计占品牌价值多少个百分点，每个企业都有不同的标准，就达意隆而言，我个人认为，设计应该占到80%的比重。Speaking of how much percentage points the design accounts for in the brand value, every enterprise has the different standard. So long as Tech-Long is concerned, in my opinion, their design accounts for 80% of the specific weight.

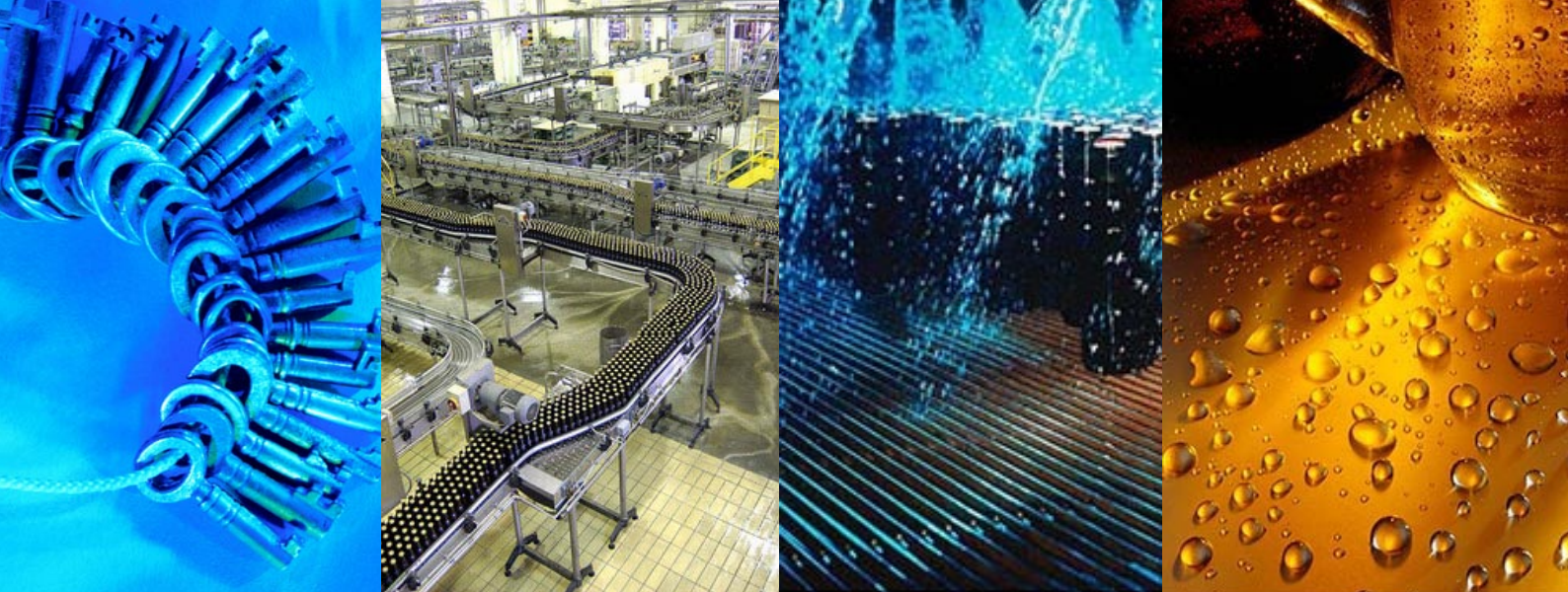
WBT主编：从客观上来讲，中国啤酒饮料机械产品设计一直受欧洲风格的影响，而中国本身作为一个庞大及有发展潜力的市场，请问张颂明董事长，您觉得中国何时才能赶上欧洲成为世界液态食品机械产品的设计中心呢？
The Last Question:
WBT: Objectively, the product design of the Chinese beer and beverage machinery has constantly been influenced by the European style, and China itself, as a giant and potential market. When do you think China can catch up with Europe and become the design center of the world liquid food machinery products?

张颂明：我觉得这种差距是不能用多少年来定义的。有人说国内液态食品机械产品的设计与国外还有二三十年的差距，也许从纯粹的技术设计角度来看，这是对的，

但从市场角度来看，我不这样认为，因为纯粹的技术设计先进并不代表在应用领域就能领先，就好比非常领先技术设计的磁悬浮交通的实用价值就远不如目前的轮轨道交通，因为它的成本过于昂贵。我们提倡站在市场需求的角度来将设计转化为应用，这也是设计的精髓所在。同时我们也必须承认欧洲的设计水平领先于中国，只要我们应用好中国的制造优势、人力资源优势、市场优势，相信我们的设计水平上升速度会远远快于欧洲。
Mr. Zhang Songming: I think that this difference cannot be defined by means of years. Some people said that the design of the domestic liquid food machinery will also have a gap of two or three decades in comparison with the foreign countries. Viewing from the angle of purely technical design, perhaps, it is right, but as viewed from the market, I don't think so because the purely advanced technical design cannot represent that it can take a lead in the applied realm. It seems the magnetic suspension train, though it is of extremely leading technical design, its practical value is far not as good as wheel, road and rail communication because its cost is extremely high. We advocate the design into application from the angle of the market demand, which is where the key of design lines. In the meanwhile, we must also admit that the European design level is more advanced than China. As long as we apply well the Chinese manufacture superiority, manpower resource superiority, and market superiority, it should be believed that the rising velocity of our design level would be much quicker than Europe.

越南槟城采用达意隆设备生产现扬
Tech-Long machinery running in THP group, BINH duong province Vietnam





做具有国际竞争力的 饮料整线设备供应商

——达意隆董事长张颂明谈公司发展方向

*Be a whole line equipments' supplier of
beverage with international competitiveness*

——“Mr. Zhang Songming, President of Tech-Long,
talked about company develop strategy”

近年，饮料工厂对整线设备的需求持续增长，我们认为努力成为替代进口设备的整线供应商，让我们的产品为广泛的饮料用户服务，是我们今后的发展方向，我们可以为用户带来更大的附加值和成本优势。

In recent years, the demand for whole line equipment of beverage factory increases continuously, we think it is our developing direction in the future to become the whole line supplier who substitutes the import equipment and let our products serve extensive beverage users. We can bring larger extra value and cost advantages to users.

技术做核心，
为用户创造最高利益

Taking technology as the core, and
creating supreme interests for users

“与用户合作，为用户创造最高利益”是达意隆一直追求的目标。给用户带来更高的效率是其中的表现之一，而这些都要靠

先进的技术来实现。达意隆的宗旨就是以技术为核心为用户创造最高利益。

“Cooperate with users and create supreme interests for users” is the goal that Tech-Long has been pursuing. Bringing higher efficiency to users is one of the goals, and all these will be realized through advanced technology. The aim of Tech-Long is to regard

technology as the core and create supreme interests for users

早期，达意隆也生产半自动化的设备，但这只是一种过渡的设备，目前达意隆生产的全自动大型设备已经能够与国外顶尖供应商的设备相媲美，并能够为用户带来利益的最大化。目前许多同行似乎更多地关注如何能够将设备做得更便宜，而忽略了技术。这样的设备可能在短时间内能够带来一些利益，但不能带来长远的利益。在饮料行业竞争激烈的今天，纵观整个行业，用户真正需要的是能够为自己带来长远利益的供应商。达意隆看到用户的这种需求后坚定了以技术为核心的宗旨，不断加强自己的研发力量，达意隆目前已经拥有了达到国内同行最高水平的110人的研发团队。近两年的研发资金已经达到了销售额的10%。目前，广东省饮料包装行业的技术研发中心就设在达意隆总部。

At early stage, Tech-Long also produced the semi-automatic equipment, but it was only a kind of transitional equipment. At present the full-automatic heavy-duty equipment that Tech-Long produces can compare favorably with the equipment of top foreign suppliers, and can bring maximum interests to users. Many counterparts seem to pay close attention to how to make the equipment cheaper, while the technology has been neglected. Perhaps such equipment can bring some interests within short time, but long-term interests cannot be gained. Today competition in beverage trade is fierce. Through a general survey of the whole trade, we can see that what users really need is the supplier who can bring long-term interest. After seeing this kind of demand of users, Tech-Long strengthened the aim of taking technology as the core and improving his own research and development strength constantly. Now Tech-Long has a research and development group of 110 persons which has reached highest-level among domestic counterparts. The research and development fund of the past two years has reached 10% of the sales volume. Now the technological research and development centre of the beverage packing trade of Guangdong Province is set up at the general headquarters of Tech-Long.

替代进口设备，
带给客户最优的性价比

Substitute the import equipment and bring
optimum cost performance for customers

价格无论在什么时候，都是用户所关注的最敏感的问题。目前饮料包装机械的现状

是国外设备性能优良但价格让许多饮料企业望而却步；而国内的一些饮料包装机械供应商的产品质量又无法满足饮料企业的高要求。达意隆正是清楚地看到了其中的市场空白，因此达意隆的目标就是做进口产品的替代产品，带给客户最优的性价比。

Price is always the most sensitive problems that all users concern. The current situation of the beverage packaging machinery is that the foreign equipment is of good performance but the price let a lot of beverage enterprises hang back; Product quality of some domestic beverage packaging machinery suppliers can't meet the high requirements of beverage enterprises. Tech-Long has seen this market blank clearly, and set up its goal to be the substitution of imported products and bring optimum cost performance to customers.

想做到这些并不容易，与国外同行的博弈，是达意隆发展的促动力之一。国外供应商近一两年来加快了本土化的发展步伐，但是真正意义上的本土化并不是轻易就可以达到的，尤其是在成本中的研发成本投入方面。达意隆选择了利用企业的灵活性来与国外企业对抗，这其实是一个兔子与大象相比较的道理。大象一般都不十分灵活，会跳舞的大象灵活但不容易练出，兔子就是要在大象的动作之前，凭借灵活的特点提前动作，取得市场先机。

But it is not easy to accomplish these. Gaming with foreign fellow traders is one of motivators for Tech-Long's development. Foreign suppliers accelerated their developing steps of localization over the past two years, but the real localization can not be achieved easily, especially in the input of research and

山东九发使用达意隆
整线设备生产“深海
泉”产品现场

The scene of “Deep sea spring”
water that being produced
on Tech-Long's whole line
equipments ShanDong Jiu
Fa's plant.



development cost. The reason that Tech-Long chose to make use of flexibility of enterprises to confront with overseas enterprise is similar to the comparison between a rabbit and an elephant. Generally the elephant is not flexible; elephant that can dance is flexible but not easy to be trained. The rabbit should take measures to gain market priority relying on the flexible characteristic before action of the elephant.

达意隆始终认为：只有性价比最优才是真正的低价。因此，公司的设备一直定位在代替国外进口设备这一水平。在技术性能达到国外同行90%水平的同时，价格远远低于国外进口设备的40%——这是达意隆带给用户的高性低价，也是达意隆在性价比最优理念上最好的诠释。

Tech-Long believes that: Real low price lies in optimum cost performance. So, the equipment of the company has been orientated as at the level of replacing the foreign imported equipments. While the technical feature reaches 90% of the levels of foreign counterparts, the price is far lower than 40% of the imported equipment --This is the high performance and low price that Tech-Long bring to the users, and which is also the best annotation of Tech-Long’s idea of optimum cost performance.

**响应市场需求，
致力于做全套解决方案的供应商**
Respond to market demand and be devoted to becoming a supplier of the complete solution

目前饮料企业在配置包装生产线时都希望能够做到最优化合理，他们希望能够找最少数量的供应商解决整条包装生产线的配置，在这种市场需求下，许多供应商都逐渐扩大了业务范围，达意隆凭借在吹瓶、灌装方面的核心优势，已率先成为整线供应商的佼佼者。目前饮料行业的行业整合现象日趋严重，饮料企业逐渐向规模化发展。在这种情况下，企业就迫切需要高速的包装设备满足大规模工业生产的需要。尤其是在目前前段包装线能够达到每小时3-3.6万瓶生产速度的情况下，后段包装线必须提高效率才能达到整线的效率最优。而目前的情况是，国内后段包装线可以选择的供应商不多，且技术水平相对不高，虽然国外供应商的后段包装线技术水平高，但价格之高又让很多国内用户无法承受。基于市场的这个需求，达意隆已经在后段包装方面加大了研发力度，达意隆的二次包装设备在行业内已有更新的突破。

At present all beverage enterprises hope to achieve optimization while disposing the production line of the packaging. They hope to let minimum number of suppliers solve the disposition of the whole production line of packaging. Under this market demand, a lot of suppliers have expanded the business scope gradually. Tech-Long has taken the lead in becoming an outstanding whole line supplier relying on its key advantages in such respects as bottle blowing and filling. Currently integration has become a common phenomenon in the beverage trade, and the beverage enterprises gradually develop towards greater scale. In this case, enterprises are in urgent need of high-speed packaging equipment to meet extensive industrial production. Especially under the condition that currently the speed of production of packaging line at the first phase can reach 30,000-36,000 bottles per hour, only the efficiency of the latter packaging line is improved can the optimum efficiency of the whole line be achieved. But the present situation is that there are few domestic suppliers secondary packing, and the technical level is relatively low. Though the technology of the back section of packaging line of foreign suppliers is competent, many domestic users cannot afford. Based on the market demand, Tech-Long has devoted more efforts to the research and development secondary packing. The secondary packaging equipment of Tech-Long has newer breakthrough in the industry.

总体说来，达意隆在市场开发方面特别重视设备的整合能力和交钥匙工程的提供，公司希望能够不断完善产品的类型，以便为用户提供最优化的全套解决方案。

Overall, Tech-Long pays special attention to the integration ability of equipment and offering of the turn-key project in market development. The company hopes to improve the type of the products constantly in order to offer optimized complete solution to users.

Text by: Tech-Long Zhang Songming
Pictures by: Tech-Long Muker/Hakim

达意隆整线设备主要包括:
The whole line equipment of Tech-Long mainly include

水处理系统、饮料前处理系统、注坯注塑系统、全自动旋转式PET吹瓶机、瓶装饮料灌装系统、五加仑桶装水灌装系统、二次包装设备系统
Water treatment system, Beverage processing system, Injection moulding system, Bolw moulding machine, bottle Water filling line, 5 gallon filling system, Packing system,etc.





倡导先进的饮料包装技术， 提供真正符合用户需要的产品

Advocate advanced beverage packaging technology,
provide customer-oriented products

达意隆首次涉足日化领域，成功研发国内第一台高粘度液体定量灌装设备

Tech-Long involves in daily chemical field for the first time, successfully develop the first high viscosity liquid quantitative filling equipment in China

饮料包装设备发展新概念，吹灌旋一体机

New Concept of Beverage Packaging Equipment Development, Blow-Fill-Cap 3 in 1 Combi Line

与高速吹瓶机设备配套的优势产品-达意隆PET注坯系统

Superior auxiliary products for high-speed bottle blow molding machine, Tech-Long PET injection molding system

CPXX22新型高速吹瓶机，把先进的吹瓶技术带到用户身边

CPXX22 new type high-speed bottle blowing machine, bring advanced bottle blowing technology to users

传承卓越，开拓新领域-达意隆高起点进入啤酒市场，

着手研发36000瓶/小时高速啤酒灌装设备

Passing on prominence and exploiting new field: Tech-Long enters beer market from high starting-point and starts to research and develop high-speed beer filling equipment with an output of 36000 bottles/hour.

设备系统优化升级-达意隆全面二次包装设备

Equipment system optimizing and upgrading - Tech-Long secondary packaging equipment

达意隆首次涉足日化领域， 成功研发国内第一台高粘度液体定量灌装设备

*Tech-Long involves in daily chemical
field for the first time,
Successfully developed the first high viscosity
liquid quantitative filling machine in China*

传统的饮料灌装设备在灌装容量上都存在一定的偏差，而对于有更高灌装要求的产品领域（譬如粘稠日化产品），就需要有高精度定量灌装设备才能满足，正是在这种市场需求下，达意隆集中资源成功研制出了国内第一台高粘度液体定量灌装设备。

Traditional beverage filling equipment may cause deviation in filling capacity, for products with high requirements on filling (such as viscous daily chemicals), it requires high precision quantitative filling equipment. In order to meet the market demand, Tech-Long has centralized the resources and successfully developed the first high viscosity liquid quantitative filling equipment at home.

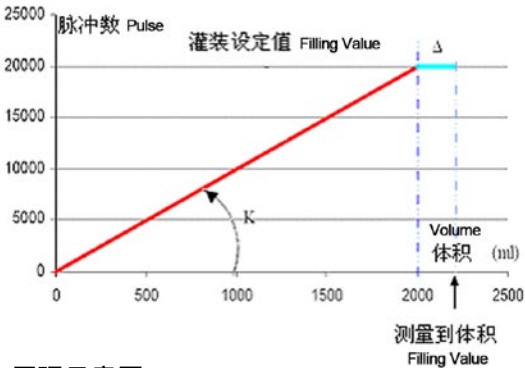
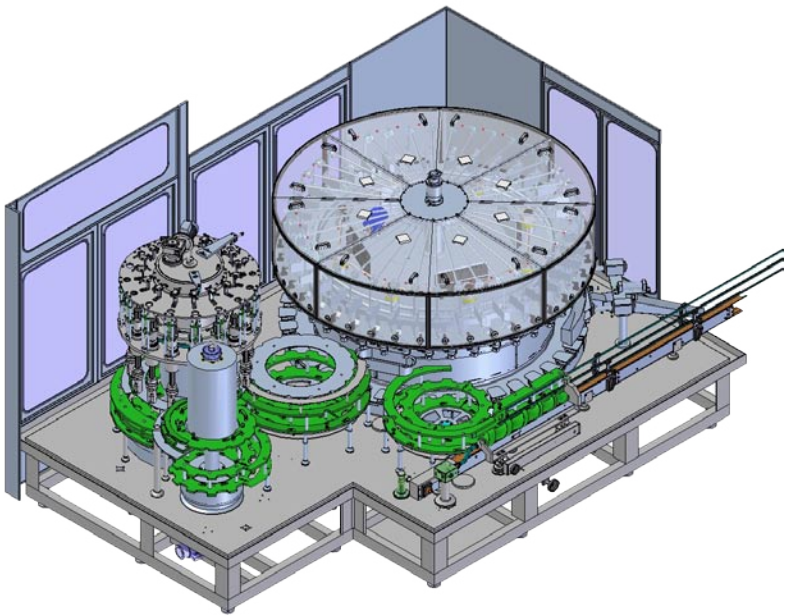
旋转式灌装设备一直是我达意隆的主要产品之一，现已成为国内饮料行业的首选设备，这次达意隆自行研制开发的定量灌装设备也一如既往采用旋转灌装方式，以达到高速度高效率低能耗的要求。

Revolving filling equipment is one of the major products of Tech-Long and now has become the preferred equipment for domestic beverage industry, the quantitative filling equipment, developed by Tech-Long, also applies revolving filling mode for achieving the requirements of high speed, high efficiency and low energy consumption.

目前市场上已有定量灌装设备按计量方式分类主要为机械柱塞式，电子称重式，液位探针式，流量计计量等几种，机械柱塞式定量灌装是先把物料灌注到定量柱塞定量，再灌注到容器内完成整个灌装过程，由于是两次灌装所以生产速度效率低，灌装过程加长密封件过多不利于卫生清洁的要求，而且更换灌装容量不容易实现，设备维护也非常麻烦；电子称重式与液位探针式分别是通过检测灌装容器内的物料重量或液位来控制灌注嘴的开关，虽然在产品适用性及卫生清洁上会有大的提高，但其测量精度不可避免将受到机器震动及其他因素的影响反而不如机械柱塞计量方式，这样就产生了一种最新准的流量计计量方式。

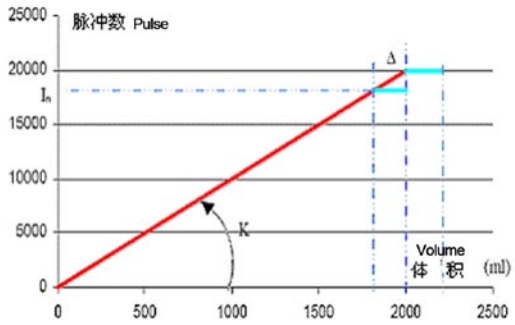
At present, current quantitative filling equipments in the market may mainly divided into mechanical plunger type, electronic weighing type, liquid probe type and flowmeter measurement type according to measurement mode; mechanical plunger type quantitative filling requires to fill material into the quantitative plunger and then the container for finishing the whole process, since it requires two filling process, it has low production efficiency, and it also makes against for sanitation since the filling process is longer with more sealing parts, additionally, it is difficult to change the filling capacity and trouble to maintain the equipment; electronic weighing type and liquid probe type control the filling nozzle through the weight of material and liquid level of the filling container, though it powerfully improves the adaptability and sanitation, the precision is lower than that of mechanical plunger type since it is influenced by the machine vibration and other factors, therefore, flowmeter measurement

高速高粘度液体定量灌装设备
DGXB16效果图
High Speed High Viscosity Fluid Quantitive
Filling Equipment Effect Drawing of DGXB16



原理示意图
对水的 $K=10000$ $I=20000$
 $vd=I/K=20000/10000=2$ 升 (或2000ml)
 $vm=2010$ ml
 $\Delta=2010-2000$ ml=10ml

Schematic Drawing
To water $K=10000$ $I=20000$
 $vd=I/K=20000/10000=2$ L (or 2000ml)
 $vm=2010$ ml
 $=2010-2000$ ml=10ml



对误差的修正
通过修正，灌装到瓶子里的产品刚好为理想设定值。
 $In=10000*(2-0.010)=19900$

Correction to Error
After correcting, product filled into the bottle is just the
ideal setting value
 $In=10000*(2-0.010)=19900$

which is the latest and precise is developed.

达意隆本着高起点开发新产品的宗旨，一次到位的选定使用流量计计量灌装作为攻克目标，成功的研制出了国内第一台高粘度液体定量灌装设备TL-FC4016-64，并一次性通过了严格的欧盟CE认证，适用于各种饮料、高粘度产品（如日化类）甚至所有流体的高精度灌装（灌装偏差小于0.5%）。Tech-Long insists on the principle of “developing new products from the high level”, and selects flowmeter measurement filling as the target, and has successfully developed the high viscosity liquid quantitative filling equipment TL-FC4016-64 which is the first at home, and passed the strict European Union CE Certification. The product is applicable for the high precision filling (with the deviation <0.5%) for various beverages, high viscosity products (such as daily chemicals) and even all liquids.

TL-FC4016-64定量灌装旋盖整线介绍:

达意隆自主开发设计制造的定量灌装生产线主要包括:

- 进瓶输送链(送瓶)
- 旋转式定量灌装旋盖二合一机
- 出瓶输送链(产品)
- 提盖机(送盖)
- 理盖器
- 盖风送道

Introduction to TL-FC4016-64 quantitative filling and capping whole line:

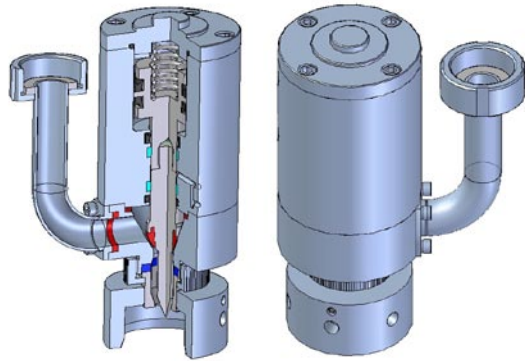
Tech-Long quantitative filling product line mainly includes:

- Bottle Feeding & Conveying Chain (Bottle Conveying)
- Revolving quantitative filling and capping 2-in-1 machine
- Bottle Discharging & Conveying Chain (Product)
- Cap Lifting Machine (Cap Conveying)
- Cap Sorter
- Cap Air Delivery Path

基于设备适用能力的高要求，此设备采用大节距（201mm）托瓶

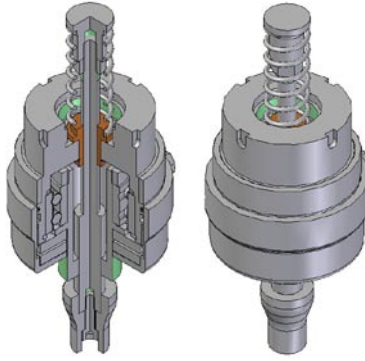
定量灌装设备
灌装头立面及
剖面图

Vertical and
Profile Drawing of
the Filling Head
of Quantitative
Filling Equipment



定量灌装设备
旋盖头立面及
剖面图

Vertical
and Profile
Drawing of the
Capping Head of
Quantitative
Filling Equipment



底灌装形式，适用瓶型可以为各种异性结构，截面尺寸最大可到180mm,高度达到400mm,同时通过新的理盖器设计，新的旋盖抓盖头设计，可以适用各种异性螺纹塑料盖型，最大直径和高度都可到80mm；整个物料灌装管路最小截面2平方厘米（等同于16通径管道），适用于各种不同粘稠物料的灌装，最大产量能达到340瓶每分钟。

Basing on the high requirements on high adaptability, this equipment applies big pitch (201mm) bottle filling and is applicable for various shapes of bottles with the max section size reaching 180mm and height reaching 400mm. Through the new cap sorter design, new cap holding head design, it is applicable for various abnormal plastic cap with the max diameter and height reaching 80mm; the minimum section of the material filling pipe reaches 2cm² (the same as 16 size pipe), applicable for filling various viscous materials with the max output capacity reaching 340 bottles/minute.

在设备的传动方面，使用Italy B&M及SEIMEC电机，MOTOVIRIO减速机，所有关节轴承选用Germany FAG及INA品牌，并作到免维护设计；一流的品质保障设备运行的可靠性。

In the aspect of driving, the equipment applies Italy B&M and SEIMEC motor, MOTOVIRIO decelerator, all joint bearings select Germany FAG and INA brand, with maintenance free design; top quality assures the reliability of the equipment.

该机灌装定量选用国际知名品牌Endress+Hauser电磁流量计；灌装阀开关控制选用美国MAC大流量高速电磁阀；流量计脉冲计数选用AB高速计算模块。灌装精度偏差小于±0.5%，能满足几乎所有客户的要求。

The filling ration of the machine selects world famous Endress + Hauser electromagnetic flowmeter; filling valve switch adopts America MAC high flow rate and high speed solenoid valve; flowmeter pulse counter selects AB high speed counting module, the filling precision deviation <±0. 5%, and can meet the requirements of almost all clients.

电磁流量计定量原理

法拉第电磁感应定律表明：在磁场中移动的导体将产生感应电动势。在电磁测量中，流动着的液体相当于移动的导体，产生的电压跟它的流速成比例，感应电压由两个电极测量出来，并被送到放大器中进行放大；根据管子的直径和媒体的速度计算出流量，恒定的磁场是由变换极性的直流电极产生的。计算公式如下：

Ratio Principle for Electromagnetic Flowmeter

Faraday's Law of Electromagnetic Induction shows: conductors moving in magnetic field may generate induction electromotive force. In the electromagnetic measurement, flowing liquid is the same as moving conductor, the voltage generated is proportionable with its flowing speed, induction voltage is measured from two electrodes and is amplified in the amplifier; calculate the flow rate according to the diameter of pipe and speed of medium, constant magnetic field is generated from DC electrode which has been changed the polarity. The formula is shown below:

达意隆第一台包装中即将发货的高粘度液体定量灌装设备
The first high viscosity liquid quantitative filling equipment of Tech-Long which will be delivered soon is under packaging



当某一灌装阀打开后，流体开始流入流量计。根据流体的特性，不同的流体在流量计里流动的速度将会不同。每一升流体的流动速度通过脉冲来表示，在表格上用K显示。流量计产生的脉冲数跟通过流量计的产品数量相对应。此脉冲数由高速计数卡记算。当高速计数卡计算脉冲数到某一设定的界限，它发出一信号关掉控制灌装阀的电磁阀。由于高速计数卡处理时间和其它机械变量，灌装阀关闭会有延时，因此测量到的体积比目标值高，用一数量 Δ 表示。脉冲值由后面的公式 $I=K*V$ 计算出；通过流量计的体积值由 $V_d=I/K$ 计算出；由于延时而流过的体积是 $\Delta=V_m-V_d$ ；因此测量到的体积是： $V_m=(I/K)+\Delta$
When some filling valve is opened, liquid flows into the flowmeter. According to the property of liquid, different liquid has different flowing speed in the flowmeter. The flowing speed of every liter of liquid is shown with pulse, and K in the table. Pulse generated from the flowmeter is accordant with the quantity of products which pass the flowmeter. This pulse is calculated with high speed counting card. When the high speed counting card calculates the pulse to some set value, it sends signal to turn off the solenoid valve which controls the filling valve. Since time delay exists for the processing time of high speed counting card and other mechanical variables and filling valve, the measured volume is higher than the target value, shown with a quantity. Pulse is calculated with the formula $I=K*V$; the volume passing the flowmeter is calculated through $V_d=I/K$; the passing volume due to time delay $\Delta=V_m-V_d$; therefore, the measured volume is $V_m=(I/K)+\Delta$

对误差的修正:

为了对延时而多灌装了液体的修正，那就需要减少脉冲数。新的脉冲值为： $I_n=K*(V-\Delta)$ ；通过修正，灌装到瓶子里的产品刚好为理想设定值。

Correction of Error:

For correcting the surplus liquid caused by time delay, it requires to drop the pulse. New pulse is $I_n=K*(V-\Delta)$; after correcting, product filled into the bottle reaches just the setting value.

技术创新

灌装阀

不同于传统的饮料灌装阀的内部排气方式，此次采用的灌装阀为外部排气，增大了灌装阀出口截面积（等同于16通径管道），使灌装速度大大提高，并使之能适用于更高粘度的产品；该阀把气动头与灌注嘴做成一体，通过气动头来驱动阀芯开合灌注嘴，唯一的动密封件采用无死角设计，并选用FPM氟橡胶材料，几乎适用于所有特性的物料。同时设计有溢流孔，使用户能适时观察到密封件的工作情况；对于不同的灌装介质，在阀嘴上将有不同的设计，在出口处安装一到三层滤网，既使液体达到紊流效果消除了泡沫，同时能大大减少了关阀后残留物料的滴漏；阀嘴还能零工具单独快速拆卸更换。

Technical Innovation

Filling Valve

Different from traditional beverage filling valve which exhausts air from inside, this filling valve exhausts air from outside, enlarges the output section of filling valve (the same as 16 size pipe), thus powerfully improving the filling speed for meeting the products with high viscosity; this valve has integrated pneumatic head and filling nozzle, and drives the valve with pneumatic head, the only dynamic seal part applies non dead Angle design and is made of FPM fluororubber which is applicable for nearly all materials. Additionally, it is designed with overflow hole, therefore, users may observe the work situation of seal part; for different filling medium, it has

different design for valve nozzle, installed 1-3 layers of filter at the outlet to achieve turbulent flow, remove foam and powerfully drop the remained material; valve nozzle can also be independently and swiftly replaced without any tool.

旋盖头、抓盖头

目前饮料行业所使用的几乎都是即抓夹紧式的抓盖头，这样对瓶盖形状就有一定的要求且容易伤盖，而TL这次设计的抓盖头使用气动抓盖手指，相当于机械手，适用盖型基本上没有限制，并且通过调节气压来控制抓盖力度作到不伤盖；新的旋盖头扭矩标示精确，调整方便，最大旋盖力矩可达7.5牛顿米，能满足大盖大扭矩的特殊要求。

Capping Head, Cap Holding Head

Currently, beverage industry applies only clamp type cap holding head, which has certain requirement to the shape of bottle cap and may easily damage the cap, TL cap holding head applies pneumatic cap holding fingers as manipulator without limit on shape of cap, and won't damage the cap by controlling the cap holding force through adjusting the air pressure; new capping head has precise torque marks with convenient adjustment, and the max cap turning torque reaches 7.5N.M, and can meet the special requirements of high torque for big cap.

物料管路的零死角设计

由于灌装介质的通用性，设备上没有配备灌装中间罐，大大缩短了物料在管路里的停留时间；与物料接触管路全部为316L不锈钢；在管路的密封件方面，我公司与世界著名密封件公司Busak+Shamban一起反复讨论实验，真正的作到了无死角设计，所有管道静密封件选用卫生级FPM氟橡胶材料，更是从Busak+Shamban公司定制了一种新型食品级PTFE泛塞密封圈作为物料分配器旋转密封用，使用寿命将会是传统密封件的4-6倍。同样的人性化设计的体现，操作者可以通过溢流管实时的观察到密封件的使用状况。

Zero Dead Angle Design for Material Pipe

Since it is applicable for universal filling medium, the machine is not equipped with filling intermediate tank, which powerfully shorten the time to keep material in the pipe; pipes which contact with material are made of 316L stainless steel; in terms of seal parts for the pipes, our company has achieved zero dead angle design together with the world famous seal part company --- Busak + Shamban after repeated experiments, pipes sealing parts are made of sanitary class FPM fluororubber filling nozzle material, additionally, our company has customized a new type of food class PTFE seal ring for the revolving seal of materials distributor from Busak + Shamban Company, and the service life is 4-6 times longer than traditional seal parts. Same human-oriented design enables the operator to observe the work situation of seal parts through the overflow pipe.

理盖器

此次设计制造的异型盖理盖器直径达1500mm，是TL制造的最大的理盖器，能适用于几乎所有类型的螺纹塑料盖。正反盖及歪盖的区分是通过纯净压缩空气气嘴来实现，连续运行30分钟正盖率达100%，根据盖型尺寸最大产量能达到每分钟300-800PCS甚至更高。此前国内同类理盖器只能依赖进口，此次研制成功也填充了国内的空白。

Cap Sorter

The diameter of abnormal cap sorter designed this time reaches 1500mm, which is the biggest for TL and is applicable for nearly all types of screw plastic cap. The identification of frontal and reversed cap and askew cap is achieved through the pure compressed air nozzle, and the frontal cap rate reaches 100% after continuous working for 30 minutes, according to the size of cap, the max output capacity exceeds 300-



800PCS /minute. Before this product is developed, this kind of cap sorter can only be imported, the development of it also fills the blank at home.

快速更换件

减少停机时间是提高生产率最直接的方法，达意隆的工程师们经过反复讨论，总结以前瓶型盖型更换件的优缺点，设计出最新一代快速瓶型更换件。零工具操作一直是行业设备的一个目标，TECH-LONG最新的设计真正的作到了这一点，任何的瓶型，盖型及产品的更换都可以自动或手动直接完成。瓶型盖型的高度变换完全由PLC自动控制一键完成；所有星轮型板（包括盖型）只需要插拔一个卡销就可以快速拆卸更换；螺杆等通过手轮做对应的调整，并且有精确的位置显示；一个受过培训的操作者最快可以在10分钟内完成所有更换件的拆卸与装配（从一种瓶样/盖样换至另一种瓶样/盖样），可以为用户争取到更高的生产效率。

Instantly replace parts

It is the most direct method on improving producing efficiency to reduce the stop time, after repeated discussion, Tech-Long engineers have summarized the advantages and weakness of shape of bottle and cap, and have designed the new generation fast bottle shape replacing product. It is the target for machinery industry to achieve operation without tool, the latest design of Tech-Long achieved this target, and can manually or automatically replace any shape of bottle, cap and product. The change of shape of bottle and height of cap are automatically controlled with PLC; all star wheel plates (including shape of cap) can be swiftly replaced by unplugging one clamp; screw is also adjusted with hand wheel with precise position display; a well trained operator can finished disassembling and assembling all parts within 10 minutes (change one kind of sample of bottle/cap to another), thus improving the production efficiency for users.

最完善的控制

一直以来，在设备控制方面国内与国外都存在一定的差距，国内设备的竞争力也深受此方面的制约，更稳定更完善的自动控制就成了我们必须攻克的目标。我公司与自动化领域专家罗克韦尔的再次深度合作，使此设备在控制方面达到了国际最先进水平。

Most Complete Control

For a long period, domestic has inferior technology compared with foreign in terms of equipment control, therefore, the competitive force of domestic equipments are restrained by it. It is our target to develop stable and complete automatic control system. Our company has cooperated with the expert in atomization Rockwell and promoted the control of the equipment to the most advanced level in the world.

自动追踪

基于此设备的灌装阀及抓盖头的开合都由电气控制，所以在设备运行过程中的灌装旋盖位置必须能做到连续自动追踪。我们在机器上设定一个零位，就可以基于此零位按角度区分每个灌装头的位置，我们再使用绝对值编码器配合移位寄存器就可以得到设备运行时每个灌装头每个抓盖头的具体角度位置，这就实现了在线的自动追踪。罗克韦尔自动化的Logix平台基于标签的编程方式，用户自定义结构体，数组等功能都非常适合旋转式的灌装机的开发工作，我们更是选用了精度和范围更可靠的ROCKWELL的842D型编码器，主要走DEVICENET网络线来读取信号，达到高稳定高精度的要求。

Automatic Track

Since the filling valves and cap holding heads of the equipment are controlled with electricity, therefore, it requires continuous and automatic track for the filling and capping position during the work of the equipment. We set one zero position in the machine to identify the positions of different filling heads, then use absolute coder and shift register to get the specific angle position of every cap holding head and the filling head, thus achieving online and automatic track. The label-based programming mode of Rockwell Logix platform, customized structure and array functions are suitable for the development of revolving filling machine, our company selects ROCKWELL 842D coder which has more reliable precision and scope, and get the signal with DEVICENET network line for achieving high stability and high precision.

在线检错剔除系统

在以往生产线中灌装及旋盖的合格与否必须有单独的设备或者人工来检查排除，这就大大

的增加了生产运行成本。在线检错剔除系统的开发使用势必将改写行业设备的标准；我们使用特殊的液位传感器置于灌装末端，使用巧妙的有无盖及歪盖检测装置置于旋盖末端，能够快速准确的对灌装液位及旋盖好坏作出反馈发送信号到设备出口处的高速分瓶剔除机构，准确无误的把不合格产品剔除到单独的位置；通过在线灌装及旋盖位置的自动追踪，设备出口处每一瓶产品就能对应到哪一个灌装头及旋盖头，配合在线检错剔除系统，我们更能够实现在线的每一个灌装头每一个旋盖头的工作状况追踪，这就真正意义上的作到了灌装旋盖过程的全控制。

Online Error Detecting & Removing System

In the past, it requires to check if the filling and capping are qualified by independent equipment or by operator, which powerfully increases the production and work cost. Online error detecting & removing system has optimized the standard of the equipment; our company installs the special liquid level sensor at the filling end, no cap and askew cap detecting device is installed at capping end, which may accurately and swiftly identify the filling liquid level and capping quality and then send the signal to the high speed bottle removing mechanism which is installed at the outlet of the equipment, thus accurately remove the disqualified products; with the automatic track of online filling and capping position, every product at the outlet may correspond the filling head and capping head, combined with online error detecting & removing system, it can track the work situation of every filling head and capping head online, which achieves the control of the entire filling and capping process.

严谨的控制逻辑及稳定性

设备运行的稳定性及出现故障后的快速响应都将直接影响到最终的生产效率，这就需要更合理更完善的逻辑控制。我们选用高品质的检测元器件（AB，SICK等）配合ROCKWELL的PLC，控制的稳定性得到了有力的保证。在程序上我们精益求精，运行过程中出现的任何运行故障都将快速清晰的显示在人机界面上，并能在一分钟内排除恢复生产；上百项的故障模拟测试，2小时无故障运行测试，成了此设备的高品质高效率的体现。

Strict Control Logic and Stability

The running stability and fast response in case of fault may directly influent the production efficiency, therefore, it requires more reasonable and more complete logic control. We select quality detection element (AB, SICK) and ROCKWELL PLC to assuring high stability of control. In terms of program, we strive for precision, and any fault can be instantly displayed on the human-machine interface, and remove the trouble and recover production within 1 minute; over 100 times of fault analog tests and 2 hours of non fault running test have thoroughly shown the high quality and high efficiency of the equipment.

CE认证

TL-4016-64灌注旋盖二合一机一次性通过了严格的欧盟CE认证，相信这也是行业内同类灌装设备的第一张CE证书，标志着我公司产品已经迈向了一个更高的层次。

CE Certification

TL-4016-64 filling and capping 2-in-1 machine has passed the strict European examine and get CE Certification, which is also the first CE Certification for filling equipment in this industry. It symbols that our product has up worded to a higer level.

Text and Pictures by:Tech-Long Fan D/Mukee

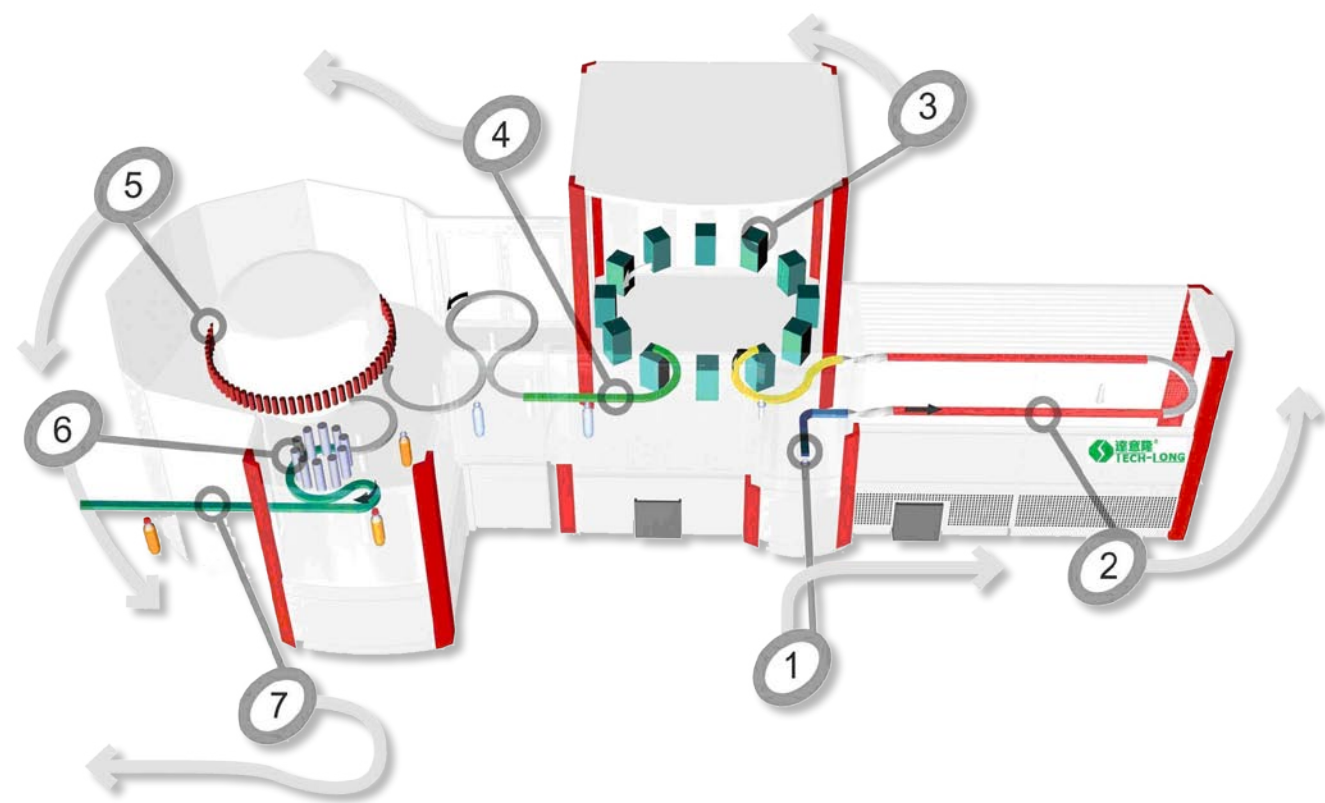


饮料包装设备发展概念

吹灌旋一体机

New Concept of Beverage Packaging Equipment Development

Blow-Fill-Cap 3 in 1 Combi Line



- 1.瓶胚输入 Bottle Feeding
- 2.加热 Heating
- 3.吹瓶 Bottle Blow Molding
- 4.星轮传动 Drive with Star Wheel
- 5.灌装 Filling
- 6.封盖 Capping
- 7.产品输出 Output Product

目前，国际上的的矿泉水、茶和果汁饮料、碳酸饮料等饮料市场发展迅猛，有专家预测，灌装水每年的平均增长率达到9%，灌装水的消费量将在2008年达到约2060亿升，比2003年增加约500亿升。其中五分之一的增长出现在北美，五分之二出现在亚洲。在包装方面，PET瓶占据全球包装水市场约80%的份额。面对庞大的市场空间和激烈的市场竞争，饮料企业更多的考虑到的是如何提高生产效率和降低成本，以及如何确保设备的稳定性，而设备供应商也因此面临了更多的挑战。随着PET包装行业的发展，市场竞争日趋激烈，为满足用户的需求，降低生产成本，提高吹瓶和灌装饮料的质量，面对市场的需求，利用达意隆吹瓶机和灌装机两大成熟产品，等国外吹灌联合机的先进经验，达意隆决定开发吹瓶、灌装、旋盖于一体的全自动联合机组。

Currently, the international market of mineral water, tea, fruit juice beverage and carbonated beverage are enlarging very fast. It is estimated by experts that the annual average increase of filling water will reach 9%, and the consumption volume of filled water will reach about 206 billion liters in 2008, an increase of 50 billion liters compared with 2003. Among which, 1/5 of the increase will occur in North America and 2/5 in Asia. In terms of packaging, PET bottle occupies about 80% of the entire market. Facing the wide space and sharp competitive market, beverage enterprises consider more on how to improving production efficiency, dropping cost and assuring the stability of equipments, and the equipment suppliers are also facing more and more challenges. As the developing of PET packaging industry, the market becomes sharper and sharper, in order to meet the demands of users, drop production cost and improve the quality of blow blowing and filling beverage, facing the market demand, with Tech-Long bottle blowing machine and filling machine and advanced experiences of foreign blowing and filling machine, Tech-Long has decided to develop the fully automatic combined machine with the functions of bottle blowing, filling and capping.

在 市场发展的要求下，达意隆在历经了五加仑灌装设备到全自动旋转式吹瓶机几个阶段的发展后，已经计划发展新一代的产品：把灌装生产线形成一个整体的吹灌旋一体机，这是一项灌装和包装领域的革命性的技术创新。这一设计理念也使达意隆又向世界领先的饮料包装技术迈进了一大步。

As the developing of the market, Tech-Long, after the development from five gallon bottling equipments to fully automatic rotary bottle blowing machine, is planning to develop new generation products: develop bottling product line into a whole blow-fill-cap integration machine, which is a revolutionary technical innovation in bottling and packaging field. And the design thought also makes Tech-Long advance a big step to world leading beverage packaging technology.

达意隆致力于倡导世界先进的饮料包装技术，已在不同阶段创造了一个又一个的奇迹，吹灌旋一体机是达意隆不断超越自我的又一挑战，我们相信，只要有不断创新的勇气和信心，一切都有可能。

Tech-Long is dedicated to promote world advanced beverage packaging technology, and has created one and another miracle in different phases, blow-fill-cap integration machine is another challenge for Tech-Long to constantly surpass, we believe that everything is possible once we have the courage and confidence for constant innovation.

通过解决关键环节设备之间的协调与平衡来提高整线效率，这是达意隆设计的初衷。吹灌旋一体机大大提高了设备的整线效率：

Improve the efficiency of whole product line through achieving harmony and balance in key equipments, which is the original intention of Tech-Long design. blow-fill-cap integration machine can largely improve the efficiency of whole product line:



当各环节能保持高效（>95%），
整线效率的计算可套用：
整线效率＝关键设备1效率×关键设备2效率×关键设备3效率×…

If the procedures keep effective (>95%),
The efficiency of whole product line can be counted with the following formula::
Whole product line efficiency = efficiency of key equipment 1 × efficiency of key equipment 2 × efficiency of key equipment 3 ×...

整线的高效率和关键是保证其中的关键设备的高效运行，而吹瓶机和灌装机是其中最为关键的设备。

The high efficiency and key of whole product line is to assure effective run of key equipments, bottle blowing machine and bottling machine are the most significant equipments.

达意隆吹灌旋一体机的主要构成：
Structure of blowing, bottling and capping integration machine:

- 二步法吹瓶机 2-step method blow moulding machine
- 瓶输送星轮 Bottle convey starwheel
- 灌装机 Filling machine
- 封盖机 Capping machine

我们认为，提高整线效率的三个关键问题在于：

- 整线的理念和设计
- 各个设备的质量可靠性
- 各环节设备之间的协调和平衡

In our opinion, three the most significant factors for improving efficiency of whole product line are as below:

- Thought and design of whole product line
- Quality and reliability of equipments
- Harmony and balance of equipments

由于对市场竞争的考虑，降低成本已成为饮料灌装的重要任务。通过提升整线效率，可以降低设备投资成本，厂房的投资成本、运行成本.....

For improving competitive force in the market, it has become the significant factor for beverage bottling to reduce cost. It can reduce the equipment and workshop investment cost and run cost through improving efficiency of whole product line.....

DCGS22-33000 吹灌旋一体机

DCGS22-33000 Blow-Fill-Cap 3 in 1 Combi Line

目前达意隆的吹瓶机、灌装机两大产品已有多个系列，在设计、加工过程中，培养和锻炼各种人才，并积累了较多的技术、加工及装配经验；吹瓶机、灌装机两大产品已趋向成熟，为吹瓶、灌装、旋盖于一体机的设计奠定了基础；吹灌旋一体机将完全可以满足用户对不同产量的要求。现在让我们了解一下DCGS22-33000吹灌旋一体机给我们带来了哪些方面的改善--

At present, Tech-Long bottle blow molding machine and filling machine cover several series, and Tech-Long has trained various talents in designing and processing, and has gained rich experience in technology, processing and disassembling; bottle blow molding machine and filling machine are mature, which has set the foundation for bottle blow-fill-cap 3 in 1 machine can completely meet user's requirement on different output capacity. Now let's introduce the improvements of DCGS22-33000blowing, bottling and capping integration machine ---

>>> 操作作简单:

中央式操控台控制两台设备操作，人员对整线的主要生产情况一览无遗，只需一名操作人员；

Simple Operation:

Central operation station can control two equipments, operator may clearly master the main production state of whole product line, only one operator is required;

>>> 瓶子输送:

瓶子输送通过瓶颈环完成，瓶子与瓶子之间很少发生接触，完全避免了划痕；

Bottles transferring:

Convey bottles through bottle neck ring, bottles won't contact each other, thus completely prevent scratches;

>>> 维护减少:

设备更加的简化,无风送过滤芯的更换、卡瓶处理减少等;

Less Maintenance:

Equipment becomes more simplified, it has no need to replace wind filter core, reduce bottle jam;

>>> 机械安全提高:

完全采用瓶颈处理技术、设备与瓶子无接触过程简单、卡瓶等现象减少

整机主要技术参数

Main Technical Parameters of the Whole Machine

型号: DCGS22

产量: 33000瓶/小时（500ml水瓶）

吹塑站数×灌装头数×旋盖头数: 22X60X18

Model: DCGS22

Output: 33000bottles/hour (500ml water bottle)

Number of blow molding stations × number

of filling heads × number of capping heads:

22X60X18

吹瓶机CPXX22主要参数:

主电机功率: 5.5Kw

灯管功率: (2.5+3)Kw

总功率: 844.7Kw

低压无菌空气压力: 2-4bar

低压工作空气压力: 6-8bar

高压无菌空气压力: 35-40bar

生产率max : 33000瓶/小时

（500ml水瓶）

Main Technical Parameters of CPXX22 Bottle

Blow Molding Machine:

Power of Main Motor: 5. 5Kw

Power of Lamp: (2. 5+3) Kw

Total Power: 844. 7Kw

Low Pressure Aseptic Air Pressure: 2-4bar

Low Pressure Work Air Pressure: 6-8bar

High Pressure Aseptic Air Pressure: 35-40bar

Max Production Capacity: 33000bottles/hour

(500ml water bottle)

灌装机DS18F主要参数（含旋盖机）

主电机功率: 4Kw

旋盖机调整电机功率: 0.37 Kw

理盖电机功率: 0.37Kw

出瓶链电机功率: 0.75Kw

总功率: 5.49Kw

低压无菌空气压力: 6-8bar

耗气量: 0.4m³/min

Main Technical Parameters of DS18F Filling

Machine (including capping machine)

Power of Main Motor: 4Kw

Power of Capping Machine Adjustment Motor: 0.

37 Kw

Power of Cap Sorting Motor: 0. 37Kw

Power of Bottle Discharging Chain Motor: 0. 75Kw

Total Power: 5. 49Kw

Low Pressure Aseptic Air Pressure: 6-8bar

Air Consumption: 0. 4m³/min

Improve Mechanical Safety
Apply bottle neck treatment technology, equipment won't contact the bottles, simple process, reduce bottle jam

>>> 卫生安全可靠:
整个过程在几乎密封的空间完成,降低交叉污染;

Hygienic, safe and reliable:
The whole process is completed in nearly closed space, reduce crossed pollution;

>>> 设备投资成本降低:
吹灌旋一体机无需配置风送道和洗瓶机;

Reduce equipment investment cost:
No need air conveyor and bottle rinser;

>>> 厂房投资降低:
设备占地面积大大减少, 仅为原有模式占地面积的35%;

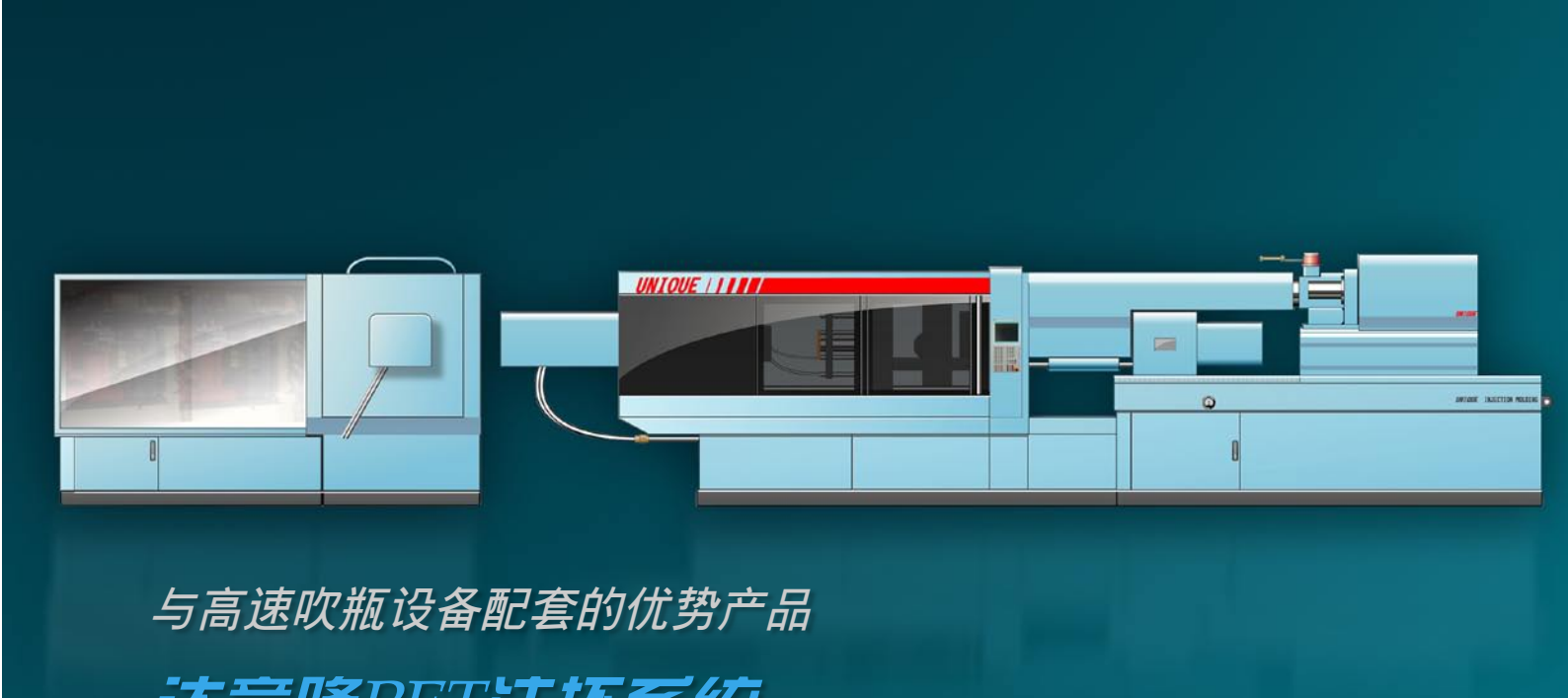
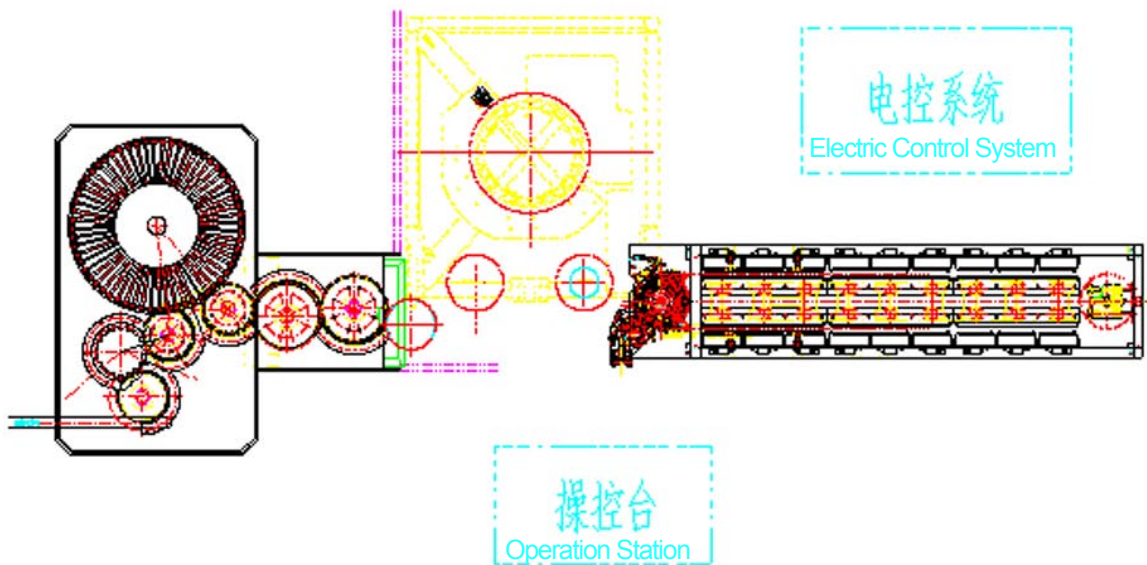
Reduce workshop investment cost in:
Dramatically reduce the occupation area of the equipment, which is only 35% of original mode;

>>> 运行成本降低:
只需要一名操作人员, 由两台设备两次启动变为一次启动, 降低了启动损耗, 没有风送能耗、卡瓶损耗, 无需冲瓶, 瓶子重量可进一步降低。

Reduce cost:
Only one operator is required, two starts of two equments turn to be one start only, reduce start consumption, without consumption for air conveyor bottle damage in jam. No need to rinse bottle, thus reducing the weight of bottles.

>>> 通过为客户提供方案设计, 还可以为客户进一步优化性能价格比。
Improve performance and price ratio through providing project design.

Text and Pictures by Tech-Long Hakim/Mukee/Zhang Litao



与高速吹瓶设备配套的优势产品

达意隆PET注坯系统

Superior auxiliary products for high-speed
bottle blow moulding machine

Tech-Long PET injection molding system

我国PET注坯设备的现状
Current situation of PET injection
molding equipment in China

随着PET瓶包装方式在饮料以及更多行业中的应用, 市场占有率的逐渐提高, 给全自动数控PET瓶注坯机带来了很大的发展机遇。国内目前全自动高速PET瓶注坯设备主要依赖进口, 据统计, 高昂的设备投入使企业需要大量的固定资产投资, 并导致企业的固定成本居高不下, 制约了我国饮料行业的规模化发展和市场竞争能力。

The application of PET bottle packing method in the beverage and more trades and the gradual improvement of market share have brought great development opportunity for the full-automatic numerical control PET bottle injection molding machine. At present domestic full-automatic and high speed PET bottle injection molding equipment mainly relies on import. According to statistics, the enterprise needs a large amount of capital investment due to the high equipment input, so the fixed cost of enterprises remains high, thus restricted the scale development and market competitive power of the

trade of beverage in our country.

目前全球市场全自动高速PET瓶注坯设备领先的代表公司主要有: 加拿大HUSKY公司、瑞士NETSSTAL公司、德国KRAUSSMAFFEI公司等。这些国家的生产厂家已抢占了全自动高速PET瓶注坯设备工艺技术的制高点, 设备的最高生产能力已经达到40000瓶/小时。其产品在设计、电气控制、注胶系统、液压系统等关键工艺技术及设备的成套开发能力上已非常成熟。

The leading representative company of full-automatic and high speed PET bottle injection moulng equipment on the global market are mainly as follows: HUSKY company of Canada, NETSSTAL of Swill, KRAUSSMAFFEI of Germany, etc. Manufacturers in these countries have seized the commanding point of full-automatic and high speed PET bottle preform injection moulding equipment; the supreme production capacity of the equipment has reached 40000 bottles / hour. The products are very successful in complete set development ability in its key processing technology and equipment

such as mold design, electric control, impregnation system, hydraulic pressure system, etc.

达意隆研发PET注坯系统的契机
Opportunity of research and development of PET injection moulding system of Tech-Long

在达意隆还没有生产注坯设备之前，只能由用户自己购买相应的设备与吹瓶机配套，达意隆错失了很多商机。在这个过程中达意隆看到了注坯设备的市场前景非常广阔，还可以与现有的吹瓶设备产品配套，于是达意隆决定与外商合资成立一道注塑设备有限公司（以下简称一道公司），自主研发生产注坯系统。

Before Tech-Long producing injection molding equipment, user can purchase corresponding equipment from other supplier bottle blow molding machine and Tech-Long has lost a lot of opportunities. During this course, Tech-Long has observed that injection molding equipment has a prospective market, additionally, it can also match the current bottle blow molding equipments, therefore, Tech-Long decided to set up UNIQUE Injection Moulding Systems Co., Ltd. (hereinafter referred to as UNIQUE Company) with foreign investment to develop injection molding system.

开发具有国内领先水平的全自动高速PET瓶注坯设备，与公司现有的PET瓶吹瓶设备配套，形成成套的大型装备，是达意隆公司今后进一步发展做大做强的重要契机之一。

Developing full-automatic and high speed PET bottle injection moulding equipment with the leading national level, forming a complete set with the existing PET bottle blow moulding equipment of the company to gain a large-scale complete line is one of Tech-Long's opportunities to become bigger and more powerful.

达意隆PET注坯系统的优势
Advantage of PET injection moulding system of Tech-Long

一道公司目前已经开始研发16000支/小时全自动数控PET双级注坯系统。此设备主要由锁模系统、双级注塑系统、液压系统、全自动多工位机械手、高精度模具等几个部分组成。

Tech-Long has begun to research and develop 16000 pieces / hour of full-automatic numerical control

PET double stage injection moulding system, which is mainly made up of several parts such as mould locking system, double stage molding system, hydraulic pressure system, full-automatic multi-stage manipulator , high-accuracy mould, etc..

全自动数控PET双级注坯系统是一种以锁模装置、注射装置以及机械手为主体的大型设备，集原材料的干燥、PET原料的塑化射出、瓶坯的取出、输送、检测等为一体的综合性项目，应用了多项现代高新技术，涉及到高分子、材料、液压、机械加工、电子电器等多学科、多行业。

The full-automatic numerical control PET double-stage injection moulding system is a heavy-duty equipment that takes the mould locking device, inject device and manipulator as the main bodies, and also a comprehensive project that integrates drying of raw material, plastification and penetration of PET raw materials and taking out, conveyance and examination of preform, etc. Multiple modern new and high technologies are adopted, which involve many disciplines and many trades such as high polymer, material, hydraulic pressure, machining, electronic apparatus, etc.

技术先进性:
16000支/小时全自动数控PET双级注坯系统是生产PET瓶的关键设备。目前，我国生产国产全自动高速PET瓶注坯设备的厂家只有少数的两三家公司，而且他们生产的产品一般只有24个模腔，这样的话生产能力一般只能达到4000支/小时至6000支/小时，即使是个别技术先进的厂家，产品也只能做到48个模腔，最大产能也只能达到12000支/小时。而我们开发的产品将会采用国内独有的双级注射技术，而且模腔数可以达到56个，产能达到16000支/小时，整体技术将达到国内领先水平。

Technological advance:
The full-automatic numerical control PET double-stage injection moulding system of 16000 pieces / hour is the key equipment for producing PET bottle. At present, only two or three companies in China can produce full-automatic and high speed PET bottle injection moulding equipment, and generally their products have only 24 mould cabinets, so generally their production capacity can only reach 4000 pieces / hour to 6000 pieces / hour. Even products of some producers with modern techniques can have 48 mould cabinets, and the maximum productivity is only up to 12000 pieces / hour. With the unique double-stage injecting technology in China, the No.

of mold cabinets of the products that we will develop can reach 56, the productivity can reach 16000 pieces/hour, the whole technology will reach the leading competence at home.

一道公司专门设计了先进的PET模具热流道，与国内其他厂商相比，不仅节约了生产原料，而且提高了产品质量，加快成型周期（250ml产品的成型周期可保持在11秒左右），提高了生产效率；机械手采用独有的多工位设计，国内的机械手设计都是单工位；将锁模机构进行了优化，避免了机铰容易断裂的现象。

Tech-Long designed a special advanced PET mould hot runner. Compared with other domestic manufacturers, not only the raw materials for production can be saved, but also the product quality can be improved, and the shaping cycle is accelerated(the shaping cycle of 250ml products can be kept in about 11 seconds), and production efficiency is improved; The manipulator adopts the unique multi-stage design, and many domestic manipulators are designed as single-stage; Optimize the mould locking structure, thus the problem of easy breaking of hinge is avoided.

技术创新性:
一道公司开发的16000支/小时全自动数控PET双级注坯系统是专门用于注塑PET瓶坯的设备，所有的设计都以PET原料的特殊性能而设计，因此与传统的注塑机相比，在多个方面进行了技术突破和创新。主要体现在以下几个方面：

Technological innovation:
The 16000 pieces / hour full-automatic numerical control PET double-stage injection moulding system developed by Tech-Long company is an equipment specially used for plastics moulding of PET bottle base. All designs are according to the special performance of the raw materials of PET, so compared with traditional plastics moulding machine, technological break-through and innovation in a lot of respects have been carried on, mainly the following several respects are included:

双级注射系统不但可以加快成型周期，而且最重要的是降低了产品的AA值。

The double-stage injecting systems not only can accelerate the shaping cycle, but also can reduce AA value of the products.

PET模具热流道:
在模具的设计上，由于采用高模腔，所以专门选择了热流道设计。而且，鉴于国内目前的加工水平还存在不足，又专门委托德国厂家加工，从而保证了非常优秀的性能。高质量的热流道的设计不仅节约了生产原料，而且提高了产品质量，加快成型周期，提高生产效率。

Mould hot running of PET:
In the design of mould, because high mould cabinet is used, so special hot running design is chosen; And in view of the insufficiency of domestic processing level at present, we entrust the German producer to process, thus outstanding performance is guaranteed. The high-quality hot running design has not only saved the raw materials for production, but also



注坯模具
Fittings to Preform Injection Machine



注坯配件
Moulds for Preform Injection Machine

improved product quality, accelerate shaping cycle, and improved production efficiency.

优化了的锁模机构:

国内的厂家都采用传统的锁模机构, 在使用过程中普遍反映机铰容易断裂, 不仅会造成机械故障, 还会给客户带来较大的损失。而我们正在开发的项目产品, 将会从强度、结构等方面进行优化设计, 从而从根本上解决锁模机构机铰断裂的问题。

Optimized mould locking structure:

Most domestic producers adopt the traditional mould locking structure. In the course of using the hinge is easy to break, which will not only cause the mechanical breakdown, but also bring greater loss to customers. But the design of products under our project will be optimized from such respects as intensity and structure, etc., thus the problem of hinge break of mould locking structure shall be solved fundamentally.

采用阀针式注胶口:

这种注胶方式是阀针注射完之后马上关闭, 可以做到大流量注射, 而且注射的产品不会产生胶口, 不需要第二次加工, 可以满足国际客户的高质量要求。

Adopt the valve needle type gluing inlet:

In this gluing method, the valve needle will be closed at once after injection, so large flow injection can be made, and glue mouth shall not be generated on the products injected, the second processing is not needed, the high quality requirement of international customers can be met.

采用多工位机械手:

这也是国内独创的, 国内其他同行都是采用单工位机械手, 我们开发出国内独有的多工位机械手, 使成品有充足的时间冷却, 大大提高了成品的合格率。

Adopt the multi-stage manipulators:

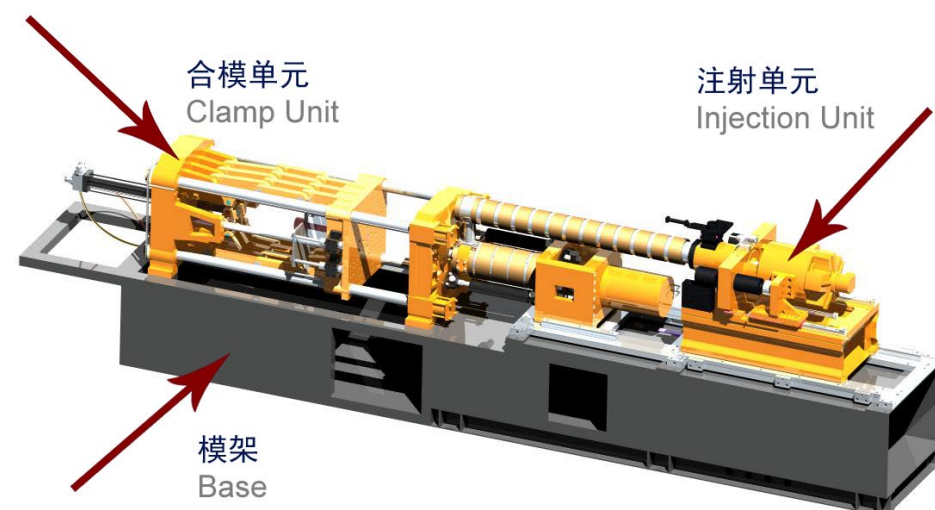
This is unique at home too. Other domestic counterparts adopt the single stage manipulator. We develop the unique multi-stage manipulators in China, by which the finished products have sufficient time to cool; the qualification rate of the finished product is improved greatly.

市场前景 Market prospects

一道公司开发的注坯设备价格只相当于国外产品的1/4, 具有很大的性价比优势, 这一举措将打破国外行业巨头技术垄断的局面, 大幅降低生产厂家的投资成本, 对发展我国包装设备制造行业起到巨大的推动作用。

The price of injection moulding equipment developed by Tech-Long is only equivalent to 1/4 of that of the foreign products, so it has great advantages in cost performance. This action will break the situation of technological monopolization of giants of foreign trade, reduce costs of investment of the manufacturers by a wide margin, and play an enormous role in developing the packing equipment manufacturing trade in our country.

Text/picture by: Tech-long Xu Zhijiang



CPXX22新型高速吹瓶机 把先进的吹瓶技术带到用户身边

*CPXX22 new-type high-speed
bottle blow moulding machine
Brings advanced bottle
blow moulding technology for users*

CPXX22是达意隆在RJM14的基础上, 采用当今国际最先进的制瓶技术自主研发的新型小瓶形高速吹瓶机, 近期将投放市场。

CPXX22 is a new-type high-speed small bottle blow moulding machine researched and developed by Tech-long independently with the most advanced bottle making technology of the world on the basis of RJM14, and it will be put on market in the near future

CPXX22的特点 Features of CPXX22:

CPXX22的自动化、智能化程度均比RJM系列有所提高, 机器性能稳定可靠, 生产效率高、成本低, 产品不受中间环节污染, 可以广泛应用于食品、饮料、化妆品、医药容器的生产。

The automation and intelligence degree of CPXX22 is improved to some extent than RJM series, with steady and reliable mechanical performance, high production efficiency, low costs, and products are free

from pollution of intermediate link; it can be applied extensively in the production of food, beverage, cosmetics, medical containers, etc

>>>>>

CPXX22高压单模产量可以达到1590瓶/模小时, 22模腔总产量高达35000瓶/小时 (600ml);

The output of CPXX22 high-pressure single mould can reach 1590 bottles / mould hour, and the total output of 22 moulds are up to 35000 bottles / hour (600ml);

>>>>>

CPXX22瓶坯采用38mm间距加热, 比传统加温机节能25%, 最大可吹制70mm瓶径; 除此之外还选配了废气回收系统, 可节约高压气15-20%, 能耗大幅降低; 这一系列吹瓶机自动化、智能化程度非常高, 整个生产过程全部由机器独立完成, 无需人工操作;

The preform of CPXX22 is heated with an interval of 38mm. Compared with the tradition heating

machine, 25% of energy can be saved, and a maximum of 70mm of bottle diameter can be blown; In addition waste gas recovery system is equipped, and 15-20% of high pressure gas can be saved, the energy consumption is reduced by a wide margin; The automation and intelligence degree of this line of bottle blow moulding machine are very high. The whole production process is finished by the machine independently, and no manual work is needed;

CPXX22配置了友好的图表人机界面，触摸屏式的工控电脑，机器可以按照人的意愿得到控制，同时人可通过触摸屏反映的数据随时掌握机器运转情况。如发生故障，维修人员可根据触摸屏显示的故障类型、原因等进行维修；

CPXX22 has friendly chart man-machine interface and touch-sensitive screen type industrial computer, by which machine can be controlled according to will of people, at the same time people can know the situation of running of machines through data on the touch-sensitive screen at any time. When it breaks down, the maintenance person can carry on maintenance according to trouble types and reasons etc displayed on the touch-sensitive screen;

CPXX22品质稳定优良，该机配备了稳定的红外线加温系统及高精度的吹瓶模闭合系统，并采用了欧洲知名品牌的高压吹气阀，其余气动元器件及电气元器件均采用国际知名品牌；CPXX22依据产品专门设计的拉伸导轨，保证了吹瓶过程吹制动作的准确性，充分保障了产品品质的稳定性；

The quality of CPXX22 is steady and fine. The machine is equipped with steady infrared heating system and high-accuracy bottle blow moulding closed system, the high pressure pneumatic valve of famous brand of Europe is adopted, other pneumatic components and parts and electric components and parts are of international famous brand; Relying on the specially designed stretching guide rail, the CPXX22 has guaranteed the accuracy of bottle blow moulding action, and fully ensured the stability of the quality of the products;

CPXX22采用了全封闭的生产区域，其优良的自润滑系统，使清洁度进一步提高，完全避免了二次污染，绝对保障了产品的卫生性。CPXX22 adopted the totally closed production area. Its fine self-lubricating system improved the cleaning degree, and secondary pollution has been avoided totally, the hygiene of the products is ensured definitely.

CPXX22采用合理的工艺步骤，在工艺参数的设计上大大减少了电、气、水消耗量，使生产成本大幅度降低；该机体积和占地面积较小，可以使用户减少固定资产的投入，再一次降低了生产成本。

CPXX22 adopts the rational processing step, reduces consumption of electricity, gas and water greatly in the design of the processing parameter, lowers production cost by a large margin; The volume and floor space is relatively small, which can reduce users' input in fixed assets, and the production cost is reduced again

达意隆的吹瓶技术目前已达到国际先进水平，我们除了能为世界各地的用户提供高速度高品质的吹瓶设备之外，还能为用户配套提供各种规格的注塑管坯模具，真正做到整线供应，解除用户的后顾之忧。达意隆时刻根据用户的需求而改变，做到与用户共同进步。

The bottle blow moulding technology of Tech-Long has reached the most advanced international level at present. Besides offering high-quality bottle blow moulding equipment at a high speed to users around the world, we also offer auxiliary elements such as molds for mould plastics and tubular billet of various kinds of specifications, thus the whole line supply can be accomplished and users' worry can be removed. Tech-Long makes changes on the basis of users' demand, and make common progress with users.



Text/picture by:Tech-long Zou Daqun/Mukee

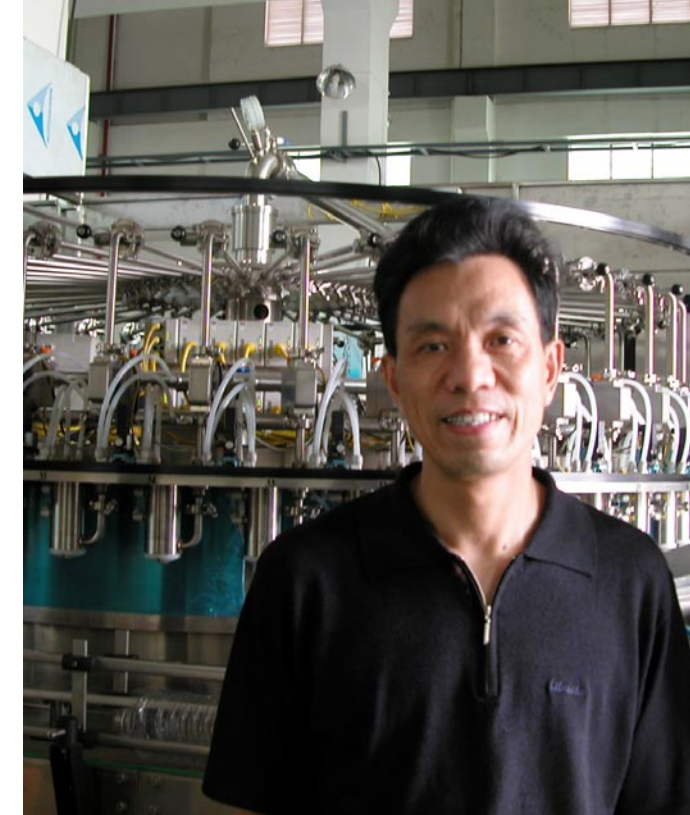
传承卓越 开拓新领域

Passing on prominence Exploiting new field

达意隆高起点进入啤酒市场，着手
研发36000瓶/小时高速啤酒灌装设备

*Tech-Long enters beer market from
high starting point and starts to research
and develop high-speed beer filling
equipment with an output of 36000 bottles/
hour.*

2002年我国成为世界啤酒第一产销大国以来，4年来的啤酒产销量每年都以超过6%的增长率位居全球首位，我国有强大的市场消费潜力和生产基础。以人均占有量来说，目前我国人均啤酒消费量虽然已接近22升，但中西部地区却仅在10升左右，8亿多人口的农村人均连5升不到；而世界平均水平目前是30升，欧美国家人均年消费啤酒已超过80升，其中，啤酒消费大国的捷克、爱尔兰、德国人均消费分别已超过159升、135升和117升，而我国人均消费量仅相当于捷克的1/8、美国的1/4和日本的40%。所以，无论从宏观层面来讲还是从微观角度来说，我国啤酒业的产量依然会持续稳步上升。同时，中国啤酒设备的市场也在加大，特别是邻近我国的印度及俄罗斯；目前，我国很多啤酒厂的设备几乎都在15年左右，已经需要更新换代，可见啤酒灌装设备的发展前景十分广阔。Since China became the biggest producer and seller of beer in the world in 2002, annual growth rate of beer production and sales volume has exceeded 6% in the past 4 years, ranking first in the world. Therefore, China has a powerful market consumption potentiality and production foundation. As far as per capita consumption volume is concerned, China's per capita beer consumption volume approaches 22 liters, but it's only about 10 liters in the mid-west part of China and the per capita consumption among over 800 million peasants is below 5 liters. However, the world per capita consumption is 30 liters at present, per capita consumption in Europe and USA is more than 80 liters and the big beer consumers such as Czech, Ireland and Germany respectively exceed 159 liters, 135 liters and 117 liters, so per capita consumption in China is only equivalent to 1/8 of that of Czech, 1/4 of that of U.S.A. and 40% of that of Japan. Therefore, judging from macroscopic or microcosmic aspect, China's beer production volume will rise continually and steadily. Meanwhile, China's beer equipment market is also expanding, especially in India and Russia, neighbors of China. At present, many Chinese breweries' equipments have



达意隆成立啤酒设备设计研发小组，主要负责啤酒灌装设备的设计、工艺、产品加工、过程跟踪，保证产品质量。灌装事业部谢棋柏先生，主要负责啤酒灌装设备的开发工作。

Tech-long has established beer filling equipmet's design, research and development group,mainly responsible for the design, technology, products processing and process follow up of beer filling equipment to guarantee product quality.Mr.Xie Qubai ,Filling Operating Division, mainly in charge of the development of beer filling equipment.

灌装事业部 谢棋柏
Filling Operating Division--Xie Qibai

毕业于广州市轻工局职工大学机械设计和工艺制造专业。

自1982年开始，一直从事啤酒、饮料灌装设备的工艺制造和设计工作。凭着对专业的兴趣和对工作的热爱，从技术员到助理工程师、工程师、高级工程师，经历了中国啤酒、饮料灌装设备的整个发展过程。对机械设计和工艺制造有丰富经验，特别是对灌装机等机械设备的机械性能、机械特点和设计要素非常熟悉，曾经完成瓶装灌装机、易拉罐灌装封盖机；黄酒、白酒灌装机的设计工作，并成功设计了易拉罐灌装封盖机和72头、122头瓶装灌装机，获得全国和广州市科技进步奖。

曾任广东省啤酒灌装设计所所长一职。

2006年入职达意隆，主要负责啤酒灌装设备的开发工作。

Graduated from University for Staff under Guangzhou Light Industrial Bureau, majoring in mechanical design and technology manufacturing.

Since 1982, he's been engaged in the technology manufacturing and designing of beer and beverage filling equipment. Owing to his interest in his major and his love of his work, he's been promoted from technician to assistant engineer, engineer and senior engineer, going through the whole evolution of China beer and beverage filling equipment. He's experienced in mechanical design and technology manufacturing and especially familiar with the mechanical performance, characteristics and key design elements of mechanical equipment including filling machine. He once completed the design of bottling filling machine, canning filling and capping machine and rice wine and white spirit filling machine and has successfully designed canning filling and capping machine and bottling filling machine with 72 heads or 122 heads, which won national and Guangzhou science and technology prizes.

He's once head of Guangdong Provincial Institute of Beer Filling Design.

He joined Tech-Long in 2006, mainly in charge of the development of beer filling equipment.

been used for nearly 15 years and are needed to be replaced, so we can say the development prospect of beer filling equipment is expansive.

达意隆看准时机，凭借在饮料领域从单一设备到整厂解决方案多年的丰富经验，目前已经正式进入啤酒市场，并已经对啤酒灌装设备展开始进行研发。
Catching the chance and relying on years' plentiful experience in beverage industry from single equipment to plant solution, Tech-Long has officially entered beer market and started to research and develop beer filling equipment.

经过一段时间的准备工作及引进高级技术人才，达意隆已经具备了啤酒灌装生产线的开发能力，决定在2006年10月正式开展研发啤酒灌装设备的工作，经过市场分析及调研后，决定开发36000瓶/小时啤酒灌装机，并计划第一台啤酒灌装机设计工作在2006年年底完成，预计在2007年5月完成在厂内的调试工作。
After a period of preparations and introducing advanced talents, Tech-Long has possessed the ability to research and develop beer filling production line and decided to research and develop beer filling equipment on Oct., 2006.; What's more, it decides to develop the beer filling machine with the output of 36000 bottles per hour. It also plans to finish the design of the 1st beer filling machine by the end of 2006 and the debugging in the factory is expected to be finished on May, 2007.

达意隆的啤酒灌装生产线主要包括:
Tech-Long's beer filling production line includes:

灌装生产线的后段包装部分由所选择的包装箱不同，使用塑料周转箱或纸箱或膜包，在洗瓶机前和贴标之后的包装设备稍有差别，我们把啤酒灌装生产线所包含的设备从使用上的不同主要分为以下A，B两大类。

采用塑料周转箱装箱的啤酒灌装生产线流程

Adopt plastic circulation boxes for beer filling production line procedure



There are different choices of packaging boxes during the later stage of filling production line, so plastic circulating boxes, cartons or film wrappers are usable. The packaging equipment is slightly different before bottling washing machine and after the labeling. Therefore, we divide beer filling production lines into Type A and Type B according to the different uses of equipment.

A类 Type A

- 双端洗瓶机
Double-end bottle washing machine
- 灌装、压盖机
Filling, capping machine
- 灌装CIP系统
Filling CIP system
- 瓶盖提升机
Bottle lid hoister
- 隧道式杀菌机
Tunnel type sterilization machine
- 输瓶系统
Conveyor system
- 贴标机
Labeling machine

A类中的CIP系统及输瓶系统在达意隆是成熟产品，贴标机为外配设备，达意隆开发的产品主要为双端式洗瓶机、灌装压盖机、隧道式杀菌机。
Type A CIP system and conveyance system are Tech-Long's mature products. Labelling machine is outside distribution equipment. The products Tech-Long develops mainly include double-end bottle washing machine, filling capping machine and tunnel type sterilization machine.

B类 Type A

- 卸（装）箱机或装卸箱机器人
Decriater (boxing machine) or loading and unloading robot
- 塑箱洗箱机
Plastic box washing machine
- 输箱系统
Box transmission system
- 卸（码）垛机
Palletizer
- 纸箱全裹机或薄膜包装机
Full carton wrapping machine or film packaging machine

B类的设备，已经完全是达意隆的成熟产品，并已在多个啤酒用户中运行。
Type B Equipment is completely Tech-Long's mature products and used by a lot of beer user. salready.

达意隆开发的啤酒灌装生产线具体为:
The concrete condition of beer filling production line developed by Tech-Long is as below:



达意隆的外籍专家Inde Soor，在碳酸饮料和啤酒灌装机械领域有20多年的从业经验，此次参与啤酒设备研发工作，为达意隆啤酒设备的研发提供专业意见。

Tech-Long's foreign expert Inde Soor, who has been engaged in the fields of Carbonated Beverages equipment and beer filling machine for over 20 years. Participating in the research and development of beer equipment, he offers professional advice for the development.

Inde Soor 达意隆外籍专家
Inde Soor, Tech-Long's foreign expert

在英国伦敦Uxbridge technical College获得机械与生产工程HND学位，并且有多年在机电工程方面的工作经验

Obtaining machinery and production engineering HND degree of Uxbridge technical College in London, Britain, he has many years' working experience in electromechanical engineering

1982~1989年开始在Meyer-Mojonnier UK担任设计及服务工程师，积累了极丰富的机电方面和机器保养维修方面的经验
Between 1982 and 1989, he worked as design and service engineer in Meyer-Mojonnier UK, accumulating extremely abundant electromechanical and machine maintenance experiences.

1990~2003年开始在美国WPC公司担任啤酒、含汽饮料灌装设备高级技术顾问
Between 1990 and 2003, he served as senior technology adviser for beer and gas-bearing beverage filling equipment in WPC Company of U.S.A

2004年入职达意隆，担任啤酒、含汽灌装设备技术顾问。
He joined Tech-Long in 2004 as technical consultant for beer and carbonated drink filling equipment.

双端式洗瓶机 Double-end bottle washing machine

功能要求 Functional requirements

- 双端式进瓶、出瓶结构
Double-end bottle entrance and exit structure
- 出瓶端部分箱体，喷淋装置，温、热水槽采用不锈钢结构
Box body in bottle exit, spray equipment, warm and hot flume adopts stainless steel structure
- 进瓶端包括预浸泡槽共三级升温，循环水热能吸收率提高；采用三级小梯度升温，降低破瓶率
Entrance bottle end includes pre-soak trough, totally 3 levels to raise temperature, circulating water and raising heat energy; adopts 3-level small gradient to raise temperature and lower rate of bottle breaking
- 碱液浸泡时间按8~10分钟设计
Alkali solution soaking time is designed to be 8~10 minutes
- 配置碱液自动检测、控制装置，确保洗瓶工艺的稳定性，避免人为因素对洗瓶效果造成的影响
Dispose automatic detection and control device for alkali solution to guarantee the stability of bottle washing technology and avoid the bottle washing effects influenced by human factors.
- 碱槽底采用弧底结构，避免旧结构碱槽底碎标容易沉积的不足，除标效果好，同时也提高碱液的耐用度
Alkali trough bottom adopts arc bottom structure to prevent broken parts of old structure alkali trough bottom from being deposited and have a good removing effect and also raise the durability of alkali solution.
- 出瓶端具有一个循环的热水槽，共5级降温，降温梯度平缓，把从碱槽出来的瓶子上的碱及温度降到最低
Bottle exit end has a circulation hot flume, totaling 5 levels. Its temperature lowering gradient is placid and decreases the alkali from alkali trough into the minimal level.
- 进、出瓶分别设置过载安全保护及自动复位功能和机构
Bottle entrance and exit are respectively set up with safe protection against overloading and automatic reset function and structure.
- 采用旋转喷射系统，降低水耗，避免喷嘴堵塞
Adopt revolving spray system to decrease consumption of water and prevent the spray nozzle from being blocked up
- 出瓶部分配蒸汽抽吸装置
Bottle exit part is equipped with steam release and inhalation device
- 具有各浸泡槽温度显示功能，故障显示及喷淋水压力报警系统，实现智能化
Have temperature indication function, trouble indication and spray water pressure warning system for every soaking trough to realize intellectuality
- 出瓶端配自清洗装置，消毒水自动添加，具有防滴水装置
Bottle exit end is equipped with washing device, automatic adding of sterilization water and antidrip device

灌装、压盖机 Filling, capping machine

功能结构 Function & structure

- 灌装机组设计为灌装、压盖组合的整体结构，设计中初步引入模块化设计概念，采用屋顶式的洁净平台，平台中不会残留破瓶，及易于清洗
Filling machine group is designed as the filling and capping combination. Modularization is first introduced to the design, clean platform of roof type is used and no broken bottles can be left in the platform, which makes it easy to wash.
- 灌装机采用酒缸内置式机械阀，两次抽真空等压灌装，具有无瓶不抽真空功能；卸压时，瓶内的二氧化碳气体由专门的通道收集集中排放
Filling machine adopts the built-in mechanical valve for wine jar and releases vacuum equipressure filling twice with the function of every bottle's being released into vacuum; when the pressure is released, carbon dioxide in the bottle will be collected and released through special passway
- 托瓶汽缸为新式结构，瓶碎屑不会积在气缸处；具有适应不同瓶高的主机升降机构，可与主机同步的控制环、定中架提升凸轮的升降结构，具有破瓶喷吹功能
Bottle cylinder is in new structure and broken bottle pieces will not be accumulated in air cylinder. It has main processor lifting structure adapting to different bottle height, can upgrade the lifting structure of cam with control ring and centering shelf in pace with main processor
- 压盖机采用开放式压盖头，可方便卫生清洗；压盖头有自动卸荷功能，降低破瓶率
Capping machine uses open capping head facilitating keeping clean and being washed; the capping head has the function of automatic unloading, reducing bottle breaking rate
- 理盖滑道和理盖料斗设置卫生清洗系统，瓶盖提升机水平段配紫外线杀菌灯，对盖双面杀菌
Lid arranging slide and hopper are equipped with hygienic washing system and horizontal part of bottle lid lifting machine is equipped with ultraviolet sterilization light to sterilize both sides of lid
- 压盖头具有缺瓶不上盖检测功能，同时具有自动除盖功能，去除缺瓶工位的余盖
Capping head has the function of uncapping inspection in case of bottle shortage and automatic lid removing function to remove surplus lid at the process of bottle shortage.
- 具有缺盖检测，缺盖报警功能
Has the function of inspection and warning in case of lid shortage
- 整机传动拟采用两台电机带动、同步控制的新传动技术
Complete machine transmission is planned to adopt new transmission technology with two electrical machines to drive and control in step
- 设有自动集中润滑装置，分别按不同需要定时定量给各润滑点供油
Is equipped with automatic concentration and lubrication device, supplying every oil site with a quota of oil at a regular interval separately according to various needs
- 有高压激泡装置和高压水加热（85° C）和自动恒温功能
Has high pressure foaming equipment and high pressure water heating function (85 ° C) and automatic temperature-controlling function
- 安全防护为不锈钢方钢框架结构，钢花玻璃门，并设置安全开关
Safety protection is set with stainless steel and square steel frame structure, glass door of spray of molten steel and equipped with safety switch

双端式洗瓶机主要技术参数

Main technical parameters of double-end bottle washing machine

额定生产能力： 40000瓶/时
每排瓶合数： 38个
浸泡时间： 8~10分钟
适应瓶型（最小/最大）： 50/82
适应瓶高（最小/最大）： 170/290

Rated production capacity: 40000 bottles / hour
Quantity of each row of bottles: 38 pieces
Soaking time: 8~10 minutes
Suitable bottle type (minimum / maximum): 50/82
Suitable bottle height (minimum / maximum): 170/290

灌装、压盖机主要技术参数

Main technical parameters of filling and capping machine

额定生产能力: 36000瓶/时 (640ml)
适用瓶高: 150~320mm
适用瓶径: φ52~φ82
灌装阀数: 122
压盖头数: 20
设备节距: 30π (94.2mm)

Rated production capacity: 36000 BPH (640ml)
Suitable bottle height: 150~320mm
Suitable bottle diameter: φ52~φ82
Filling valve quantity: 122
Capping head quantity: 20
Equipment pitch: 30π (94.2mm)

杀菌机主要技术参数

Main technical parameter of sterilization machine

额定生产能力: 36000瓶/时 (640ml)
总处理时间: 约45分钟
主杀菌温度: 62℃
杀菌单位: 15~30PU

Rated production capacity: 36000 BPH (640ml)
Total treatment time: about 45 minutes
Main sterilization temperature: 62 ℃
Sterilization unit: 15~30PU



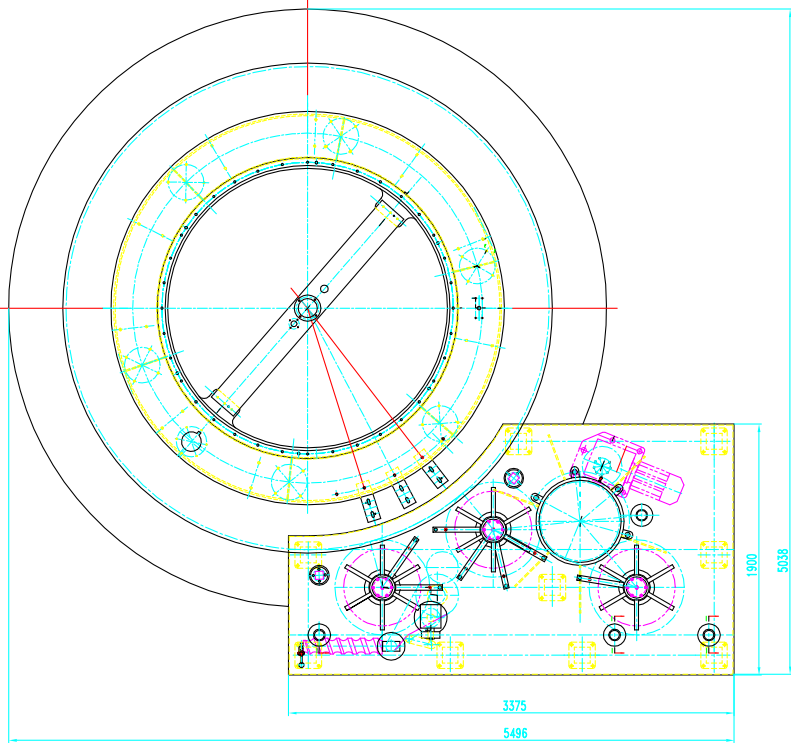
- 灌装机组的控制终端具有灌装故障显示、灌装参数显示和设定等功能
Control terminal for filling machine has the function of filling trouble indication, filling parameter indication and setting, etc..

隧道式杀菌机
Tunnel type sterilization machine

结构功能
Structure & function

- 双层链网式，机体、水箱等主要结构为不锈钢结构
Double-layer grid and main structures of body and water tank are stainless steel
- PU值自动显示、人机界面
Automatic indication of PU quantity and human-machine interface

啤酒灌装机122-20示意图
Layout for beer filling machine 122-20



Text by:Tech-long Wenjie Cheng/Mukee
Picture by:Tech-long Wenjie Cheng/Mukee/Anya

设备系统优化升级
达意隆全面二次包装设备
Equipment systematic optimization and upgrading
Complete Secondary Packaging
Machine of Tech-Long

国际食品包装机械的发展趋势
Development trend of international food packing machine

据世界包装组织提供的信息，全球包装营业额已逾5000亿美元。国际上食品包装机械的发展是以大型客户的要求为目标，以此带动相关机械的发展。大型客户的要求主要体现在以下方面:

According to the information offered by world packing organize, the turnover of packing in the whole world has and exceeded 500 billion dollars. The development of the food packing machine in the world is to regard the large-scale customers' requirement as the goal, and bring along relevant mechanical development based on this. The large-scale customers' requirements mainly lie in the following respects:

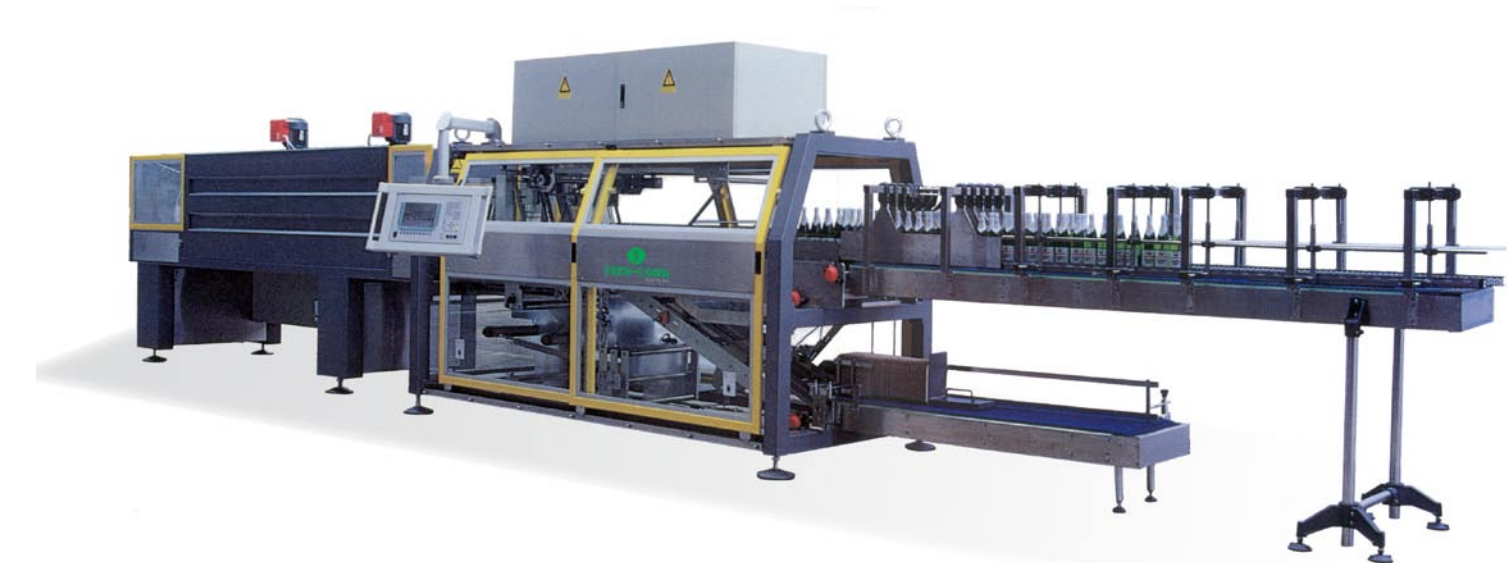
一是对生产效率要求越高越好，这样可以降低单件产品的成本，满足交货期和降低工艺流通成本，同时，高速包装机要求与前道工序有相关衔接，不需搬运环节，包括控制衔接，整个生产线按生产及包装工序排列要做到倒序启动，顺序停机。如冷灌装生产线从塑料原料自动上线到饮料灌装、大包装码垛全部自动在封闭车间内进行First, there are increasingly high expectations

for higher production efficiency, thus the cost of single pieces of products can be reduced, delivery date can be met and process circulation cost can be lowered. Meanwhile, the high speed packer requires relevant linking up with the previous process, and no transportation link is needed, including control link. According to the arrangement of production and packing process, the whole production line should start with an inverted order and shuts down according to proper order. If the cold filling production line go to the drink filling automatically from the plastic material, all large package stacking shall done within the closed workshop automatically.

二是能适应产品的更新变化。因为产品的生命周期远短于设备使用寿命，变更产品及包装不至于更换昂贵的包装生产线，故要求包装机械要具有较高的柔性和灵活性，生产线允许在一定的范围内变化包装物大小。

Second, the equipment can adapt to newer changes of products. Because life cycle of products is far shorter than the service life of equipment, changing products and packing will not lead to changes of the expensive packaging production line, so it is required that the packing machine should have higher flexibility and adaptability; the production line should allow to change the size of the packing article in certain range.

三是将设备的常见故障及解决方案预先输入电脑，当设备出现常见的故障时可以从



行诊断，亦可实行远程诊断并排除故障。

Third, input the common troubles and solutions of the equipment in advance in the computer. Common trouble of the equipment can be diagnosed by the operator himself, also long-range diagnose and breakdown fixing can be adopted.

四是自动识别功能。一方面可以自动识别包装材料的厚度、硬度、反弹力等，通过电脑反馈到机械以使机械调整动作。另一方面具有高速视觉功能，各种不同的产品，其排列是有规律的，而生产线传递到的产品是无序的，可以先用探头扫描，确定不同形状的物料位置，再反馈到不同的机械手，它会准确无误地将物品按准确的位置及方向放入包装中，快而且准，不像人工那样会出现视觉及手指的疲劳。

Fourth, function of automatic identification. On the one hand thickness, hardness, rebound strength, etc. of the wrappings can be identified automatically, and then these information are sent to the machinery through computer so that the machinery can adjust movements. On the other hand the equipment should have a high-speed vision function. The arrangement of all kinds of products is regular, but the products transmitted by the production line are unordered. First probe scanning can be used to determine positions of materials with different forms, then feedback to different manipulators, who can put articles into the package accurately according to precise position and direction. The action is quick and accurate, without the fatigue of the vision and finger like working with manpower.

五是在生产及包装过程中尽量减少污染，包括噪声、粉尘污染、污水等，并尽量减少废弃物。国际先进的作法是采用计算机仿真技术，大大缩短了包装机械（生产线）的设计周期，客户的满意度也大大提高。

Fifth, try best to reduce pollution in the course of production and packing, including noise, dust pollution, sewage, etc., and reduce offals. The internationally advanced practice is to adopt the computer simulation technology to shorten the design cycle of the packing machine (production line) greatly, and the customers' satisfaction improves greatly too.

这种仿真技术的应用提醒包装机械的制造按照部件的功能要先进行模块化，各部件有统一接口，各模块之间可以自由组合。这样可以变包装机械的单件小批生产为各种模块的批量生产，以降低生产成本。即使不是生产线而是单个机器，模块式组合也可以缩短设计及制造周期，降低生产成本。而模块化又可以使非标准零件走向标准化，使用户排除故障方便快捷，也就降低了用户的运行成本。

The application of such simulation technology reminds that the manufacturing of the packing machine should be modularized first according to functions of the parts. There's unified interface for every part and every module can be combined freely. Thus the single small serial production of packing machine can be turned into the batch

process of various kinds of modules to reduce the production cost. Even for production line and not individual machine, the module type combination can shorten the design and cycle too, and reduce the production cost. Modularization also can realize the standardization of non-standard part, and facilitate users to fix a breakdown conveniently and swiftly, thus reduce users' operating cost.

国外的食品包装机械，无论是在生产工艺、设备稳定性，还是在制造水平、设计理念各方面，都领先国内许多年，例如：国际先进的灌装生产线早就能做到每小时12万罐；一条灌装生产线可以卖2亿元；整条灌装生产线只用3个人；膜包机每分钟可开300包；

Foreign food packing machine took the lead for a lot of years, no matter the production technology, equipment stability, or in the manufacturing level, design idea, for example: the internationally advanced filling production line has reached the productivity of 120,000 cans per hour for a long time; a filling production line can sell for 200 million yuan; only 3 people are needed for the whole production line; The shrink wrapper can open 300 packs in a minute;

这几年国内乳业爆发式发展，仅几个龙头大公司就进口了数十条生产线，这无疑给国外设备供应商提供了更广阔的市场.....

Domestic milk industry develops rapidly during these years. Only several leading big companies import several dozens of production lines, which undoubtedly provides the wider market for foreign equipment suppliers

可喜的是，由于国内食品包装机械行业的发展壮大，我国正在迅速迎头赶上，缩短差距，提供的产品已能满足国内大部分的需求，并在国际上产生了“中国威胁”，这大大降低了国外产品的价格与利润，增强了国内设备的竞争力。

What is encouraging is that due to the development and growth of domestic food packing machine trade, China is catching up forthwith rapidly to shorten the difference. The products offered can meet most domestic demands, and has produced China Threat in the world, which has reduced price and profit of the foreign products greatly, and strengthened the competitiveness of the domestic equipment.

国内食品包装机械市场空间巨大

Enormous space for domestic food packing machine market

在中国，民以食为天。随着改革开放、人民生活水平的提高，尤其是近十余年，中国食品饮料业出现了持续快速发展的势头，总产量每年都有20%以上的提高。每年食品工业销售额达2万余亿元以上，近几年进口的设备都是国内不能制造或者制造水平相差甚远的，进口代表着我们的差距所在。

In China, food is god for the people. With reform and opening-up, and the improvement of living standards of the people, especially in the recent ten years, continued fast developing momentum has appeared in the Chinese food beverage industry, and the total output increased by 20% each year. The annual sales volume of food industry is up to more than 2000 billion yuan, The equipments imported in recent years are those that can not be produced at home or there's great difference in the manufacturing level. Import represents difference.

食品安全问题已为举国关注，如果放任不管，将会影响人们的身体健康、降低人们的生活水平，会对社会的稳定、对食品工业乃至对整个经济发展带来严重的负面影响。因此，国家将会努力提高食品领域的科技和装备水平。

The food security problem has attracted attention of the whole nation. If let it go unchecked, it will influence people's health, lower people's living standard, bring serious negative effect to the stability of society, food industry and even on the whole economic development. So, the country will make great efforts to improve the science and technology and equipment.

由于中国食品和包装机械形成行业仅20这20年又是世界技术发展最快的时期，新技术不断在该行业上应用，而国内该行业的基础薄弱，技术及科研力量不足，其发展相对滞后，在某种程度上拖了食品和包装工业的后腿。总体发展虽然较快，但食品及包装工业发展更快，差距又拉大了。预测到2010年，国内行业总产值可达到1300亿元（现价），而市场需求可能达到2000亿元。这个市场的空穴将会有国外设备来填补。我国的目标是要缩小这个空穴，为食品工业赶上世界先进水平，为使包装大国向包装强国迈进，提供先进的技术装备，让进口设备在国内市场上只起到拾遗补缺的作用。这就要求

国内食品和包装机械发展的年速度超过 18 %，新产品产值率达到 25 %。

Because Chinese food and packing machine trade forms only 20 years, and this is the period when the world technology developed with the fastest speed, the new technology is applied on this trade constantly. But the foundation of this trade is weak in China, technological and scientific research strength are insufficient, and its development lags behind relatively, which has hindered the development of the food and packaging industry to a certain extent. Though its overall development is fast, food and packaging industry develop much faster, so disparity has been widened again. It is predicted they by 2010, the gross output value of domestic trade can be up to 130 billion yuan (current rate), and market demand may be up to 200 billion yuan. The gap of market will be filled in by foreign equipment. The goal of our country is to narrow this gap, offer advanced technical equipment to enable the food industry to catch up with the advanced international standards, and change a big packing country to a powerful one, let the import equipment only play a role in picking up the neglected and to supply the deficient on the domestic market. This requires the domestic food and packing machine develop at an annual rate of over 18%, and the rate of output value of the new products reaches 25%.

当前中国的食品和包装机械的一个突出问题是新产品开发周期长，模仿多，新的创意少，这不仅与相关行业的发展有关，也和设计人员的知识水平有关。

A sharp problem of the food and packing machine of China at present is that the development period of new products is long, most of them are imitated ones, and with little new intention. This not merely relates to development of relevant trades, but has something to do with the designer’s knowledge level too.

国外设备高昂的人力与售后服务成本，将迫使他们与用户进行低成本扩张，本地化生产与服务，许多大公司已决定优先采用国内同类设备，这给我国包装机械行业的发展带来了额外机会；同时，随着国内基础工业的长足进步，经过国内同行的不懈努力，随着一批像达意隆这样的企业的崛起，国内设备的地位已越来越高，像每小时2万瓶左右的灌装生产线已难见国外设备。The high manpower and service cost after sale of the foreign equipment will force them to carry on the expansion in low cost, localized production and service with users. Many big companies have

determined to have priority to adopt the domestic similar equipment, which has brought extra chance to the development of the trade of packing machine of our country; At the same time, with the considerable progress of the domestic basic industries, through the untiring efforts of domestic counterparts, the emergence of such enterprises like Tech-Long, the position of the domestic equipment has been more important, for example, the 20,000 bottles/hour of filling production line seldom adopts foreign equipment.

达意隆有幸处在这样一个有识之士称之为“可做百年”的夕阳产业，只要有决心、有毅力、有行动，“百年企业”、“百强企业”都决不是梦想。

Tech-Long is lucky to be engaged in such a setting sun industry which the knowledgeable people say that it can be done for a century. So long as we have resolution, willpower, actions, the “century-old enterprise” and “enterprises of 100 tops” are not dreams.

达意隆公司二次包装机械的发展
Development of secondary packing machine of Tech-Long

对制成品进行后段处理的所有机械设备，统称为二次包装机械，这其实就是我们常说的通用的包装机械，其大致可分为品检、分选、计数、称重、套袋、装箱、膜包、打包、贴标、喷码、输送、码垛、缠绕、无人中转、自动仓储等多种机型。公司现在的二次包装机械还局限销售于饮料行业，事实上，从大米、水泥到家具、空调，几乎所有的产品都可用到包装机械。

All mechanical equipment dealing with the back segment of the manufactured goods is referred to as the secondary packing machine, which is what we call the all-purpose packing machine. It can roughly be divided into many models such as product examined, sorting, counting, weighing, bagging, shrink wrapping, baling, labelling, packing coding, conveying stacking, winding, unmanned transference, automatic storages. At present the secondary packing machines of the company are confined to the beverage trade. In fact, from rice, cement, or furniture, air conditioner, almost all products can use the packing machine.

正是看到了二次包装机械的巨大市场，在2001年底，达意隆研发二次包装机械。4年来开发出了简易膜包机、自动膜包机、纸箱裹包机、装箱机、码垛机、卸垛机、机

器人、专用输送链等多类十多个产品，还储备了几个新产品，做出了不少成绩，使后段包装产品迅速形成了系列，赢得了同行的称赞。

It is just seeing the enormous market of the secondary packing machine that at the end of 2001, Tech-Long begin research and development of secondary packaging machine. Over the past 4 years more than ten products have been developed, including simple shrink wrapper, automatic shrink wrapper, carton wrapping machine, case packer, palletizer,depalletizer,stacker, robot, special-purpose conveyance chain, etc., also several new products are stored, and great achievements have been made, series back segment packaging products are formed rapidly, and have won praises from counterparts.

达意隆主要的几大类二次包装机械产品包括以个品种:

The secondary packaging machinery of Tech-Long mainly include the following several varieties

装箱机类
包括落瓶式，抓瓶口式，装箱机器人等。

Case packer
Including falling bottle type, bottle mouth clamping type, case robot, etc.

落瓶式装箱机为达意隆的第一个产品，经过多少个不眠之夜的摸索调试，当它首次出现在北京包装展时，一位老教授感叹道：我想有这种产品多年，很高兴看到你们开发出来了。以后经过多次的改进，它以简单的结构、良好的适应性与性价比，成为了我们包装机械的第一个定型标准产品。

The falling bottle type casing machine is the first product of Tech-long. Through trying and testing of many sleepless nights, when it appeared in the packaging exhibition of of Beijing for the first time, an old professor said with feeling: I want these products for many years, now I’m glad that you have developed it. that I want to have this kind of product. Later after numerous improvements, it has become the first standardized product of packaging machine with simple structure, good adaptability and cost performance.

抓瓶口也是一种常规的装箱方式，但这类机器抓瓶头等磨损较快，相对体积要庞

大，价格也不低。

Bottle mouth clamping is a routine way of case packing too, but the bottle clamping head of this machine is easy to wear, and volume is big, and the price is high.

现在的机器人每

小时能完成3000次装箱动作，我们已完成这类装箱机器人的设计，并已有客户采用。

The present robot can finish casing movements of 3000 times per hour. We have finished the design of this packing robot, and some customers have adopted.

膜包机类
包括全自动膜包机、简易膜包机等。

Shrink wrapping machine
Including the full-automatic shrink wrapping machine, simple shrink wrapping machine etc.

热收缩膜包装优良的展示性能、低包装成本和运输成本、高自动化程度和生产速度以及美观的形象使它具有极强的生命力，在欧美发达地区早已大行其道，近年来也在中国包装领域兴起。

The fine exhibition performance, low packing and transportation cost, high automatic degree and the speed of production and beautiful appearance of the heat shrink wrapper enable it have extremely strong vitality. This belief has been propagated on a large scale in the developed area of America and Europe, and it also rises in China’s packaging field in recent years.

公司敏捷的捕捉到市场寻求，仅用半年多时间、后来先上的推出了全自动热收缩膜包装机这一高难度产品，且电气伺服控制全部自己完成，在国内为首家，就是在后来，几家大品牌做同样的伺服控制也没成功，可见其难度之大。现在青岛啤酒我们的膜包机一直在超速大生产运行，体现了达意隆机械的高品质。The company quickly caught the opportunity of the market. Only half a year’s later, it introduced the highly difficult product-- full-automatic shrink wrapper, and completed the electric servo control



装箱机
Case packer

by himself. This is the first at home. Even later on, several big brands failed in making the servo control, so it is very difficult. Now our shrink wrapper is running in Tsingtao beer company with high speed and large production scale, which reflects the high-quality of Tech-Long’s machinery .

针对客户有许多异型产品需要膜包，且产量不高，要求自动化程度低，我们学习欧美机的长处，又马上推出第二代、第三代简易膜包装机投入市场，有时仅用20天就完成了全部开发设计，体现了我们的市场观念与技术实力；此类机在出口的中、低产量生产线上用的较多。

In view of the fact that customers have a lot of products with abnormal shape to be packed with shrink, the output is not high, and require low automation, we study the strong points of machines in America and Europe, and introduced the second and the third generations of simple shrink wrapper and put them into the market at once; sometimes all development and design are finished in only 20 days, which reflected our market idea and technological capability; this kind of machine are mostly used in the exported production line of medium and low output.

膜包机系列，我们有许多先进技术，已在专利申请中。

For shrink wrapper series, we are applying patent for many advanced technology.

纸箱裹包机
包括步进式，连续式等。

Carton wrapping machine
Including stepped type, continuous type, etc.

纸箱裹包机相对于装箱机工艺简单，整个装箱、封箱过程一机完成，一般要用到热熔胶封箱。

Compared with packaging machine, the carton wrapping machine has a simple technology. The entire process of casing and sealing can be finished with one machine; generally the hot-melt glue is used to seal the case.

连续式纸箱裹包机产量可做到很大，复杂程度与全自动膜包机相当，不计螺栓螺



母 仅 机
械 主 要
零 部 件
清 单 就 达
30多页；我们现在销售较多的还是步进式的，产量在每分钟25包。

The output of continuous type carton wrapping machine can be very high, its complexity is equal to the full-automatic shrink packer. The inventory of main spare part of machinery alone is up to more than 30 pages, not including bolts and nuts; Most of the products that we sell now are progressive type, with an output of 25 packs per minute.

码垛、卸垛机
码垛卸垛机根据产量、场地等的不同，分为高位、低位等多种形式，从简单的单独码垛、卸垛，到复杂的码卸垛两用机，应用范围较广。空瓶码垛机是我们乃至国内需要开发的一个新产品。

Bottle palletizer and depalletizer
According to different outputs and places, etc. the bottle palletizer and depalletizer can be divided into various forms: high position or low position. From simple independent stacking, unloading to complicated dual-purpose machine of stacking and unloading, the range of application is wide. The empty bottle palletizer is a new product that we and



膜包机
Shrink wrapping machine

码垛、卸垛机
Bottle palletizer and depalletizer

even all Chinese counterparts should develop.

机器人
机器人是现代机电一体化设备的杰出代表，技术已相当成熟，在国外已有大量应用，它在解决劳动力不足、提高生产率、改进产品质量和降低生产成本方面，发挥着越来越显著的作用，成为保持经济增长速度和产品竞争能力的一支不可缺少的队伍。国内有的汽车生产线就配有上百台机器人。

Robot
Robots are remarkable representatives of the modern electromechanical integrated equipment. The technology has been quite mature, and is applied widely abroad. It plays a more and more remarkable role in solving the problem of insufficient workforce, boosting productivity, improving product quality and reducing production cost, and has become an indispensable team to keep economic growth rate and competitive power of products. Some automobile production lines at home are furnished with more than one hundred robots.

在包装方面，机器人能完成分选、开箱、装箱、码垛、搬运等动作，尤其可用在高低温、多尘、超高、超重、高精度、低故障等环境要求下。随着国内人力成本的提高，综合考虑维修、品牌等因素，必将有更多的客户应用它。如在每小时2千、3千桶的大桶生产线上，若两班生产，用机器人码垛是一个不错的选择。

In packing, the robot can finish such movements as

sorting, unpacking, casing, stacking, carrying, etc., especially they can be used under the environment of high and low temperature, many dust, super elevation, high accuracy, low trouble, etc. With the increasing of the domestic manpower cost, and considering such factors as maintenance, brands, etc., more customers will use it. For a large barrel production line with 2,000, 3,000 barrels per hour, and if the production is carried out in double shifts, stacking by robot is a good choice.

我们抓住市场机遇，引进国外名牌机械人，自己进行夹具、输送链、运动程序等的开发，走了一条又快又好的捷径，使之性能满足客户的需要；现已推向市场，走在了国内同行的前列。

We catch the market opportunity, introduce the foreign famous-brand robot, develop jig, conveying chain , movement procedure, etc. by ourselves, and find a good and fast shortcut fast to make performance meet demands of customers; now the robots have been introduced to the market, and is at the forefront of the counterparts at home.

专用输送链
各种输送链在包装生产线中占有重要的位置，造价可占整线的1/4；它可分为平板链、网链、滚珠链、皮带、滚筒、堆积链、特种输送链等多种，我公司已有专门机构进行研究。

Special-purpose conveyer chain
Various kinds of conveyer chains occupy the important position in packing production line, the cost can account for 1/4 of that of the whole line; It can be divided into many types such as flat chain, network chain, ball chain, belt, roller chain, stacked chain, special type conveyor chain, etc. Our company has specialized agencies to carry on this research.

自动仓储设备
自动仓储设备与无人中转车（LGV）配套于大型生产线等，是现代自动物流的高级装备，国内烟草、电子等行业已有应用，我们也在进行这方面的开发准备。

Automatic storage equipment
The automatic storage equipment and laser guided vehicle (LGV) form a complete set on the large-scale production line, they are the advanced equipment of the modern automatic logistics, and have been applied in such trades as domestic tobacco, electron ,etc.. We are preparing for the development in this respect too.



顺德甘碧采用达意
隆纸箱裹包机的生
产现场

Production Site
of Shunde Ganbi
Applying Tech-
Long carton
wrapping machine



DBZ-JRM450 机器人码垛机

DBZ-JRM450 Palletizer Robot

DBZ-JRM450是达意隆针对精确、高速和重负荷码垛应用的最新型的机器人码垛设备，现在，让我们来了解它到底具备哪些优势。

DBZ-JRM450 is the new type palletizer robot developed by Tech-Long for precise, high speed and heavy loading pile, now, let's realize the advantages of it.

技术特点: Technical Features:

- 占用面积少，生产能力大，全自动运行
Small occupation, high production capacity, fully automatic work
- 适应多种垛板及箱型，调整方便
Adapt various palletizing plate and boxes, convenient adjustment
- 多处安全保护，性能稳定可靠
Several safety protections, stable and reliable performance

动作描述: Description on Movement:

- 自动运行分为进垛板、夹放垛板、进箱、夹箱、码箱、出垛等步骤
Automatic run composes of following procedures as feeding palletizing plate, clamping palletizing plate, feeding box, clamping box, palletizing box and exiting pile etc.

设备描述: Description on the Equipment:

- 此设备由进箱链、垛板堆放台、机器人主机、出垛链、防护栏杆、电气控制等部分组成
This equipment composes of box feeding chain, palletizing plate station, robot, pile exiting chain, protective rail and electric control etc.
- 进箱链:
采用多个减速电机单独驱动各段滚筒，可带转向装置，一般终端停1-4个箱包，通过调节护栏宽度以定位不同

的箱包
Box Feeding Chain:
Apply several decelerators to drive the rollers independently, it can be equipped with steering device, stopping 1-4 boxes at the end, position different boxes by adjusting the width of protective rail

- 垛板堆放台:
采用碳钢型材加工后焊接而成，通过调节机架下边的螺栓来保证机架水平，外表做油漆；至少可堆放7个垛板；如客户需要可做成垛板堆放输送链以堆放更多的垛板
Palletizing Plate Station:
It is welded from carbon steel after processing, assure the machine is level by adjusting the bolts under the machine frame, the surface is coated; it can pile at least 7 palletizing plates; this mechanism can also be made into palletizing plate convey chain for palletizing more plates according to client's requirements.
- 机器人主机:
采用日本进口发那科（FANUC）M410iB系列机器人，配带专用夹具，每次可夹1—4个包，也能夹1000—1400mm的垛板；通过程序控制，实现不同规格的码垛
Robot:
Apply Japanese FANUC M410iB series robot, with special clamp, it can clamp 1-4 boxes each time or 1000-1400mm palletizing plate; with program control, it can palletize different sizes of piles.

- 出垛链:
一般采用二套减速电机分二段传动输送滚筒，结构简单；各段通过调节底部的地脚螺钉，使机架保持水平；第1段输送滚筒较短，当垛板一输出后马上停转，等待来新垛板；第2段长度可以根据客户需要进行调整；由光电开关发送垛板位置信号，再经电气控制各段动作
Pile Discharging Chain:
Apply 2 sets of deceleration motor for driving the convey roller in 2 sections with simple structure
Keep the machine frame level by adjusting the bottom floor bolts
The first section convey roller is short, and may immediately stop running for new palletizing plate once palletizing plate is output
The length of the second section is adjustment according to client's requirements
Palletizing plate position signal is send with photoelectric switch, and the sections feature electric control

- 防护栏杆:
采用外购标准活动护栏，任意组合长度，防止人员进入码垛区域
Protective Rail:
Apply standard flexible protective rail, with any length, prevent employees to approach the palletizing area

- 电气控制:
可根据上游设备（如输送系统等）运行情况的变化，控制

Main Technical Parameters:

Max Palletizing Capacity: 600 times/hour,
The packaging number is confirmed according to the palletizing mode
Max Palletizing Dimension:
L x W x H=1200 x 1400 x 2200 mm
Main Unit: 4 DOF palletizing,
Max Lifting Weight 450Kg
Applicable for: film bags, carton and plastic box etc.
Compressed Air: 0.1M3 /min, 6 bar
Motor: 380V/50Hz, 15kw
Weight of Mechanical Part: 2430 kg
Control Shaft: 4 shafts
Max Movement Radius: 3130MM
Installation Mode: on floor
Permit Max Torque of Wrist: 2000 kgf cm sec2
Drive Mode: AC Server Motor
Installation Environment: Temperature: 0-45℃
Humanity: <75%RH
Vibration: <0.5G

主要参数:

最大码垛能力: 600次/小时，
每次包装箱数根据码箱方式定
最大码垛尺寸: 长x宽x高=1200 x 1400 x 2200 mm
主机配置: 四自由度码垛机器人，
最大抓举重量450Kg
适应箱类: 膜包、纸箱、塑料箱等
压缩空气: 0.1M3 /min , 6bar
电机配置: 380V/50Hz, 15 kw
机械部分重量: 2430 kg
控制轴: 4轴
最大运动半径: 3130MM
安装方式: 地装
手腕允许最大扭矩: 2000 kgf cm sec2
驱动方式: 交流伺服马达
安装环境: 温度: 0-45℃
湿度: 通常 75%RH以下
振动值 : 0.5G以下

码垛机的运行状况;
设置了一套完整的检测监控系统，系统中部分减速电机配带变频器，以使得设备运行平稳，
多处带安全保护装置;
机器人主机自带程序控制器(PMC)、友善的示教盘，具备手动、自动运行模式，码垛方式转换简单快捷
Electric Control:
It can control the palletizer according to the work of other equipments (such as convey system)
With a complete set of detection and monitoring system, the deceleration motor is equipped with transducer for assuring stable run, several parts are installed with protective devices
Robot is installed with PMC, and features friendly demonstration disc, manual and automatic work mode, easy to switch the palletizing mode

Text by:Tech-Long Zhao Jianmin
Pictures by:Tech-long Hakim/Mukee

DBZ—JRM 系列机器人码垛机参数表

项 目 Project		规格 Model			备注 Note
		DBZ-JRM/160	DBZ-JRM/300	DBZ-JRM/450	
控制轴 Control shaft		4轴 4 axis	4轴 4 axis	4轴 4 axis	
最大运动半径 Max moving radius		3143mm	3143mm	3130mm	
安装方式 Install type		地装 Ground install	地装 Ground install	地装 Ground install	
动作范围（最大动作速度） Moving range (Max. moving speed)	J1	360°（130° /sec）	360°（85° /sec）	360°（70° /sec）	
	J2	144°（130° /sec）	144°（90° /sec）	144°（70° /sec）	
	J3	136°（135° /sec）	136°（100° /sec）	135°（70° /sec）	
	J4	540°（300° /sec）	540°（190° /sec）	540°（180° /sec）	
最大手部负载 Max. arm load		160 kg	300 kg	450 kg	
手腕允许最大扭矩 Wrist Max. torque		800 kgf·cm·sec2	1400 kgf·cm·sec2	2000 kgf·cm·sec2	
搬运能力 Capacity		1500 次/小时 1500Times/Hour	1000次/小时 1000Times/Hour	700次/小时 700Times/Hour	注1 Note1
重复 Repeat		± 0.5 mm	± 0.5 mm	± 0.5 mm	
机械部分重量 Machanism part weight		1940 kg	1940 kg	2430 kg	注2 Note2
驱动方式 Drive type		交流伺服马达 Alternating servo motor			
安装环境 Installation condition		周围温度：0 ~ 45℃ temperature nearby 0~45			
		周围湿度：通常 75%RH以下 Humidity nearby: normally under 75%RH			
		短期 95%RH以下（1个月以内）Short-term under 95%RH(during 1 month)			
		没有结露 Non-dew			
		振动值 ：0.5G以下 Shaking rate:<0.5G			

注1: 最大负荷时，水平移动距离2,000mm，上升下降距离400mm
注2: 已包含控制器重量
注3: M-410iB系列的最大线速度是2500mm/sec

Note1-Horizontal moving distance2,000mm, distance between up and down 400mm, when Max. load
Note2-Include controller weight
Note3- M-410iB series Max.whole line speed 2500mm/sec

达意隆二次包装机械发展大事记

Memorabilia of the development of secondary packing machine of Tech-Long

- 2001.11

达意隆二次包装研发开始运作
Tech-long research and development of secondary packaging began to operate
推出第一代自动装箱机
- 2001.12

Introduced the first generation of automatic case packer
针对热点，迅速研发全自动热收缩膜包装机投放市场
- 2002.5

Aiming at the focus, researched and developed the full-automatic heat-shrink wrapper to put on market rapidly
完成了卸垛机的设计
- 2002.10

Finished the design of depalletizer ;
完成简易膜包机的设计
- 2002.11

The designing of facility shrink wrapper was finished
正式成立合氏公司技术部、生产部，合氏公司独立运作
Established technological department and production department of Heshi company formally, and Heshi company operated independently
- 2003.7

步进式纸箱裹包机面市
The stepped type carton wrapping machine appeared on the market
- 2003.8

码垛机推出
Palletizer was introduced
- 2003.11

完成第二代简易膜包机的设计
inished the design of second generation of simple shrink wrapping machine
- 2003.12

完成了双通道热收缩膜包装机的设计
Finished the design of the two-passway heat-shink wrapper
- 2004.6

完成了连续式纸箱裹包机的设计
Finished the design of continuous type carton wrapping machine
- 2004.12

完成了第三代简易膜包机的设计
Finished the design of the third generation of simple shrink wrapper
- 2005.3

采用三维设计软件；对多项装箱技术进行了研究
Adopted the three-dimensional design software; Carried on research in multiple case packing technology
- 2005.6

在国内同行中率先开发码垛机械人，并投入客户使用
Took the lead in developing the robot for stacking among the domestic counterparts, put into use for customers
- 2005.9

码垛机、卸垛机进军香港太古，多种机型出口量大增
The palletizer and depalletizer marched into the Pacific of Hong Kong, the export volume of different types of machines increased greatly

Text by:Tech-Long Li Weimin



成为为用户提供更多附加值的理想合作伙伴

Become the ideal partner for providing more value for users

北京汇源，最具竞争力的百分百果汁品牌-达意隆与汇源，共同见证品牌的成长

Beijing Huiyuan, 100% fruit juice brand with highest competitive force

Tech-Long and Huiyuan witness the development of the brand

农夫山泉,好品质的水-记达意隆与农夫山泉的合作之路

Nongfu Spring, Quality Water-The Cooperation of Tech-Long and Nongfu Spring

达利集团

达意隆与达利集团成功签订6条整线订单，达意隆凭借丰富整厂解决方案经验，迎接全新挑战

Dali Group, Tech-Long always ready to meet new challenge with abundant

experiences of complete factory.

华龙品牌的成功升级，今麦郎饮品-达意隆与今麦郎进入实质性合作阶段

Successful Upgrading of Hualong Brand-Jinmailang Beverage

Tech-Long and Jinmailang step onto the stage of actual cooperation

银鹭集团，营造战略发展的合理布局-达意隆与银鹭集团的合作

Yinlu Group, Construct Reasonable Layout for Strategic Development

-Cooperation Between Tech-Long and Yinlu Group

鼎湖山泉，来自自然保护区的优质山泉水

Dinghu Spring, quality spring water from the nature reserve



北京汇源

最具竞争力的百分百果汁品牌

达意隆与汇源，共同见证品牌的成长

Beijing Huiyuan

100% fruit juice brand with highest competitive force

Tech-Long and Huiyuan witness the development of the brand

北京汇源饮料食品集团有限公司成立于1992年，是主营果、蔬汁及果、蔬汁饮料的大型现代化企业集团。在全国各地创建了20多家现代化工厂，链接了100多个、300多万亩名特优水果、无公害水果、A级绿色水果生产基地和标准化示范果园；建立了遍布全国的营销服务网络，构建了一个庞大的水果产业化经营体系。

Beijing Huiyuan Beverage and Foods Group Co., Ltd. was set up in 1992 as a big and modern group specialized in fruit and vegetable juice and beverage, and has set up over 20 modern factories and connected with more than 100 and 3 million mu famous and quality fruit, harmful fruit and Class A green fruit produce base and standard fruit garden; constructed the national wide marketing and service network as well as the big fruit industrialization system.

汇源集团拥有国际最先进的PET瓶、康美包、利乐包无菌冷灌装生产线70余条，开创和引领了中国饮料PET瓶无菌冷灌装的新时代。汇源集团的水果原浆加工的冷破碎、浓缩果汁加工的超微过滤、饮料生产的无菌冷灌装等项工艺和技术均处于世界领先地位；汇源集团累计研发、生产了500多种饮料食品，其中，汇源百分百纯果汁和中高浓度果汁饮料的市场份额，一直高居全国市场同类产品榜首，部分产品出口20多个国家和地区。汇源已成为中国果汁行业第一品牌。

Huiyuan Group possesses over 70 most advanced PET bottle, Combibloe bag, Tetra Pak bag aseptic cold filling product lines, which leads the new times of domestic beverage PET bottle aseptic cold filling. The cold crushing of fruit slurry, super micro filter of concentrated fruit juice and beverage aseptic cold filling of Huiyuan Group rank leading in the world; Huiyuan Group has developed and produced over 500 kinds of beverages and foods, among which the market share of Huiyuan 100% pure fruit juice and middle and high concentrated fruit juice beverage ranks first in the industry at home, and some products are exported to more than 20 countries and regions. Huiyuan has become the first brand in domestic fruit juice industry.

汇源集团带动了中国果汁行业的发展，引领了中国果汁健康消费的新时尚，促进了水果种植业、加工业及其它相关产业的发展。

Huiyuan Group promotes the development of domestic fruit juice industry, leads the new fashion of healthy consumption of fruit juice, and promotes the development of fruit planting, processing and other relative industries.

诞生于1992年的汇源品牌，从一开始就专门致力于各种果蔬汁饮料开发、生产与销售，凭其稳健的经营与市场拓展，销售量节节攀升，加之在品牌建设初期，就注重走专业化的路线，同时配合较为先进的品牌营销手段，迅速在行业内取得了一席之地。1994年汇源在北京建厂，面向全国，发展到目前同时管理着分布在国内各个区域的20多个分厂。一句“喝汇源果汁，走健康之路”的专业性品牌诉求，使得汇源品牌在短短数年之间，就成为中国饮料工业十强企业，销售收入、市场占有率均在同行业中名列第一。而达意隆也一路伴随着汇源的发展而成长壮大。

Huiyuan, born in 1992, has been dedicated to the developing, producing and selling of various fruit and vegetable beverages since the establishment with the sales volume keeping steady increase due to stable operation and marketing. Focus on the professional route, combined with advanced brand marketing, Huiyuan has instantly occupied a place in the industry. In 1994, Huiyuan set up the factory in Beijing. At present, Huiyuan has over 20 factories throughout China. The professional brand appeal of “drink Huiyuan fruit juice, take the road of health” makes Huiyuan the Top 10 Enterprise in China Beverage Industry with the sales income and market share ranking first in the industry. And Tech-Long is also developing together with the development of Huiyuan.



汇源部分PET包装产品

Huiyuan Parts of Huiyuan PET packing products



汇源精益求精的选果工艺

Huiyuan presents precise technique in selecting fruit



汇源PET果汁生产线
Huiyuan production and PET packing line



2001年，达意隆以一套前处理系统及一条小瓶灌装生产线正式拉开了与北京汇源公司的合作帷幕。在2002年至2005年间，也正是汇源公司设备采购由进口到国产化的转型时期，由于转型的跨度过大，也使汇源公司不段地在总结经验，不段地在考察国内的优秀设备供应商。

In 2001, Tech-Long started the cooperation with Beijing Huiyuan with a set of pre-treatment system and a small bottle filling product line. During 2002-2005, which is also the period for Huiyuan to switch from imported equipment to homemade equipments, since it was significant, Huiyuan was also constantly summarizing the experience and investigating the domestic outstanding suppliers.

2006年初，汇源与达能携手合作的消息震动了整个饮料行业，汇源也此在饮料行业迎来了一个崭新的开始，构建了一个崭新的平台。而达意隆与汇源在经历了三年的间断性合作及调整、设备考证到相互信任之后，在2006年底，双方的合作又进入了新的里程：从单一的PET瓶灌装生产线延伸到了前处理系统等设备，更值得欣慰的是，2006年11月9日，汇源一次性向达意隆订购了9台RJM14全自动旋转式吹瓶机，这意味着汇源对达意隆及达意隆设备的高度认可。

In early 2006, the news on the cooperation of Huiyuan and Danone aroused the shock of the entire beverage industry, Huiyuan also greeted a new start in the beverage industry and constructed a brand new platform. After 3 years of cooperation, adjustment, equipment investigation and confidence, Tech-Long and Huiyuan entered into a new milestone for the cooperation in the late 2006: from single PET bottle filling product line to such equipments as pre-treatment system, what shall be gratified was, on November 19th, 2006, Huiyuan ordered nine RJM14 fully automatic revolving bottle blow molding machines from Tech-Long, which means the highly recognition of Huiyuan to Tech-Long products.

达意隆与汇源一路走来，从汇源品牌的成长中，也不断加深了对品牌的内在要素的理解：品牌其实也是一种感受，是一种评价，是企业文化的结晶，更是企业历史的缩影。我们和汇源共同期望，能从彼此品牌的成长过程中，见证中国民族品牌的一步步崛起！

during the development of Huiyuan: brand is also a kind of realization, appraisal, the crystal of corporation culture and the epitome of the corporation history. Tech-Long and Huiyuan expect to witness the rising of national brand from the development of both parties.

Text by:Tech-long Ning Wenbin/Mukee

Pictures by:Tech-long Mukee

农夫山泉

好品质的水

农夫山泉股份有限公司成立于1996年，为中国饮料工业十强企业之一。公司品牌“农夫山泉”在国内享有很高的认知度，2006年农夫山泉天然水的总产量达100万吨。中华商业信息中心市场监测报告显示，从1999年至2003年在全国瓶装饮用水十大品牌中，农夫山泉市场综合占有率连续五年荣列第一名。农夫山泉的产值不断递增，每年上一个台阶。2003年后农夫山泉先后推出“农夫果园混合果汁饮料”、“尖叫系列功能饮料”，2005年又推出“新概念茶饮料农夫汽茶”，均获得显著成功。

The Nongfu Spring Limited Company was established in 1996. It is one of the top ten enterprises of Chinese beverage industry. The company's brand Nongfu Spring enjoys high cognition degree at home; the total output of natural water of Nongfu Spring was up to 1,000,000 tons in 2006. According to the market monitoring report of China Commercial Information Central, among ten major brands of national bottled drinking water from 1999 to 2003, market comprehensive occupation rate of Nongfu spring has ranked the first place for five years in succession. The output value of the Nongfu spring is increasing progressively constantly, and goes a step forward each year. Nongfu Spring put out Nongfu Orchard Mixed Fruit drink, Jianjiao Serial Function Beverage successively after the 2003, and introduced new concept tea beverage—Nongfu Soda Tea in 2005, and gained great success.

1997年-2003年底，农夫山泉相继在国家一级水资源保护区浙江省千岛湖、吉林省长白山矿泉水保护区、湖北省丹江口建成五座现代化的饮料工厂，投资总额逾18亿元人民币。2004年，为满足珠三角和港澳地区的市场需求，农夫山泉公司投资10亿，在国家级森林公园广东万绿湖建设华南最大的景点式旅游工厂。

1997 - the end of 2003, Nongfu Spring built up five modernized beverage factories in succession in the national first class water resource protection zones Qiandao Lake of Zhejiang Province, Changbaishan mineral water protection zone of Jilin Province and Danjiangkou of Hubei province, with a total investment of over 1,800 million yuan. In 2004, in order to meet the market demand of Zhujiang Delta, Hong Kong and Macao, Nongfu Spring Company invested 1 billion yuan to build the largest beauty spot type travel factory in South China in Guangdong Wanlu lake, a national-level Forest Park.

农夫山泉的目标是加入世界最优秀的饮用水饮料公司行列，成为中国最具竞争力的企业之一。

The goal of the Nongfu Spring is to join the ranks of the world's most outstanding drinking water beverage company, and become one of the most competitive enterprises of China.

农夫山泉四大水源

Four major water sources of Nongfu Spring

农夫山泉认为，优质的水源是奠定好品牌的基石。不同于其他厂家为节约成本在中心城市建厂与城市争自来水的策略，农夫山泉寻找的都是大山深处的珍贵水源。

The Nongfu Spring thinks that the high-quality source of water is a foundation stone of establishing the good brand. Different from the strategy of other producers who build up the factory in key cities and struggle for running water with city to save cost, Nongfu Spring looks for precious sources of water in mountain depths.

Nongfu Spring

Water of good quality

农夫山泉水源地之一 ——国家一级水资源保护区千岛湖

千岛湖，面积580平方公里，森林覆盖率94.7%，空气质量指数一级。这里水质天然清纯，属国家一级水资源保护区。农夫山泉源自千岛湖优质深层水，常年水温12摄氏度，富含天然的钾、钠、钙、镁、偏硅酸等矿物元素。

The first water source of Nongfu Spring - Qiandao Lake, protection zone of national first class water resource
Qiandao Lake has an area of 580 sq. km., the forest coverage rate is 94.7%, and the air quality index is grade A. The water quality here is natural and pure, and belongs to the national first class water resource protection zone. The Nongfu Spring stems from the high-quality deep water of Qiandao Lake, with a long-term temperature of 12 C, and is rich in such mineral elements as natural potassium, sodium, calcium, magnesium, metasilicic acid, etc..

农夫山泉水源地之二 ——长白山天然矿泉水保护区

长白山腹地的高寒山区，人稀林密。第四纪长白山火山群造就了中国最好的水源漫长的地质年代，使水中富含丰富的矿物元素。农夫山泉工厂就建在茂密的森林里，取水口错草泉日涌量达三万五千吨，并按国际标准建立水源保护区，周围10平方公里无人居住。

Second of Nongfu Spring's water source - Natural mineral water protection zone of Changbai Mountain
High and cold mountain area of the hinterland of Changbai Mountain has fewer people and dense forest. The volcano group of Changbai Mountain in Quaternary Period has brought up the best source of water in China. Rich mineral elements exist in the water during long geological epoch. Nongfu Spring builds the factory in the dense forest. The daily water volume of the intake Cuocao Spring is up to 35,000 tons, and the water source protection zone is set up according to international standard, with no people living there around 10 square kilometers.

农夫山泉水源地之三 ——南水北调中线工程源头丹江口水库

位于秦岭大巴山流域的湖北丹江口生产基地，是南水北调中线工程源头，国家一级水资源保护区、亚洲第一大人工淡水湖，水域面积745平方公里，具立体生态系统特征。

Third of water source of Nongfu Spring --Reservoir of Danjiangkou, source of centre line of South-North Water Diversion Project
The Danjiangkou production base of Hubei, which lies in the Daba mountain basin of Qinling Mountains, is the source of centre line of South-North Water Diversion Project, the national first class water resource protection zone, the largest artificial fresh water lake of Asia, with the water areas of 745 sq. km., and has the three-dimensional ecosystem characteristics.

农夫山泉水源地之四 ——华南最大国家级森林公园万绿湖

广东新丰江水库又名万绿湖，是华南地区最大的国家级森林公园，其中水域面积370平方公里。绿化率达到98%，空气质量达到国家标准一级，水质达到国家一类地表水标准，可直接饮用，并通过东深供水工程间接供往香港。

Fourth of water source of Nongfu Spring ---Wanlu Lake, the largest national-level forest park in South China
The Xinfengjiang Reservoir of Guangdong, which has another name Wanlu Lake, is the largest national-level forest park of South China, with a water area of 370 sq. km. The afforesting rate is up to 98%, the air quality reaches the national first class standard, the water quality is up to the surface water standard in the country and can be drunk directly, and is used in Hong Kong indirectly through Dongshen water supply project.



农夫山泉广东万绿湖生产基地试生产仪式现场，图中从左至右依次为：达意隆销售总监孔祥捷先生、农夫山泉公司总经理钟纪钢先生、达意隆总裁王忠先生。

Site of trial production ceremony of Guangdong Wanlu lake production base of Nongfu Spring. In the picture the people from left to right are: Mr. Kong XiangJie, sales director of Tech-Long, Mr. Zhong JiGang, general manager of Nongfu Spring Company, Mr. Wang Zhong, president of Tech-Long .

达意隆与农夫山泉首次合作成功

Initial successful cooperation between Tech-long and Nongfu Spring

2005年12月28日，随着电控按钮的启动，一瓶瓶装着万绿湖源头活水的农夫山泉产品走下生产线。这标志经过5个月建设，投资5亿元的农夫山泉广东万绿湖生产基地正式投入生产。

Nongfu Spring adopts 1200BPH five gallon filling line of Tech-Long On December 28, 2005, with the start of automatically controlled button, bottles of Nongfu Spring products which contain running water at the source of Wanlu Lake were off the production line. This indicated that after 5 months' construction, the Guangdong Wanlu Lake production bases of Nongfu Spring with an investment of 500 million yuan is put into production formally.

农夫山泉广东河源万绿湖生产基地于2006年新年期间试产成功，这个基地是目前为止中国乃至整个亚洲最大的饮料生产基地。万绿湖生产基地占据的是国家级珍贵的水资源，分两期实施，其中第一期已基本建成，建设总规模为8.9万平方米，生产区域整体洁净度达到10万级。

The trial production of the Wanlu lake production base of Guangdong Heyuan of Nongfu Spring which was conducted at the New Year of 2006 was very successful. This is the largest beverage production base in China and even in Asia. A Wanlu Lake production base occupies the national-level precious water resource. It is implemented

in two stages, among them the first stage has been built up basically, with a total scale of construction of 89,000 square meters. The overall cleanliness in the production area reached 100,000 grades.

农夫山泉万绿湖生产基地第一期配备三条生产线，其中包括从达意隆引进的国内最先进的1200BPH旋转式桶装水生产线及从德国、意大利引进2条当今世界最先进PET瓶灌装生产线。这个生产基地是农夫山泉全国六大生产基地之一，产品主要供应珠三角及港澳市场。二期工程完工后，河源基地最终将配备七条生产线。届时，年产能将达到70万至80万吨，年产值将达15亿元左右。

Three production lines are used in the first stage of Wanlu Lake production base of Nongfu Spring, including China's most advanced 1200BPH rotary type drummed water production line introduced from Tech-Long, and 2 world's most advanced PET bottle filling production lines introduced from Germany and Italy. This production base is one of the six major ones of Nongfu Spring in China. The products mainly supply Zhujiang delta, Hong Kong and Macro markets. After the completion of second stage, the Heyuan base will be equipped with seven production lines finally. At that time, the annual productivity can be up to 700,000 to 800,000 tons, and the annual output will be up to about 1,500 million yuan.

这次合作是农夫山泉与达意隆的第一次亲密接触。从2003年9月起，达意隆总裁王忠先生、销售总监孔祥捷先生曾多次亲赴杭州农夫山泉总部，向客户全面客观地介绍达意隆集团的发展情况和产品的优势。

2005年9月30日，国庆节的前一天，客户对达意隆整体发展水平及产品的优势给予了高度的肯定和赞扬，双方代表在杭州签署了1200BPH旋转式PC桶装水生产线的供货合同，这条生产线于12月28日在万绿湖生产基地正式投入生产。

This cooperation is the first intimate contact between Nongfu Spring and Tech-Long. From September of 2003, Mr. Wang Zhong, president of Tech-Long and Mr. Kong XiangJie, the sales director went to Hangzhou, the general headquarters of Nongfu Spring many times to make an overall and objective introduction to customers of the development and advantage of products of Tech-Long. On September 30, 2005, the previous day of National Day, the customer offered affirmation and praise for the overall development level and advantage of the products of Tech-Long. The representatives of both sides signed the supply contract of 1200BPH rotating type PC drummed water production line in Hangzhou. This production line was put into production formally in Wanlu Lake production bases on December 28.

农夫山泉凭借珍贵的水资源，出产了可与世界上任何著名品牌水媲美的高品质水，在与农夫山泉的合作中，达意隆更深刻体会到了产品品质就是企业的生命！

Relying on the precious water resource, Nongfu Spring produces the high-quality water that can be compared with any famous brand water in the world. During cooperation with Nongfu Spring, Tech-Long realized deeply that quality of products is the lives of enterprises!

Text and pictures by:Tech-long Li Youhua

农夫山泉采用的达意隆1200BPH五加仑灌装生产线

Nongfu Spring adopts 1200 BPH five gallon filling line of Tech-Long





农夫山泉总裁钟睺眈（左三）、常务副总经理张国玺（右三）、与达意隆董事长张颂明（左二）、总裁王忠（右二）、销售总监孔祥捷（左一）、西中国区销售总经理程伟（右一）在2006年9月的北京国际啤酒饮料展达意隆展位前。
Chairman of Nongfu Spring Mr. Zhong (3rd from the left), Standing Vice General Manager Zhang Guoxi (3rd from the right), President of Tech-Long Zhang Songming (2nd from the left), President Wang Zhong (2nd from the right), Sales Supervisor Kong Xiangjie (1st from the left), West China Area Sales General Manager Cheng Wei (1st from the right) are taking photo in front of the Tech-Long booth in Beijing International Beer and Beverage Exhibition held in September, 2006.

达意隆与农夫山泉再次牵手， 双方进入全面合作阶段

Tech-Long and Nongfu Spring enter into the phase of complete cooperation

农夫山泉立志成为世界最优秀的专业饮用天然水企业，为达到这一目标，农夫山泉一直以来都选择最优质的水源及世界最先进的生产线。在2005年9月与达意隆合作之前，农夫山泉的生产线均选用来自德国、意大利等国的进口设备，因此对设备技术、性能、稳定性、交货期及售后服务等各个方面的要求都非常严格，特别是对超过30000BPH的生产线，要求尤为挑剔。为了全面了解并达到用户多方面的需求，达意

隆董事长张颂明先生、销售总监孔祥捷先生自2006年10月以来，曾多次亲赴杭州农夫山泉总部与客户就技术及商务等各方面问题进行全面洽谈。2006年11月，农夫山泉的考察团到达意隆广州总部考察，并参观多间用户工厂，对达意隆的设备运行状况进行了了解，参观过后，农夫山泉对达意隆产品给予了高度评价，认为达意隆全自动旋转式吹瓶机、PET瓶灌装生产线等设备已可以替代进口设备。
Nongfu Spring is constantly striving for developing

美丽迷人的广东河源
万绿湖风景区我
Beautiful and Attractive
Heyuan Wanlü Lake
Scenery Zone in
Guangdong

into the world best enterprise in natural drink water. In order to achieve this target, Nongfu Spring selects the best water source and world most advanced product line. Before cooperating with Tech-Long in September, 2005, the product lines of Nongfu Spring are imported from Germany and Italy, therefore, it has very strict requirements in technology, performance, stability, delivery time and after sale service of the equipments, particularly to product line which exceeds 30000BPH. In order to completely realize and meet client's requirements, President of Tech-Long Mr. Zhang Songming, Sales Supervisor Mr. Kong Xiangjie have visited Hongzhou Nongfu Spring Head Office and held complete negotiation on technology and business with the client since October, 2006. In November, 2006, the investigation delegation of Nongfu Spring visited Tech-Long Guangzhou Head Office and several users' factories. After the visitation, Nongfu Spring has given high praise to Tech-Long products and holds the opinion that Tech-Long fully automatic revolving bottle blow molding machine and PET bottle filling product line can completely substitute imported equipments.

自从达意隆的1200BPH旋转式PC桶装水生产线于2005年12月28日在农夫山泉广东河源万绿湖生产基地正式投入生产以来，达意隆设备运行的可靠性及良好的售后服务得到农夫山泉的高度认可，这为达意隆与农夫山泉的再度牵手奠定了良好的基础。Since Tech-Long 1200BPH revolving PC barrel water product line was put into production in Guangdong Heyuan Wanlü Lake Produce Base of Nongfu Spring on December 28th, 2005, Tech-Long equipments have earned high recognition from Nongfu Spring due to high reliability and considerate after service, which has set solid foundation for the further cooperation of Tech-Long and Nongfu Spring.

2006年11月27日，达意隆与农夫山泉在杭州签订了包括3条36000BPH天然水生产线、1条20000BPH热灌装生产线、1条1600BPH（5L）天然水生产整线在内的共5条生产线及两台全自动旋转式吹瓶机

的购买协议。参与此次农夫山泉项目的竞争对手中不乏世界一流的设备供应商及国内优秀的企业，在慎重考虑了公司实力、技术、价格、售前售后服务等各方面因素后，达意隆设备完全能满足农夫山泉的多方位的要求，达意隆以高性价比的优势获得了农夫山泉的青睐。如果说2005年9月30日是达意隆与农夫山泉尝试性的合作，那么这一天就意味着达意隆与农夫山泉已经进入了全面合作的阶段。On November 27th, 2006, Tech-Long and Nongfu Spring signed the agreement for three 36000BPH natural water product lines, one 20000BPH hot filling product line, one 1600BPH(5L) natural water whole product line and two fully automatic revolving bottle blow molding machines in Hangzhou. A lot of world top equipment suppliers and domestic outstanding enterprises participated into the bidding, after carefully taking the corporation strength, technology, price and service of all bidders, Nongfu Spring selected Tech-Long since the equipments can completely meet the requirements with high ratio of performance and price. If it is said that September 30th, 2005 is the trail cooperation of Tech-Long and Nongfu Spring, then today means that Tech-Long and Nongfu Spring has entered into the phase of complete cooperation.

农夫山泉凭借优质的水资源出产高品质的水，达意隆将用高品质的设备为农夫山泉成为世界最优秀的饮用水公司做出贡献！Nongfu Spring produces quality water with quality water sources, Tech-Long contributes to promote Nongfu Spring to be the world best drink water corporation with quality equipments.

Text by: Tech-long Hong Feng/Mukee
Picture by: Tech-long Mukee



2006年6月15日，达意隆与达利正式签订了高达1.2亿的设备订单。上图为达利集团厂长余军（左二）、达利集团董事长助理林春雨（右三），达意隆董事长张颂明（左四），与达意隆此项目小组成员。

On July 15 2006, Tech-long formally signed the 120-million facility contract with Dali Group. The above picture shows factory director of Dali Group Yujun(2nd from the left), president assistant Lin Chunyu(3rd from the right), president of Tech-long Zhang Songming(4th from the left) and other project members of Tech-long.

达利集团

Dali Group

达利集团创办于1989年，是一家致力于研发和制造健康美味食品的大型集团化企业。公司总占地面积1600亩，各类专业技术人才及员工12000多人，拥有分布在华北、东北、华东、华中、西南、西北的八大生产基地，拥有“好吃点”饼干，“可比克”马铃薯休闲食品，“达利园”派类的三大产业品牌，其品种之全，技术含量之高，市场之广位于国内同行之列，三大品牌的销售量更是雄居市场榜首。

Dali Group is founded in 1989, which is a large-scale enterprise devoted to the development and manufacture of the healthy and delicious foods. The total area of company is 9600 acres and there are more than 12000 professionals technicians from kinds of majors. It possesses 8 production bases respectively located in North China, the Northeast, East China, Central China, southwest and northwest. "Haochidian" Biscuits, "Copico" Chips and "Daliyuan" Pie series are its three famous brands, which rank the first place among the peer group with its various types, high technology and large sales volume.

作为国内最大的休闲食品生产厂家达利首次进军饮料市场，是其长远发展战略中具有历史意义的一笔，达利集团已真正成为全方位、多元化的集团公司。

This is the first time for Dali, the largest leisure food producer, to step into the drinks market. It is also a step with historical significance on its development. And Dali Group has become a real omni-directional, pluralistic group company.

达意隆与达利集团， 成功签订6条整线订单

达意隆凭借丰富整厂解决方案经验，迎接全新挑战

Tech-long and Dali Group Succeed in signing the contract of six complete production lines.

With abundant experiences of factory problem solution, Tech-Long is always ready to meet new challenges

快速响应，赢得用户
High-speed respond, win the user

2006年6月15日达意隆与福建达利集团（以下简称达利）正式签订了6条整厂热灌装生产设备订单，这在整个中国饮料行业是一个震惊，也是达意隆国内迄今为止单一合同金额最大的订单。无论对于休闲食品行业龙头企业达利，还是饮料设备制造商的达意隆，这次联手都是一个具有历史意义的新里程，达意隆人用自己的执着、专业、实力再次印证“中国民

族产业本土造”已是大势所趋，饮料企业对包装整线整厂解决方案的需求时代已经到来。

On June 15 2006, Tech-Long and Dali Group(short for Dali) formally signed the contract of 6 sets of hot bottling production lines, which is considered to be a hot topic in the drinks industry of China. This cooperation between Tech-Long and Dali is a new course with historical meanings, to both leading enterprise of leisure food in China-Dali and drink equipment manufacturer.Tech-Long. By the persistence, professionalism, strength, Tech-Long

proves once more the tendency of“ Made in China”, which shows that a new echo of drink enterprises’ need of whole solution plan has come.

与达利的结缘是在2006年4月的一个星期天，得知达利公司一行到了广州，达意隆负责人迅速与达利取得联系，第二日便带领达利相关人员参观了整厂，达意隆张董事长就目前饮料机械的发展趋势做了简要的介绍，使达利对达意隆的行业龙头地位有了初步了解，而达意隆也从中得知达利需要采购6条24000BPH的乳饮料生产线，这个大项目对达意隆来说，无疑又是一个全新的挑战。

It was a Sunday of April 2006 that we became attached with Dali. On receipt of the arrival of Dali to Guangzhou, the director of Tech-Long got in touch with Dali and invited them to visit the whole factory. Director of Tech-Long Mr. Zhang delivered a brief introduction to the present development of drink equipment and acknowledged them of the industrial leading position of Tech-Long. Then Tech-Long got the news that Dali would order 6 sets of the 24000BPH milk drinks production lines, which was no doubt a new challenge for Tech-Long.

初次见面的三天后，达意隆就把24000BPH的热灌装生产线方案提交给了达利负责人。为了让客户对达意隆的设备、综合实力有更深入的了解和确认，方案提交后达意隆与达利积极联系，多次邀请相关人员到达意隆生产厂家进行实地考察。

Three days after the first meeting, Tech-Long submitted the 24000BPH hot bottling production line plan to the director of Dali. In order to make customers better understand the equipments and comprehensive power, Tech-Long contacted with Dali frequently and actively, and for many times they invited related personnel to have on-site inspection.

2006年5月3日，达意隆接到了达利接受邀请到济南普利思参观的电话，这个电话改变了达意隆与达利的合作进程。

On May 3, 2006, Tech-Long received the call of the receipt of Dali for the visit to Lipusi in Jinan, which changed the whole cooperation process between Tech-Long and Dali.

5月7日，在济南普利思的配合下，达利顺利的参观了24000BPH热灌装生产线在现场的工作状况，并对设备运行平稳表示满

意，一周后达利正式邀请达意隆到其福建总部就24000BPH热灌装项目进行阐述，这标志着达意隆已顺利进入与其他国内外优秀设备供应商的最后角逐阶段。

On May 7, Dali successfully visited the working 24000BPH hot bottling production line under the cooperation of Ji’nan Pulisi, and showed satisfaction with the stable operation. One week Later, Dali formally invited Tech-Long for introduction of the whole 24000BPH hot bottling project, which meant that Tech-Long had successfully stepped into the final competition phase against other outstanding equipment suppliers both home and abroad.

丰富经验，完善解决方案

Enrich experiences, perfect settlement plans

这个项目的对手除了国内的一流供应商，还有在行业内最优秀的跨国公司，竞争异常激烈。随着达利对达意隆公司成立的背景、经营理念、各阶段的产品转型、扩展，今后的发展战略以及饮料包装行业的发展趋势等情况的逐步了解，达利对达意隆的信心也不断稳固。达意隆项目负责人员在考察了达利总部新厂房后连夜通宵设计设备布置，双方反复探讨前处理工艺、设备布局、自动化程度、工艺可靠性、辅助设备布局合理性，物料和人员流动各个环节，更重要的是各单机设备与其它厂家的细化比较。在饮料工艺处理上结合了达利经营品种多样性的要求，参考了目前国内、国际市场上多种畅销饮料的工艺，设计能生产多种产品且经济实用的解决方案，真正从客户利益出发，协助客户创造一流、高效、灵活的生产条件。

Beside big suppliers abroad, the competitors of this project include the excellent transnational companies in the industry which make the competition extremely violent. Along with the Dali’s further understanding of the founding background, management theory, product transition, expansion in every stage, the future developing strategy etc., Dali’s confidence towards Tech-Long is more and more stable. After investigating the new workshop, the project responsible persons of Tech-Long stayed up the whole night to design the distribution of equipments, and discussed the pretreatment equipments, equipment distribution, degree of automatization, reliability of technology, rationality of distribution of auxiliary equipments, materials, personnel flow etc, and finally the deep comparison of the equipments with those

of other suppliers. In the aspect of drinks treatment technology, we design an economic and practical solution considering the various requirements of Dali, consulting the drinks technology of popular drinks in the modern civil and international markets. Starting from the interest of customers, we assist our customers to build a first-class, efficient and flexible production condition.

5月下旬，达利高层再次对达意隆生产基地全面严格的审核，合作的步履再次加速。从2006年5月12日到6月15日的一个多月里达意隆回复达利的110多封邮件，邮件内容覆盖面之广，包含设计原理、依据，制造流程，材料资质，加工精度，加工设备，安全隐患的防范，生产能效，投资回报等等。负责该项目的成员经常加班到3点多，甚至有7~8次通宵达旦，夜以继日的工作，达意隆人扎实的工作态度，精湛的专业技术，迅速敏捷的反应让达利折服，最终把6条24000BPH热灌装整线的项目一次投交给本土民族企业。达意隆也再一次证了明了自己丰富的饮料设备制造经验已经完全可以达到世界先进水平。而达意隆作为整厂解决方案供应商，能为达利提供更多的附加值，也是达利选择达意隆的重要原因之一。

In late May, the seniors of Dali conducted an all-round and strict verification to the production base of Tech-Long. The cooperation speeded up again. The 110 E-mails between Tech-Long and Dali during the one-month time from May 12 2006 to June 15 2006, covers broad aspects ranging from design principle, foundation, manufacture flow, material quality, process precision, process equipments precautions against hidden danger, manufacture efficiency, to investment repayment etc. The members of such project always work overtime to even 3 a.m. for more than 7 to 8 times. The sturdy working attitude, professional technology and speedy reaction satisfy Dali and finally hand over the project of 6 sets hot bottling whole production lines (24000BPH) to a civil national enterprise at one time. And Tech-Long proves again that its production level of drink equipments has reached international standard, with abundant experiences. Meanwhile, Tech-Long as the supplier of whole solution plan, can provide Dali with more added value which is a very important reason why Tech-Long is chosen.

与用户共同成长

Develop together with customers

2006年6月15日，达意隆和达利正式签订了

高达1.2亿的设备订单，随后达意隆根据方案的具体实施组建了达利项目组。正式合同签订后，接踵而来的工作还是很琐碎和繁重，准确及时的提供相关数据、图纸协助配合达利，跟进督促整个项目，按时按质完成。达利集团许董事长在商务洽谈时曾说过：“达利饮料项目对于达意隆来说是一把双刃剑”，虽然我们有越南、生力等热灌装整厂项目经验，但与国际饮料设备制造巨头企业相比，在整合资源、优化配置、制造管理、现场经验上都存在一定的差距，达利项目对达意隆来说既是机会更是考验，达意隆人将继续用坚定的技术创新、服务用户理念锻造强大的核心竞争力，稳步成长！

On June 15 2006, Tech-Long formally signed the equipment contract valued at 120 million yuan, and Tech-Long organized the Dali project teams according to the specific implementation. Followed by the formal signature of contract is a great deal of trifle and heavy work, including accurate and timely offering of relevant datum, and drawings to assist and cooperate with Dali in the urge of the completion of the whole project on schedule and quality. President of Dali Group once said in a commercial meeting: “the drinks project of Dali means a two-edged sword to Tech-Long”, although we have the experiences of whole hot bottling project of Viet Nam and Green, we still have a distance from the international giant enterprise of equipment manufacture in resource conformity, optimized dispose, manufacture management and spot experience. This project means a test to Tech-Long, and we will keep on developing steadily with the core forged by technology innovation and serve users!

Text and pictures by:Tech-long Haizhou Wu/Mukee

达利项目设备清单

List of equipment for Dali

前处理系统 Pretreatment System	-- CIP系统 CIP System	6 sets
	-- 热水系统 Hot Water System	6 sets
	-- 脱氧水系统 Deoxidated Water System	6 sets
	-- 饮料调配、贮藏系统 Drink-mixing & Storage System 14T/H UHT	6 sets 6 sets
水处理系统 Water Treatment System	-- RO水系统 RO Water System	6 sets
	-- 软化水系统 Soft Water System	6 sets
吹瓶机系统 Bottle blow Molding Machine System	-- RJM14全自动旋转式吹瓶机 RJM14 Fully-automatic Blow Molding Machine	12 sets
灌装系统 Filling Machine	-- 热灌装线 Hot Filling Line	6 sets
	-- 风送系统 Air conveyor	6 sets
输送系统 Conveyor System	-- 实瓶输送系统 Bottle Conveyor System	6 sets
	-- 箱输送系统 Case Conveyor System	6 sets
后包装系统 Packing Machine	-- 套标机 Labeller(Roll)	6 sets
	-- 纸箱裹包机 Wraparound	6 sets
	-- 封箱机 Case Sealer	6 sets
	-- 纸箱成形机 Carton Former	6 sets
	-- 机器人装箱机 Robot packer	6 sets
工程服务 Engineering service	-- 工程规划 Engineering Plan	
	-- 安装调试 Installation and Test	
	-- 备品备件 Choice & Spare Parts	
	-- 操作、维修培训 Operation & Maintenance Training	
	

Data supplied by: Tech-long Guan Ming

华龙品牌的成功升级

今麦郎饮品

达意隆与今麦郎进入实质性合作阶段

Successful Upgrading of Hualong Brand
Jinmailang Beverage

Tech-Long and Jinmailang step onto the
stage of actual cooperation

今麦郎食品有限公司是一家集生产、销售、科研开发于一体的现代化综合食品企业，公司凭借一流的方便食品生产水平和“今麦郎”、“华龙”等知名品牌而享誉华夏。

Jinmailang Foods Co., Ltd. is a modern and comprehensive foods enterprise with the combination of production, sale and technical development, and is famous in China with top instant foods production and such famous brands as “Jinmailang” and “Hualong”.

公司现员工总数3万人，总资产达50亿元，分设制面、面粉、餐饮、饮品、综合五大事业部，下设28个分公司。在全国建有河北隆尧、邯郸、正定、徐水、秦皇岛、黑龙江哈尔滨、吉林长春、辽宁沈阳、山东兖州、河南许昌、汤阴、湖南平江、安徽天长、陕西扶风、浙江嘉兴、广东东莞、四川成都、北京密云等18个生产基地，形成方便面年产能120亿份，年转化小麦180万吨的庞大生产规模，这样的转化量相当于60多个县的农民的商品粮，制面、制粉规模跃居世界前列。

Currently, the company has 30,000 employees with the total assets reaching RMB5 billion with five divisions including Noodles Producing, Flour, Foods, Beverage and Comprehension with 28 branches. The company has set up 18 produce bases in China: Longyao, Handan, Zhengding, Xushui, Qinghuangdao in Hebei, Harbin in Heilongjiang, Changchun in Jilin, Shenyang in Liaoning, Yanzhou in Shandong, Xuchang, Tangyin in Henan, Pingjiang in Hunan, Tianchang in Anhui, Fufeng in Shaanxi, Jiangxing in Zhejiang, Dongguan in Guangdong, Chengdu in Sichuan and Miyun in Beijing, and has formed the big production scale with the annual output capacity in instant noodles 12 billion packages, and annual wheat transferring capacity reaches 1.8 billion tons, which reaches the size of the commodity rice for over 60 counties, and the noodles and flour making ranks leading in the world.



从1994年建厂到2003年年底的十年间，今麦郎集团在燕赵大地迅速崛起，集团规模综合实力扩张了1000多倍，创造了令人惊讶的“华龙速度”并被经济界称之为“华龙现象”。2004年华龙与日本日清株式会社强强联合组建了华龙日清食品有限公司，2006年，华龙日清与统一企业共同投资创建了今麦郎饮品（北京）有限公司，目前在国内同时筹建7个工厂，并成功在市场上推出冰红茶、绿茶、桂花清茶、矿物质水等系列饮品，今麦郎预期将在国内建立22个分厂，进入水市场前三甲地位。

During 10 years since the establishment in 1994 to late 2003, Jinmailang Group has achieved fast development in Shanxi, and the size and comprehensive strength of the group expanded more than 1,000 times, which created surprised “Hualong Speed” and was named as “Hualong Phenomenon” in world economy industry. In 2004, Hualong and Japan Nissin Co., Ltd. set up Hualong Nissin Foods Co., Ltd., in 2006, Hualong Nissin and Uni-President set up Jinmailang Beverage (Beijing) Co., Ltd., currently, Jinmailang is planning to construct 7 factories at home, and has successfully promoted such beverages as ice black tea, green tea, osmanthus clear tea and mineral water, Jinmailang is estimated to set up 22 factories at home and rank in the top 3 in water market.

由于今麦郎饮品是一家成立不久的饮料企业，初期的技术人员之前接触的大部分是来自先进国家的进口设备，而技术人员本身的专业性又很强，对设备的技术与品质要求很高，为了让今麦郎更好地了解达意隆，2006年7月期间，达意隆相关负责人曾多次拜访今麦郎，并与今麦郎技术人员进行技术交流。

Since Jinmailang Beverage was just set up, and technicians are only familiar with imported equipments, however, technicians have high requirements on the technology and quality of the equipments, in order to make Jinmailang realize Tech-Long better, in July, 2006, relative chargers of Tech-Long visited Jinmailang and had deep technical exchange with Jinmailang technicians for several times.

2006年8月，今麦郎总经理和成安先生一行到达意隆参观考察，实地了解了达意隆的企业规模及生产实力，在考察期间，达意隆得到了今麦郎良好的高度认可；2006年9月，双方开始讨论矿物质水的生产工艺及解决方案，并分别与今麦郎饮品长春有限公司、今麦郎饮品安徽天长有限公司两个新厂签定了矿物质水的水处理设备订单，自此，达意隆与今麦郎进入了实质性的合作阶段。

In August, 2006, General Manager of Jinmailang Mr. He Cheng'an visited Tech-Long and realized the scale and production strength of Tech-Long and presented highly praise to our company; in September, 2006, both parties started to discuss the production technique and solution for mineral water, and signed the order of mineral water treatment equipments with Jinmailang Beverage Changchun Co., Ltd. and Jinmailang Beverage Anhui Tianchang Co., Ltd. , since then on, Tech-Long and Jinmailang stepped onto the phase of actual cooperation.

Text and pictures by:Tech-long Ning Wenbin/Mukee

银鹭集团， 营造战略发展的合理布局

--达意隆与银鹭集团的合作

Yinlu Group, Construct the reasonable layout of strategic development Cooperation Between Tech-Long and Yinlu Group

1985年，银鹭集团的前身兴华罐头成立，经过15年的发展，2000年6月，与台商合资成立厦门银鹭食品有限公司；2000年11月，组建厦门银鹭集团，2003年4月，投资3.2亿引进居当今世界最先进水平的PET无菌冷灌装生产线，为银鹭迎来了新的发展机遇。银鹭集团技术力量雄厚，生产设备先进，拥有食品饮料进口现代化生产线30多条（套），具有较强的规模化生产能力，年可生产各类食品饮料罐头80万吨。
In 1985, the former name of Yinlu Group --- Xinghua Can Factory was set up, after 15 years of development, in June, 2000, the company set up Xiamen Yinlu Foods Co., Ltd. with Taiwan investment; in November, Xiamen Yinlu Group was set up, in April, 2003, the group invested RMB320 million to introduce most advanced PET aseptic cold filling product line, which greeted the new opportunity for the development of Yinlu. Yinlu Group features strong technical strength, advanced production equipments and possesses over 30 foods and beverage product lines with outstanding mass production ability, and the annual output capacity of various foods, beverage and cans reaches 800,000 tons.

银鹭高科技园区是厦门七大工业园区之一，园区占地面积80万平方米，建筑面积近30万平方米，是全国最大的罐头、饮料生产基地之一，目前已建成与食品饮料生产相配套的具有同行领先水平现代化生产线、仓储、物流配送、制罐、彩印、纸箱等上下游工业经济产业链。Yinlu Technology Park is one of the top 7 industry parks in Xiamen. Occupying an area of 800,000m2 with floor area reaching 300,000m2, the park is one of the biggest produce bases for can and beverage in China. Currently, the company has constructed the leading and modern product lines, warehousing, logistic, can making, color printing and carton industry chain for foods and beverage production.

在发展与巩固以食品饮料生产为主业的同时，集团实施二次创业，进军电子科技、房地产开发等领域，适度介入资本市场，多元化发展，着力打造“百年银鹭”。银鹭积极实施“人才、科技、名牌”三大战略，内强管理，外拓市场，并成功跻身中国民营企业500强，中国最具品牌价值500强。
When developing and reinforcing the main business of foods and beverage production, the group started the secondary development and involved into electronic technology, real estate development and capital market for multiple development and developing the “Eternal Operation”. Yinlu fulfills the strategy of “talent, technology and famous brand”, and enhances the management inside and develops the market outside, and has ranked in Top 500 Private Enterprises in China and is awarded as Top 500 Enterprises with Highest Brand Value in China.



正在兴建的“湖北汉川银鹭科技工业园区”
Constructing “Hubei Hanchuan Yinlu
Technology Park”

早在2003年，银鹭集团就斥巨资3亿元人民币，引进了一条“无菌冷灌装”进口生产线，这条生产线代表着饮料业的最先进水平。这条生产线的顺利投产也让世界对中国民企刮目相看——中国的民营企业也有世界级的科技、世界级的品质！

As early in 2003, Yinlu Group introduced one “aseptic cold filling product line” with the investment reaching RMB300 million, which shows the most advanced technology in beverage industry. And the production of this product line also makes the world look at private enterprises with new eyes --- Chinese private enterprises also have world class technology and world class quality!

随着达意隆吹瓶、灌装生产设备技术与品质的不断成熟，银鹭集团决定实地考察达意隆的生产实力、规模，在充分了解到达意隆的设备已经完全可以同国外同类型先进的产品相媲美后，银鹭集团对达意隆设备和服务充满信心，产生了与达意隆合作的意向。

As the developing of the technology and quality of Tech-Long bottle blow molding, filling equipments, Yinlu Group decided to investigate the production strength and scale of Tech-Long on site, after realizing that Tech-Long equipments can completely substitute imported advanced products, Yinlu Group has presented their confidence to Tech-Long products and service with the intent of cooperating with Tech-Long.

2006年10月和12月期间，银鹭集团分别向达意隆定购了2台RJM14全自动吹瓶机，2套全自动36000BPH瓶装水生产线，这些设备将应用于银鹭集团正在兴建的“湖北汉川银鹭科技工业园区”内。湖北汉川银鹭科技工业园是银鹭在省外的第一个生产基地，银鹭未来的发展是在全国各地建立多个生产基地，使产业结构更趋合理化。未来几年，银鹭将加快对外投资发展步伐，选择适宜时机与项目在全国进行布局。

During October-December, 2006, Yinlu Group ordered two RJM14 fully automatic bottle blow molding machines and two sets of fully automatic 36000BPH bottled water product line from Tech-Long which will be applied for the constructing “Hubei Hanchuan Yinlu Technology Park” which is the first produce base of Yinlu in other provinces. And Yinlu has presented the plan to set up several product bases throughout China for achieving reasonable industry structure. In the coming ears, Yinlu will accelerate the step to foreign investment, and fulfill national wide layout with suitable opportunity and projects.

*Text by:Tech-long Zheng Qiongqiu/Mukee
Pictures by:Tech-long Mukee*

银鹭纯净水及碳酸饮料产品
Yinlu Pure water and Cabonated Soft Drink



鼎湖山泉

来自自然资源保护区的优质山泉水

Dinghu Spring


Quality spring water from natural reserve

鼎湖山泉水源取自联合国自然资源保护区—广东省风景优美的肇庆市鼎湖山，飘雪鼎湖山泉有限公司总部就设在鼎湖山脚下，面积4万平方米。

Water of Dinghu Spring is from the Natural Reserve of the United Nations --- beautiful Dinghu Mountain in ZHaoqing of Guangdong Province, and the Head Office of Piaoxue Dinghu Spring Co., Ltd. is located at the foot of Dinghu Mountain with the area reaching 40,000m2.

工厂规模及生产能力已达至国内同行业前列，飘雪鼎湖山泉公司拥有十年精湛制水技术，是中国《瓶装饮用水纯净水》国家标准及广东省《瓶装饮用天然净水》地方标准起草成员之一。目前飘雪鼎湖山泉公司拥有“鼎湖山泉”、“飘雪”、“天然大氧吧”三个饮用水品牌。而这些优质的饮水用全部由天然山泉水从山中泉眼自然涌出，水质天然，入口甘甜，含有对人体有益的矿物质和微量元素，适合长期饮用。

The factory scale and production capacity have reached leading at home. Piaoxue Dinghu Spring Co., Ltd. features advanced technology in water producing for 10 years, and is one of the members of constituting the state standard of “Bottled Drink Purified Water” and Guangdong Province “Bottled Natural Drink Purified Water”. At present, Piaoxue Dinghu Spring Co., Ltd. possesses three drink water brands: “Dinghu Spring”, “Piaoxue” and “Natural Big Oxygen Bar”. And above quality drink water is from the natural well with natural quality and sweet taste, and contains beneficial minerals and microelements, and is applicable for drinking for a long period.



山泉水是有别于矿泉水与纯净水的水种，长期饮用有利于身体健康。天然山泉水必须具备两大特点：水源来自环境清幽的大自然，水源地附近的地质要达到一定要求，水体应卫生干净；此外，水源不受任何工业污染，而且水源必须是自然涌出的泉流，水质还应具有利于健康的微量元素，处理工艺符合“长期饮用安全”的要求。鼎湖山泉的水源地位于属于联合国自然保护区之一的鼎湖山，其水源的纯正毋庸置疑，目前鼎湖山泉依然以每年60%的增长速度发展，其销售网络如今已覆盖全省，并以每年10%的速度不断扩展。为了保证产品100%的合格率，鼎湖山泉投入了大量的资金引入先进的生产设备，配置空气净化系统，使灌装车间空气洁净度局部达到100级(饮料食品生产过程中空气净化标准的最高等级)。

Spring water is different from mineral water and purified water and is beneficial for health after persistent drink. Natural spring water must have two properties: water source is from the nature, the geology near the water source area shall reach certain requirement, the water shall be sanitary and clean; additionally, water source shall not be polluted from natural spring, and water shall contain beneficial microelements, the treatment technique shall meet the requirements of “safe for drinking”. The water source of Dinghu Spring is located in Dinghu Mountain which is one of the Nature Reserve of United Nations. Currently Dinghu Spring is developing at the annual increase of 60%, and the sales network covers Guangdong Provicne, and is expanding at the speed of 10% each year. In order to assure 100% qualification rate, Dinghu Spring has invested a lot in introducing advanced production equipments and air purifying system, therefore, the air cleanness in the filling workshop reaches Class 100 (highest class for air purifying standard for beverage and foods production).

白

2000年飘雪鼎湖山泉公司和达意隆第一次合作定购一套450桶/小时五加仑设备之后，又于2002年定购了当时达意隆生产的国内第一台900桶/小时旋转式五加仑生产线和一台15000瓶/小时瓶装水生产线，并于当年推出了“鼎湖山泉”品牌山泉水，凭借清甜的口感赢得了广大消费者的赞赏和青睐。肇庆飘雪鼎湖山泉公司抓住这个利好机会扩大产能，于2004年定购达意隆2000桶/小时五加仑生产线，并定购了达意隆第一台五加仑机器人自动码垛机，在生产过程中节约了大量的人力，在达意隆的配合下，把原有900桶/小时的生产线逐步实现自动化，在不增加人力的情况下由2002年日产1万多桶水提高到2006年日产5万桶水的生产能力。

Since the first cooperation between Piaoxue Dinghu Spring Co., Ltd. and Tech-Long on ordering one set of 450 barrels/hour 5 gallon equipment in year 2000, Dinghu Spring ordered the first 900 barrels/hour revolving 5 gallon product line and one 15000 bottles/hour bottled water product line which is the first at home in 2002, and promoted the “Dinghu Spring” brand spring water which has earned high praise from consumers with sweet and clear taste. Zhaoqing Piaoxue Dinghu Spring Co., Ltd. grasped this opportunity to expand the production capacity, and ordered Tech-Long 2000 barrels/hour 5 gallon product line and the first 5 gallon robot automatic palletizer from Tech-Long, which have powerfully saved labor during production in 2004. With the support of Tech-Long, the original 900 barrels/hour product line was gradually upgraded to automatic operation, and the production capacity increases from 10,000 barrels in 2002 to 50,000 barrels in 2006 without increasing labor.

飘雪鼎湖山泉水公司为了保证实现2007年日产销8万桶的计划目标，已于2006年8月订购了达意隆1500桶/小时五加仑生产线及2500桶/小时机器人自动码垛机，提前做好了迎接2007年生产旺季的到来。

In order to achieve the target of daily output reaching 80,000 barrels in 2007, Piaoxue Dinghu Spring Water Co., Ltd. ordered Tech-Long 1500 barrels/hour 5 gallon product line and 2500 barrels/hour robot palletizer in August, 2006 for greeting the flourish season in 2007 in advance.

Text by:Tech-long Zheng Qiongqiu/Mukee

Pictures by:Tech-long Zheng Qiongqiu



以成熟睿智的思维拓展全球市场
Develop the global market with mature and sagacious thought

2006中国国际啤酒、饮料制造技术及设备展

—达意隆整线设备现场连线生产，成为展会最大亮点

The 7th International Brew & Beverage Processing Technology Equipment Exhibition for China,

The operation of Tech-Long complete equipment line became the highlight of the Exhibition

达意隆国际市场稳中求进，成为最具国际竞争力的民族品牌

Tech-Long is developing the international market stably, and has become the most competitive national brand

澳大利亚可口可乐订购第一条达意隆PET热灌装线—可口可乐与达意隆的深层次合作

Australia Coca-Cola Amatil ordered the first Tech-Long PET hot filling line

—Close Cooperation Between Coca Cola and Tech-Long

第一品牌的力量—达意隆与Hana Water的成功合作

Strength of the First Brand

—Successful Cooperation Between Tech-Long and Hana Water

SANETA，来自伊斯坦布尔山区珍贵的矿泉水—土耳其SANETA选用达意隆4条整线

SANETA, precious mineral water from Istanbul mountainous area

—Turkey SANETA selected 4 whole lines from Tech-Long

苏丹之旅

Ture to Sudan



CHINA BREW 2006 & CHINA BEVERAGE 2006

The 7th International Brew & Beverage Processing
Technology Equipment Exhibition for China

2006 中国国际啤酒、饮料制造技术及设备展览会

中国国际啤酒、饮料制造技术及设备展览会自1995年首办以来，一直被誉为国际啤酒、饮料及相关行业两年一度的超级盛会，规模傲视同侪。展览会汇集最新的行业资讯，历届云集世界顶尖供应商，吸引中国各省、市以及世界各地的优质买家。在2004年，展览会云集了500家国际顶尖供应商，吸引了46000多名中外对口买家，再次成为国际的焦点所在。

Since the International Brew & Beverage Processing Technology and Equipment Exhibition for China was first held in 1995, it has always been considered as a grand biennial fair of international beer, beverage and related industries with the largest scale among the same type of fairs. The Exhibition gathers latest industry information and every session attracts the participation of top world suppliers and excellent purchasers from China and all other parts of the world. In 2004, the participants included 500 top international suppliers and over 46000 fitting purchasers from at home and abroad so that it became world focus again.

2006年，由中国轻机械总公司和工商展览有限公司共同主办的展会踏入第七届，本届展会集合了全球更新颖的技术及设备，面向充满活力的亚洲解市场，充份发挥展览会作为世界啤酒、饮料行业一站式交流平台的独特位置。给了参展商在有潜力的买家面前示范专长、加强品牌形象及巩固市场地位、与客户面对面接触、建立紧密联系、达成交易的有效平台。

In 2006, the 7th International Brew & Beverage Processing Technology and Equipment Exhibition for China co-sponsored by China National Light Industrial Machinery Corporation and Business & Industrial Trade Fairs Ltd. Showing global update technologies and equipments, was oriented at vivid Asian market and gave full play to the exhibition as one-stop exchange platform of world beer and beverage industry. It offered exhibitors an effective platform to demonstrate their advantages before potential purchasers, strengthen their brand image, consolidate their market status, contact customers face to face, establish close connection and conclude the contract.

达意隆整线设备现场连线生产 成为展会最大亮点

Tech-Long whole line production on site became the brightest spot in the exhibition

参加国际性商业展览是企业展示产品的最直接途径，也是企业与客户商谈的绝佳机会。达意隆把本届展会作为2006年公司的重点工作之一，以啤酒、饮料整体解决方案的庞大阵容出席这一专业性、世界级的行业盛会，现场进行整线生产演示，并成功签下多张订单，成为整个行业的焦点。

Participating in international commercial exhibition is the most direct way to show products and also an excellent chance to negotiate with customers. Tech-Long regarded the participation in this exhibition as one of the work emphases in 2006, showed whole solution for beer and beverage in this professional and world-level Exhibition, demonstrated the whole production line and signed a few orders, which became focus of the whole industry.

本次参展是一项系统工程，从展前准备、展览期间的应对至展后的信息分析和跟进，都与参展的效果息息相关，需要考虑的问题很多，为确保参展工作的顺利进行，合理优化公司人力、财力、物力等资源，达意隆对展前、展中和展后的相关事宜都进行了周密部署，在各事业部及职能部门极力配合下，整个参展规划都如期进行，依序达到预期目标，为达意隆的历史又书写了绚烂的一页。

This participation is a systematic project. The preparations before the Exhibition, negotiations in course of it and the follow-up and analysis of information all had a close relationship with the result of this participation, so many issues should be taken into account. To ensure the smooth participation and rationally optimize company manpower, financial resources, material resources, etc., Tech-Long thoroughly disposed relevant matters before, amidst and after the exhibition. Cooperated by every operating divisions and functional departments, Tech-Long participated in the total exhibition as scheduled and reached the expected goal, which wrote a glorious page for our history.

展会全程直击 *Straight Report for Whole Process of The Fair* >>>

一、展前 Before exhibition

6个月前 确定展位

Confirm the exhibition booth,6 months before

根据展览的规模、时间、专业程度、目标市场等方面，决定参加这次行业中规模盛大的展会。选择合适的展位是参展计划中比较重要的一部分，达意隆考虑到参观人群的走向以及视线方向等方面因素，决定选择展馆中位置最为显著的5号馆511展位，参展面积为600平方米，成为这届展会中参展面积最大的参展商。

According to the scale, time, professional extent and target market, etc., Tech-Long had determined to participate in this grand Exhibition of the industry. Choosing a suitable exhibition location is an important part of participation plan in the exhibition. Considering the walking direction and sight direction of visitors and other factors, Tech-Long finally choose Booth No.511,Hall No.5,the most remarkable booth in this exhibition hall. The area of the

booth was 600 square meters, the biggest area of all booths.

5个月前, 设计展台形象

Design the image of the booth,5 months before

以达意隆的企业形象及文化理念为基础，对搭建展台的材料、结构、造型等进行创新设计，并确定展位设计方案，展台定位要求能充分突出达意隆专业的形象，并具有十足的现代感。

Based on corporate image and culture theory, Tech-Long had made a creative design of the materials, structure and model of the booth and decided on the design program of the booth. The booth stand had been positioned to fully give prominence to the professional image of Tech-Long and possess a sheer modern sense.

3个月前, 确定参展设备及展品，对展会进行推广

Decide on equipment and exhibits to be shown in the exhibition and publicize the exhibition,3 months before

确定参展设备，购置展具以及选择经验丰富的展台搭建公司确定搭建方案；准备展示样品、用具及宣传资料；加大宣传力度，进行展会及参展设备推广活动；对所有参展人员进行技术知识、礼仪方面的培训。

Decided on the exhibition equipment, purchased exhibition tools and chosen experienced stand putting-up company to help confirm putting-up program; prepared samples to be shown, tools and propaganda materials; strengthened publicity on the exhibition and the equipment to be shown; trained all participators about technology and etiquette.

4天前, 参展物品运输，首批工程人员抵达展馆

Transported exhibition materials and sent first lot of engineers,4 days before

对参展物品进行运输，第一批工程人员抵达北京，进行设备进馆、安装、调试的工作。

Had the materials to be shown transported and the first group of engineers had reached Beijing to move the equipment into the exhibition hall, install and debug the equipment.

二、设备进馆及安装调试

Have the equiment moved into the hall,
installed and debugged

9月1日晚，各参展设备及物品抵达北京国际会展中心，达意隆一共有六台设备要进行现场演示，距离正式开展只有3天时间，参展设备要在这3天时间里全部安装调试完毕，时间是相当紧迫的，这对于工程技术人员来讲，是一个严峻的考验。为了整个参展计划的顺利进行，所有人员都发扬了团队合作精神，克服了时间紧、任务多等困难。

On the night of September 1, all equipment and materials had arrived at Beijing International Exhibition Center. 6 sets of Tech-Long equipment would be demonstrated on the spot in the exhibition and only 3 days were left before the exhibition, so all the exhibition equipment must be installed and debugged in 3 days. Time was rather pressing, which was a severe test to engineers and technicians. For the smooth implementation of exhibition plan, all personnel had developed the spirit



设备进馆

Equipments launch the Hall



设备调试

Equipment Test



展台搭建

Booth Construction



达意隆的参展设备，机器人码垛机、注塑机及RJM14吹瓶机
Tech-Long exhibited the robot palletizer, plastics moulding machine and RJM14 bottle blow molding machine in the exhibition



中国饮料工业协会秘书长赵亚莉（右一）一行莅临达意隆展位
CBIA secretary-general Zhao Yali and her delegation presented at Tech-long's booth

参展设备

- 新型高速吹瓶机CPXX22;
- 注塑机 U360
- 全自动旋转式高速吹瓶机RJM14
- 含汽灌装机 DQS18-80*80*18与RJM14高速吹瓶机进行连线并在现场生产演示
- 纸箱裹包机DBZ-CB45
- 机器人码垛机HRT01与纸箱裹包连线进行现场啤酒后段包装演示

of teamwork and overcome difficulties with urgent time and too many tasks.

9月2日下午2点左右，所有的参展设备全部吊装完毕，与吹瓶机配备的高压空压机、冷干机、过滤器也一一到位，展台搭建也在紧张的进行中。16: 20分左右，所有的参展设备开始安装，负责电气的工程师开始进行电气的调试工作，确保设备的顺利运行。compressors, cool drying machines and filter matching with blowing molding machines had been put in place and the stand had tensely been being put up. At about 16:20, all exhibition equipment began being installed and the engineers responsible for electricity had started to debug the power to ensure the smooth operation of the equipment.

9月3日上午10: 30，全自动旋转式高速吹瓶机RJM14与灌装机连线的传送风道调整完毕，纸箱裹包机连线机器人码垛机后段包装的安装也已经完成，整个布展工作已略显成效。12: 00，达意隆的设备开始试运行运转。At 10:30 a.m. of September 3, full-automatic high-speed revolving blow-ing molding machine RJM14 had been connected with filling machine for by air conveyor and packing machine had been connected with palletizer for the packing in the later stage. Thus all the disposition had basically finished. At 12:00,the equipment of Tech-Long had begun preliminary operation.

在展览筹备期间，张颂明董事长于9月3日晚上7点专程赶到北京国际展览中心，体现了公司领导对此次展览的高度重视，以及对员工的关心和支持。张董事长首先对公司的布展情况做了全面细致的了解，之后，他对达意隆员工上下一心，通力合作的团队精神，勇于吃苦、顽强拼搏的奉献精神，和耐心细致的工作作风表示肯定。张董表示，团结协作、通力配合是搞好展览的关键，大家既要分工明确，又要积极配合，要共同面对困难，共同解决困难；在展览各项工作非常紧张的情况下，不管份内份外，只要需要，就要毫不犹豫地提供支持和援助。最后，他强调这次展览意义深远，所以全体人员更要确保设备在展览会上以完美的姿态出现在观众面前。

In course of preparations for the exhibition, Mr. Zhang, chairman of the board of, had paid a special visit to Beijing International Exhibition Center at 7 o'clock in evening of September 3, which showed the leader's emphasis on this exhibition and his care for and support to his staff. Chairman Zhang had first known of the exhibits arrangement carefully and then praised Tech-Long staff for the spirit of united and cooperative teamwork, the spirit of hard and tenacious devotion and patient and careful style of work. Chairman Zhang said, unity, teamwork and wholehearted cooperation were the crux to doing the exhibition well, so everybody should both divide the work clearly and cooperate actively to face and solve the difficulty together. Under the tense exhibition preparations, everyone should not hesitate to offer a hand and support if necessary whether it's your duty or not. Finally, he emphasized this exhibition was far-reaching , so all staff should guarantee the equipment would appear before

Equipment to have been shown in the exhibition

- New high-speed blowing molding machine CPXX22;
- Injection machine U360
- Fully automatic highspped blowing moulding machine RJM14
- CSD filling machine DQS18-80*80*18 and RJM14 high-speed blowing moulding machine
- Wrap around machine DBZ-CB45
- Palletizer robot HRT01 Had been connected with packing machine to demonstrate hepacking of beer

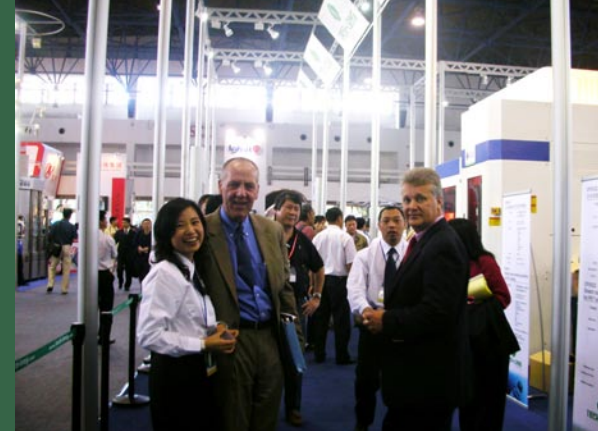
visitors perfectly in the exhibition.

达意隆总裁及销售总监等领导也连续多天在现场指导工作，从展览的总体规划到实施细节逐一落实。President, sales director and other leaders of Tech-Long had guided the work from the overall plan and the detailed implementation for days.

9月4日，布展工作进入最后一天，达意隆的所有设备都已调试完成：新型CPXX22吹瓶机连续高速运转；RJM14不间断吹瓶，成瓶合格率达100%，生产效率极高，单模产量可以达到1500瓶/模小时；纸箱裹包机与机器人码垛机连线进行珠江啤酒后段包装演示。达意隆的展台搭建工作也已全部完成，展台主体结构全部采用铝合金型材，具有强烈的金属质感，新颖别致、富有时代气息，突出了达意隆专业、年轻而富有朝气的企业形象；达意隆的工程师们在设备安装调试阶段一直坚持高度的责任感，逐一检查参展设备的每一个细节，并做了多种突发状况的预警及解决方案，确保了展会期间设备运转的稳定性及展会的顺利进行，真正做到了未雨绸缪。On September 4, the last day to arrange exhibits, all Tech-Long equipments were finished with installing and debugging: new CPXX22 blowing molding machine ran with great speed, RJM14 blew continually and the bottling qualification rate reached 100% with extremely high production efficiency and a single mould output reaching 1500 bottles/mould hour; packing machine was connected with palletizer to demonstrate beer packaging during the later stage. The putting-up of Tech-Long stand was totally completed. The main body of the stand all made of aluminum alloy sections had strong metal feel and novel, unique and up-to-date flavor, giving prominence to the professional, young and vigorous corporate image of Tech-Long; the engineers of Tech-Long always kept high sense of duty to scrutinize every detail of exhibition equipment in course of installation and debugging and prepared precautions and solutions for various emergencies to guarantee the stable and smooth operation of equipment in the exhibition.

三、以全新、专业的姿态亮相展会 Appear in the exhibition with a brand-new professional manner

9月5日，在经过五天紧张筹备之后，亚洲最大规模的饮料包装行业的专业展会正式开幕，达意隆也以全新、专业、现代感十足的形象在展现在观众眼前。On September 5, after 5 days' intense preparations, Tech-Long appeared before visitors with an brandnew and professional image full of modern sense when the largest professional exhibition for beverage and packaging industry in Asia formally opened.



来自美国百事可乐公司的全球采购及资本和运营副总裁Mr. James J Costa(左二)一行，对达意隆参展设备表现出浓厚的兴趣。
Mr. James J Costa(Vice President Global Procurement Capital. MRO PEPSICO)(2nd left) showed strong interest in Tech-Long exhibition equipment



燕京集团董事长李福成（左）莅临达意隆展位，向达意隆董事长张颂明了解设备状况。
The Chariman Li Fucheng (left) of YanJing Group visited Tech-Long booth and was highly interested in our equipment.



达意隆董事长张颂明与深圳景田实业有限公司周总现场签定一条整线订单，订单包括一台CPXX22全自动吹瓶机、一台DS15-72*60*15灌装设备，一台机器人，合同金额约人民币800万元。
Zhang Songming, chairman of Tech-long signed an order of a whole line with Mr.Zhou president of Shenzhen Dainti Indrstry Co.,Ltd,including one set of CPXX22 blowing molding machine,one set of DS15-72*60*15 filling equipment and a robot with the total contract value of about 8 million RMB.

达意隆展出的整线设备涵盖了从注坯-吹瓶-灌装-二次包装-机器人码垛的全部工作流程，而设备良好、稳定的运行吸引了来自于全球各地专业观众的参观、洽谈业务及技术交流，并对达意隆的现场演示生产的全自动旋转式吹瓶机RJM14/CPXX22，灌装机、纸箱裹包机以及机器人码垛机表现出了浓厚的兴趣，现场呈现出一派生气勃勃的景象。达意隆负责业务洽谈的人员在与客户洽谈中，详细记录了每一个到访客户的情况及要求，对客户的一些特殊参数需求，及时做出合理、准确的答复。每天展览结束后，都将潜在商机及客户资料进行整理、分析，以便及时处理及回应。

The shown whole line equipment of Tech-Long covered the whole workflow of injection-blowing molding-second packaging-palletizing and the excellent and stable operation of the equipment attracted professional visitors from all parts of the world to visit, business negotiation and technology exchange. They showed great interest in fully automatic blowing moulding machine RJM14/CPXX22, filling machine, packing machine and palletizer which were used to demonstrate production on the spot by Tech-Long. Thus the scene was vigorous. When negotiating with customers, Tech-Long's staff responsible for business negotiation kept a detailed record of every visitor's conditions and requirements and made a reasonable, timely and accurate response to customers' requirements for some special parameter. After the exhibition was over every day, they arranged and analyzed potential business opportunity and customer's materials so that they could make a timely disposal and response.

在5天的参展过程中，来到达意隆现场的观众都感叹于达意隆的快速发展，纷纷表示达意隆对整个行业的发展具有巨大的推动作用，是中国啤酒、饮料包装制造技术的实力象征。而达意隆在这次的展览会中也收益颇丰，一举拿下多个订单，成为中国啤酒、饮料业界的焦点，达意隆也在2006年的金秋满载了收获的喜悦。

During the 5 days' exhibition, visitors to Tech-Long booth were amazed at the rapid development of Tech-Long and said Tech-Long promoted the development of the whole industry as symbolic strength of China beer and beverage packaging and manufacturing technology. Tech-Long earned a lot of gains for signing a few orders, which became the focus of China beer and beverage industry. Tech-Long was full of joy for so many harvests in 2006

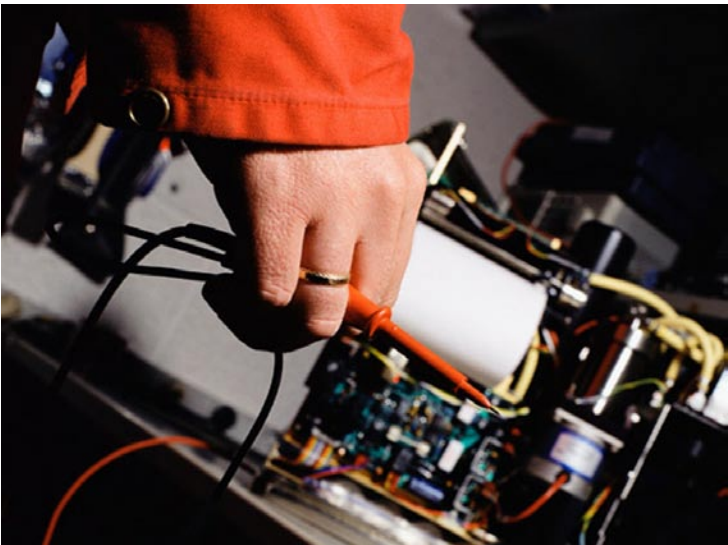
四、展后成效

Effect after the exhibition

9月9日，为期五天的2006年第七届中国国际啤酒饮料制造技术及设备展在北京中国国际展览中心圆满落幕！达意隆在此次展会的表现得到了多个国家和地区用户的肯定，现场签订了多张订单，成为本届展会的最大赢家，极大的提高了我公司品牌形象和企业知名度，达意隆的此次展览之旅也画上了完美的句号。此次参展达意隆设备现场演示也取得了空前成功，进一步体现出达意隆设备先进的制造技术、精湛的加工工艺、稳定的工作性能等优势；也充分巩固了达意隆在国内市场的领先地位，树立了在国际市场上良好的品牌形象；达意隆将持续凭借丰富的行业制造应用经验，不断创新探索，帮助用户实现梦想！

On September 9, the five-day 2006 7th International Brew & Beverage Processing Technology and Equipment Exhibition for China ended successfully in China International Exhibition Center in Beijing! The display of Tech-Long in this exhibition was thought highly of by users from various countries and regions. Tech-Long signed a few orders on the spot and thus became the biggest winner of this exhibition, which enhanced our company's brand image and popularity and gave a perfect end to our participation activities in this exhibition. Tech-Long made an unprecedented success in on-the-spot demonstration of the equipment and further embodied the advantages of the equipment such as advanced manufacturing technology, exquisite processing technology and stable operation performance; the demonstration also fully consolidated Tech-Long's leadership in Chinese market and established a good brand image in the international market; based on plentiful application experience in manufacturing, Tech-Long would make an innovation and exploration constantly to help users to realize their dreams!

Text and pictures by:Tech-long Adong/Mukee



参展设备全记录

Whole Records of The Exhibited Equipment

灌装事业部- 进一步巩固饮料 灌装领域的领先地位

Filling Operating Dept. – further consolidated its leadership in beverage filling

灌装事业部参展设备为DQS18A（80*80*18）全自动清洗/灌装/旋盖三合一机，并在现场与吹瓶机进行连线演示。

The shown equipment of Filling Operating Dept. was DQS18A(80*80*18) fully automatic monobloc machine of rinsing, filling and capping and connected with blowing molding machine for demonstration on the spot.

该灌装设备适用的产品范围涵盖纯净水、矿泉水、含汽饮料、啤酒、果汁、茶饮料、功能性饮料等，适用于350－2000毫升的PET瓶，最高产能可达36,000瓶/小时，全程采用夹持瓶颈技术，因此对于不同容量及瓶型之间的切换显得特别的方便，尤其适合当今追求多元化包装的饮料市场。

The applicable scope of this filling equipment covers pure water, mineral water,carbonated drink, beer, fruit juice, tea beverage, energy drink, etc.. It's suitable for 350-2000 milliliters of PET bottles and the highest output can reach 36,000 BPH, with bottleneck grasping technology adopted, so it's extremely convenient for the switching of different volume and bottle type and especially suitable for current beverage market pursuing packaging pluralism.

8月23日，DQS18A（80*80*18）三合一机生产装配完毕，于8月24日顺利进入灌装线调试状态，调试5天后，设备运转正常，各项性能指标均达到规定要求，按照预定质量要求及生产目标，顺利完成任务，8月27日运往北京参展。

On August 23, DQS18A (80*80*18) monobloc machine was installed and started to be debugged on August 24. After 5 days' debugging, the equipment operated normally and all performance indexes reached the requirements stipulated and finished the task smoothly according to planned quality requirements and production goal. On August 27, it's transported to Beijing for the exhibition.

设备调试还包括风送系统的安装、与吹瓶机对接。本次装配展出设备，面临定位要求高、装配时间紧迫等困难，因此在装配部件的标示方面下了很大功夫，对于灌装线理盖器、玻璃门框、触摸屏、旋盖头、出瓶星轮等重要部件的制作及焊接工艺、加工方法、装配方法上都相当的讲究。所有工程技术人员在安装

调试过程中，没有忽视任何一个细节，顶住长时间连续作业的疲劳，凭借坚强的毅力，顺利完安装调试工作，展期未出现任何的运行故障，真正体现了达意隆的专业制造、精良装配水平。

The debugging of equipment also included the installation of air charging system and the connection with blowing molding machine. This installation of exhibition equipment was faced with the difficulty of high positioning and urgent installation time, so much work was done in the labeling of installed parts and the making, welding technology, processing method and installation method of important parts such as lid arranging machine, glass frame, touch screen, capping head and bottling star wheel were demanding. In course of installation and debugging, all engineers and technicians didn't neglect any detail, withstood tiredness from continuous work for a long time and relied on strong willpower to finish installing and debugging smoothly so that no trouble happened during the exhibition, which really showed Tech-Long's level of professional manufacturing and superior installation.

吹瓶事业部—
充分演绎
中国制造的实力

Blowing Molding
Operating Dept.
- fully demonstrated the
strength of “Made in
China”

吹瓶事业部参展设备为两台全自动旋转式PET吹瓶机，型号分别为“RJM14”及“CPXX22”，两台设备的吹瓶工作站数量分别为14模腔和22模腔，其中RJM14在展会现场进行吹瓶演示并通过风送道与灌装机进行连线生产，由于受到展馆现场高压气源的制约，CPXX22只作了空转运行。

The shown equipment of Blowing Moulding Operating Dept. was two sets of fully automatic blowing molding machines with the model of "RJM14" and "CPXX22". The work station quantity of these two sets of blowing molding machines were respectively 14 mould chambers and 22 moulds. RJM14 was demonstrated and connection with filling machine by air conveyor to produce on line and CPXX22 idled only due to the limit of high air compressor in the exhibition hall.

设备从到达展馆到展览开幕，只有短短的三天时间，期间必须完成设备的吊装、定位、安装、调试、生产的整个过程，通常这一过程在客户工厂需要2—4周的时间才能完成。为了保障参展吹瓶机在展会现场能够顺利的完成展示任务，工程师们跟踪了机器从制造到装配的全过程，在设备离开工厂前做了充分的准备，在展馆现场，机械、电气、工艺工程师们争分夺秒，认真检测每一道工序，不放过任何一处细小的瑕疵，特别是对加热参数、吹瓶压力、空气流量、反应时间、机械动作位置等数据严格检查、精准调节，同时相互之间完美配合，最终得以圆满完成任务，使得吹瓶设备在展览期间能顺畅、稳定的运转、吹瓶，充分展示了达意隆成熟的高速吹瓶技术及强大的工程服务能力。

Only 3 days were available for the whole process of hoist and mount, positioning, installation, debugging and production of equipment which usually took 2-4 weeks. To ensure during the exhibition blowing moulding machine could finish the demonstration task smoothly on the spot of the exhibition, engineers followed up the whole process from manufacturing to installation. They made full preparations before the equipment was sent out of the factory and saved no time in examining every trivial defect carefully, especially strictly checking and accurately adjusting the heating parameter, blowing moulding pressure, air flow quantity, response time and mechanical act position so that blowing molding machine could work and blow smoothly and steadily. This fully showed the maturity of Tech-Long's high-speed blowing moulding technology and the strong engineering service ability.

在展会期间，“RJM14”不间断的高速吹瓶、“CPXX22”稳定的高速运转，充分展现了“中国制造”的魅力，不仅仅是价格上的优势，更重要的是在性能上同样可以达到世界领先的水平。展台吸引了大批专业观众，并在现场签定多

张设备定单，通过展出设备，业界对达意隆的吹瓶技术有一个更全面的认识 and 了解，达意隆也进一步巩固了吹瓶领域的行业领先地位。

During the exhibition, the incessant high-speed blowing of” RJM14 “ and the stable high-speed operation of “ CPXX22 “ fully represented the glamor of “ Made in China “. Not only did they have the advantage of price, but also and more importantly, they reached the world-leading level on performance. A great number of visitors were attracted by the stand and a few orders were signed on the spot. By the show of equipment, people in this industry knew of Tech-Long's blowing moulding technology fully and Tech-long further consolidated the leadership in the field of blowing moulding.

包装事业部—
周密组织，确保裹
包、码垛设备的稳
定运行

Packaging Operating
Dept.-conducted
careful organization
to guarantee the
steady operation of
packaging machine
and palletizer.

包装事业部参展设备为DBZ—CB45纸箱裹包机、HRT01机器人码垛机，纸箱裹包机连线机器人码垛机进行现场啤酒的纸箱裹包及码垛演示。

The shown equipment of Packaging Operating Dept. was DBZ-CB45 packaging machine and HRT01 palletizer, both of which were connected to demonstrate the packaging and palletization on the spot.

DBZ—CB45纸箱裹包机适用的产品范围包括玻璃瓶、塑料瓶、罐头等，额定产能为45包/分钟。HRT01机器人码垛机适用的包装形式包括瓦楞纸箱、塑箱、玻璃瓶、PET瓶、金属罐、纸袋等，工作时的最高线速度可达2500毫米/秒，相对于传统的机械码垛更加的灵活多变。

DBZ-CB45 packaging machine applies to products such as glass bottles, plastic bottles and cans with rated output of 45 package/minute. HRT01 palletizer applies to products such as corrugated cartons, plastic boxes, glass bottles, PET bottles, metal cans and paper bags with the highest speed of 2500 millimeter/second and more flexibility compared with traditional mechanical palletizer.

由于纸箱裹包机位于展厅的进货门附近，因此只能安排在整个展厅的最后时间进馆，设备从卸车、定位、安装到调试，整个只有两天的时间，包装事业部工程师在现场时间、环境、设施有限的情况下，用丰富的装配经验，在最短的时间进行设备定位、水电气管路的连接，裹包机及机器人的连线调试；为使现场演示正常连续运行，工程师们要不断地把整箱啤酒从码垛区搬到解包区，高强度的负荷，既检验了工程师的技能也考验了他们的毅力，展览现场设备的优异稳定运行更加证明了达意隆二次包装技术的成熟。

Because the packaging machine was near the goods entrance, it could only be moved into the exhibition hall during the last stage of exhibition. It took only two days for the equipment to be unloaded, positioned, installed and debugged. Under the limited time, environment and facility, engineers of Packaging Operating Dept. used their plentiful experience in installation to position the equipment, connect it with water, power and gas supply and connect packaging machine with robot for debugging; to ensure the normal and continual operation of on-the-spot demonstration. Engineers should incessantly move a whole box of beer from palletizing region to unpacking region. Load of high strength tested both engineers' skills and their willpower and the excellent and steady operation of the exhibition equipment further proved the maturity of Tech-Long's second packaging technology.

一道注塑/注塑设备
国产PET瓶坯注塑
设备的技术突破

UNIQUE Injection/
Molding Systems/
Injection equipment-
a technological
breakthrough in
domestic PET bottle
base on injection
equipment

一道注塑设备有限公司是达意隆与外商合资公司，本次参展设备为U360PET瓶坯注塑机。

UNIQUE Injection Moulding Systems Co., Ltd. is a joint venture established by Tech-Long and foreign company. The exhibition equipment of this company was U360PET bottle base injection machine.

U360PET瓶坯注塑机安装了一套48模腔的瓶坯模具，产能为14,400支/小时，该设备配备了一跟直径100毫米的螺杆，采用二级注射方式，注塑机锁模吨位可达360吨。

U360PET bottle base injection machine is installed with a set of 48 mould chambers of bottle base moulds with an output of 14,400 piece / hour and is equipped with a screw rod of 100 millimeters of diameter. By employing secondary injection means, its mould locking tonnage can reach 360 tons.

本次U360PET瓶坯注塑机的展出，为达意隆面向业界首次展出PET瓶坯注塑设备。该机的亮相受到专业人士的广泛好评，赢得众多海内外专业观众的目光，它突破了国产瓶胚注塑机市场定位，基本可以达到国际知名品牌设备的性能，是国内瓶胚注塑机新的质量标杆。U360主要有几个亮点：一个是完善的双阶注塑设计能够保证优秀的塑化效果、准确的注射量及其缩短生产周期，另外一个自行设计的多工位机械手结构简单，运行快速、精确和平稳，维护和安装简便和快捷。

This exhibition of U360PET injection machine was the first time Tech-Long showed PET bottle base injection equipment to the industry. This shown machine was highly thought of by people in this industry and caught eyes of professional visitors from at home and abroad. It breaks through the market orientation of domestic bottle base injection machine and basically reaches the performance of equipment of international famous brands as a new surveying rod for domestic bottle base plastics moulding machine. U360 has two main highlights: one is that perfect two-step injection design can guarantee a fine plastics moulding effect, an accurate injection quantity and the shortening and production cycle and the other is .the self-designed multi-stage manipulator has a simple structure, runs quickly, accurately and steadily and easy to maintenance and installation.

Text by:Tech-Long Deshe Hu/Hakim/Weidong He/Xiaobo Su/Mukee
Pictures by:Tech-Long Mukee

衷心感谢所有在展会中付出努力的
工程技术人员！

Sincerely thank all the engineers and
technicians deveted to the exhibition!

达意隆国际市场稳中有进，
成为最具国际竞争力的民族品牌
Tech-Long is developing the
international market stably,
and has become the national brand with
highest competitive force

随着全球经济一体化，中国成为世界的加工厂，饮料包装行业技术已逐步接进国际先进水平，饮料包装设备有也有着巨大的发展空间。回顾达意隆开拓国际市场的四年里，凭着稳定先进的设备质量、高素质的国际销售队伍，锲而不舍的为用户提供更多附加值的服务理念，使达意隆的设备在亚洲、非洲及中东、欧洲、北美四大洲的42个国家和地区平稳运转。
As the economy globalization, China has developed into the workshop of the world, the technology of domestic beverage packaging industry has reached the world advanced level, and beverage packaging equipments also greet enormous development space. Looking back the past 4 years for Tech-Long to develop the international market, with stable quality, professional sales team, the company is constantly providing products and service with more value, which promotes Tech-Long equipments to stably work in 42 countries and regions in Asia, Africa, Middle East, Europe and North America.

2006年，是达意隆汗水与欢笑并存的一年，在这一年里，成功的在国际市场上拓展了达意隆品牌，取得了令业界瞩目的成绩，全年出口额达到1200万美元。现在，我们就把在国际市场拓展方面的一些体会与大家一同分享：
2006 is the year with sweat and happiness for Tech-Long, in 2006, Tech-Long successfully developed the brand in the international market with eye-catching achievements, and the annual export volume reached USD12 million. Now, let's share our experience in the development of international market:

融洽的团队协作精神
2006年，达意隆国际销售区域大胆地聘用了外籍销售人员、技术专家，为这个年轻的队伍再添新鲜活力。在这个团队里，彼此间的合作非常默契，销售经验丰富的同事从如何接待客户，产品报价到合同谈判技巧，全方位指导新同事尽快成长；而新同事又在销售辅助工作中学习到了产品技术、销售方法、并能与老同事密切合作，极大地提高了工作效率。

2006年11月4日，达意隆参加了哈萨克
Almaty world food fair, 达意隆销售总
监孔祥捷(中)与客户交流设备情况
On November 4th, 2006, Tech-Long
attended the Kazakhstan Almaty World
Food Fair ,Tech-Long Sales Supervisor
Kong Xiangjie (middle) is communicating
with clients





国际销售总监张胜(前排中)与年轻而充满活力的国际销售队伍
International Sales Supervisor Zhang Sheng (middle in front row) and young and energetic international sales team

Harmonic Team Work

In 2006, Tech-Long International Sales Area bravely employed foreign sales and technical experts which injected fresh energy for the young team. With harmonic cooperation, experienced sales support the new colleagues on how to receipt clients, product quotation and negotiation skill; and new colleagues also learned the product technology and sales skill with close cooperation with senior colleagues, which powerfully improved the work efficiency.

发展和培养代理商，加强与代理商的长期合作

国际销售的特殊性是国内与国外在不同语言、生活习惯、思维习惯、经济水平、宗教、文化等方面的差异，所以我们尤为重视发展和培养各区域的代理商，同时还加强与信誉良好的代理商之间的长期合作。仅是中东区域代理SURE International代理商，2006的合同总额就达到450万美金，而代理商代理的产品也从原来单一、普通的五加仑灌装机延深到了达意隆的各个高端产品领域。

Develop the cultivate agencies, strengthen the long term cooperation with agencies

International sale has differences in language, living habit, thought, economic level, religion and culture, therefore, we focus on developing and cultivating regional agencies, and strengthening the long term cooperation with credit agencies. The total contract amount reached USD4.5 million in 2006 for SURE International Agency which is out regional agency in Middle East, and the products are also extended from single and ordinary 5 gallon filling machine to various high grade products of Tech-Long.

精心维护与老客户的合作关系，发展新客户

老客户对企业的长远发展起着非常重要的作用。老客户对产品，服务的满意程度直接影响到公司的声誉，他们是企业的“活广告”，可以为企业赢得一笔笔可观的定单，我们深谙这个道理，我们精心做好售后服务工作，在拜访客户国外工厂期间，会把客户的建议、要求第一时间反馈到技术、生产部门并及时和客户沟通，在最短的时间内为客户解决问题，赢得客户的致认同。在中亚，东南亚地区，老客户的签单率高达60%。在2006年，达意隆又成功的开拓了波黑、保加利亚等欧洲市场，与2005年同期相比，新客户的增长率达33%。

Carefully maintain the cooperation with old clients, develop new clients

Old clients are significant for the long term development of the enterprise. Old clients' satisfaction to our products and service directly influences the credit of the company, they are the "live advertisement" of the enterprise. Win favorable orders, we have deeply realized it and provided considerate after service. During the period of visiting client's factories at abroad, we will feed client's suggestions and requirements to the Technology Department and Production Department, and timely communicate with clients, and settle client's problems in shortest time for winning client's recognition. In Central Asia and Southeast Asia, the rate of signing contract by old clients reaches 60%. In 2006, Tech-Long successfully developed European market in Bosnia Herzegovina and Bulgaria, compared with year 2005, the increase of new clients

reached 33%.

重视开发大客户，为长远发展打好根基

参加国内外大型专业展会是开拓大客户的良机。与大客户合作，对提升企业知名度，完善产品性能起着重要的作用。2006年，我们参加了泰国的2006 AISA PROPAK、印尼ASPIDIN印尼水协会大型推广活动、伊朗塑胶展、沙特饮料包装机械展会、哈萨克斯坦World Food等展会，从中获得了宝贵的客户资源与市场信息。成功地提升了达意隆品牌在国际市场的知名度。

Focus on developing key clients, set foundation for long term development

It is the precious opportunity to develop key clients to attend domestic and foreign big and professional exhibitions. It is significant to improve the enterprise awareness and improve the product performance to cooperate with key clients. In 2006, our company attended such exhibitions as Thailand 2006 AISA PROPAK, Indonesia ASPIDIN, Indonesia Water Association Big Promotion, Iran Plastic and Rubber Exhibition, Saudi Arabia Beverage Packaging Machine Exhibition and Kazakstan World Food, and obtained precious client resources and market information, and successfully improved the awareness of Tech-Long in the international market.

2006一年里，我们先后与世界饮料巨子可口可乐公司旗下的孟加拉维珍可乐（VIRGIN COLA）、澳大利亚可口可乐（CCA），及巴基斯坦百事可乐都有了合作，而和法国NESTLE的合作也在进一步确定之中，这将为达意隆在2007年一步扩大东南亚、欧洲、澳洲等区域的市场铺平道路。达意隆在积累了与世界多个优秀饮料企业的合作经验后，已成为国际饮料包装行业当中最具国际竞争力的民族品牌，并在国际饮料包装设备供应商的佼佼者中占有非常重要的地位。

In year 2006, we have cooperated with world beverage tycoon Coca Cola Bengal VIRGIN COLA, Australia Coca-Cola Amagil (CCA) and Pakistan Pepsi Cola, and our cooperation with France NESTLE is also under confirming, which will smoothen the road for Tech-Long to expand the market in Southeast Asia, Europe and Australia. With rich experience in cooperating with several world famous beverage enterprises, Tech-Long has become the national brand with highest competitive force in world beverage packaging industry, and occupied an important place as the outstanding beverage packaging equipments supplier in the world.

随着人们对健康保健的逐渐重视，全球市场的饮用水量增大，饮料全自动包装设备需求也逐步扩大；而中国经济的持续对外发展，给予了中国企业与国际市场交流的广阔平台和机会，国际销售部的全体员工将抓住国际市场为我们的发展壮大提供的每一个机会，与达意隆共同成长。

As the emphasis on health, the demands on drink water in the global market increases fast, so does the demands on beverage fully automatic packaging equipments; as the constant developing of Chinese economy, it provides the wide platform and precious opportunity for Chinese enterprises to communicate with international market. The staffs of International Sales Department will grasp every opportunity to develop together with Tech-Long.

Text by:Tech-long Amy/Mukee
pictuures by:Tech-long Grace/Mukee

第一品牌的力量

记达意隆与Hana Water的成功合作



Strength of the First Brand

Successful Cooperation Between Tech-Long and Hana Water

National Plant for Healthy Water（以下简称“Hana water”）公司成立于1981年，拥有非常丰富的新鲜地下水资源，自建立以来，Hana water就致力于各种不同规格的健康水的脱盐和包装，并一直把消费者的健康和生活水平作为饮用水最重要的考虑因素，为了适应消费者的口味，和对于消费者健康的考虑，Hana water在产品的外观和成份上有非常严格的要求。

National Plant for Healthy Water (hereinafter referred to as “Hana water”) was set up in 1981 with very rich fresh underground water resources. Since the establishment, Hana water has been dedicated to various specifications of desalting and packaging of healthy water, and looks the health and life level of consumers as the most important factor for drink water. In order to meet the taste of consumers, Hana water has presented very strict requirements on the appearances and ingredients of the products.

Hana water已经成为国际瓶装水协会的会员，在当代发达工业国家最先进的瓶装水行业应用技术中，成功成为新型塑料瓶领域生产、装瓶和包装的先锋。Hana water产品涵盖了0.33L、0.5L、0.6L、1.5L、5L瓶装水和杯装水，全线使用全球最先进吹灌旋一体机，生产线全线能力超过100000瓶每小时。“Hana”目前是沙特第一品牌饮用水。

Hana Water has become the member of International Bottled Water Association, in the most advanced bottled water industry application technology in developed countries, Hana Water had developed into the pioneer of new type plastic bottle production, bottle filling and packaging. Hana Water products covers 0.33L, 0.5L, 0.6L, 1.5L, 5L bottled water and cupped water, Hana Water applies the most advanced blowing, filling and capping integration machine, and the output capacity of the whole product line exceeds 100,000 bottles/hour. Currently, “Hana” is the first brand drink water in Saudi Arabia.

为了使国内最先进的达意隆的饮料包装设备成功在沙特第一品牌水厂Hana Water(以下简称“Hana”)运转，让中国自主品牌机械产品进入长期以来一直被欧美一流企业垄断的高端客户群体，达意隆在整个Hana项目中，付出了极大的努力。2006年5月、9月先后两次拜访Hana集团。尤其是9月份由销售总监孔祥捷先生带队拜访，受到了Hana集团董事长Mr. Althyab的热情接待，并与Hana集团的技术总监Mr. Tarek，设备维护总监Mr. Ahmed进行了全面的技术交流，为达意隆12月份夺得沙特最大的300余万美金的36000HPH水线整厂交钥匙工程项目打下了坚实基础。

In order to promote domestic advanced Tech-Long beverage packaging equipments to launch Hana Water



2006年12月20日，达意隆与沙特Hana water正式签订了一条36000BPH整线设备订单。左图为Hana water集团董事长Ahmed H. I. Altheyab(左四)、技术总监Tarek Osman Hasan(右四)及达意隆中东总代理Mr. Jinesh(右三)与达意隆董事长张颂明先生及此项目相关人员在达意隆签订合同现场。

December 20th, 2006, Tech-Long and Saudi Arabia Hana Water formally signed the contract on one 36000BPH whole line equipment. The left picture shows the site of signing contract: Chairman of Hana Water Group Ahmed H. I. Altheyab (4th from the left), Technical Supervisor Tarek Osman Hasan (4th from the right) and the General Agency of Tech-Long in Middle East Mr. Jinesh (3rd from the right) and President of Tech-Long Mr. Zhang Songming and relative personnel of this project.

(hereinafter referred to as “Hana”) in Saudi Arabia, and provide the homemade mechanical products to the high grade clients which have been occupied by European and American top enterprises, during the entire Hana project, Tech-Long has paid high effort. In May and September, 2006, Tech-Long visited Hana Group for 2 times. Particularly in September, the delegation led by Sales Supervisor Mr. Kong Xiangjie received warm reception from the Chairman of Hana Group Mr. Althyab, and had complete technical exchange with the Technical Supervisor Mr. Tarek and Equipment Maintenance Supervisor Mr. Ahmed of Hana Group, which set a solid foundation for Tech-Long to win the 36000HPH water line whole factory turn-key engineering which valued USD3 million as the biggest one in Saudi Arabia in December.

要想让一个一直以来完全使用全线欧洲一流设备的企业改变观念使用中国的设备并非一件很容易的事情。在Hana整线项目跟进过程中，达意隆中东总代理Mr. Jinesh和沙特代理Mr. Hathloul曾先后四次前往沙特与Hana集团高层会晤面谈并且每日保持与Hana积极联系，随时随地替客户解决问题。沙特代理Mr. Hathloul则是用自己购买达意隆交钥匙工程成功的切身体会让Hana充分了解达意隆的设备优势，增加了Hana集团对达意隆设备的信心，使Hana董事长Mr. Althyab切实地感受到达意隆在产品性价比、技术及服务上的强大优势。

It is not easy to promote an enterprise who applied European top equipments to transfer to select Chinese equipments. In the process of the Hana whole line project, General Agency of Tech-Long in Middle East Mr. Jinesh and Agency in Saudi Arabia Mr. Hathloul met the senior staffs of Hana Group in Saudi Arabia for 4 times, and kept active contact with Hana. Agency in Saudi Arabia Mr. Hathloul makes Hana realize the advantages of our equipments with his own experience in Tech-Long turn-key engineering, which has powerfully increased the confidence of Hana Group to Tech-Long equipments, and the Chairman of Hana Mr. Althyab has actually realized the high cost performance and powerful advantages in technology and service of Tech-Long products.

2006年12月20日，达意隆与沙特Hana集团正式在达意隆签订了一条整线项目，在项目进行过程中，达意隆各部门鼎力配合，发扬了团队合作精神，集体凝聚力及向心力也是达意隆赢

取Hana项目的制胜法宝。尤其是达意隆研发中心、全自动吹瓶部、灌装事业部的研发、技术及工程人员，为整个Hana整线交钥匙工程提供了最科学最合理的整厂设计和所有技术细节的完整解释。所有的技术细节讨论让Hana集团对达意隆这一中国饮料包装机械第一品牌的印象有了全面的了解，使客户万分欣喜地看到了达意隆的设备和欧洲的一流品牌设备从技术品质和服务上的区别已经微乎其微，达意隆高性价比的设备为用户节省了采购成本及一些宝贵的资源，真正做到了提升用户的附加值。

On December 20th, 2006, Tech-Long and Saudi Arabia Hana Group formally signed the contract on one whole product line, during the course of fulfilling the project, all departments and employees of Tech-Long work enthusiastically, which is also the treasure for Tech-Long to win the Hana project. Particularly Tech-Long R&D Center, Fully Automatic Bottle Blow Molding Department, R&D, technical and engineering staffs of Filling Operating Division have provided the most scientific and reasonable whole factory design and complete explanation to all technical details for the Hana whole line turn-key engineering. The discussion of all technical details make Hana Group to completely know Tech-Long --- the first brand of Chinese beverage packaging machine, and clients have observed the advantages of Tech-Long equipments in technology, quality and service compared with European top brands, and Tech-Long equipments have saved the purchasing cost and other precious resources due to high cost performance, thus actually increasing the value for users.

在整个Hana项目中，我们要特别感谢给予达意隆全力支持的各位新老客户，如广州可口可乐、怡宝、日之泉、信联、生力饮料厂、沙特Iblal Water、Fayha Water、也门Ayoon Water 等用户的模板工厂的现场设备演示和介绍，为项目的成功签定提供了最具有说服力的帮助。透过Hana同达意隆地成功合作，我们见证了沙特瓶装水第一品牌和中国饮料包装机械第一品牌地强强联合对饮料行业所带来的深远影响。我们相信Hana品牌将会在国际市场上越做越大，越做越强，同时我们更加坚信达意隆的品牌旗帜也将随着用户群的壮大与成长而在全球市场上处处飘扬！

In the entire Hana project, we shall extend our gratefulness to the old and new clients who have provided powerful support to Tech-Long, the site demonstration and introduction of Guangzhou Coca Cola, Cestbon, Sunray Cave, Xinlian, San Miguel Beverage Factory, Saudi Arabia Iblal Water, Fayha Water, Yemen Ayoon Water provided most convictive assistant for the project. With the successful cooperation between Hana and Tech-Long, we have witnessed the profound influence of the cooperation of the first bottled water in Saudi Arabia and the first brand of Chinese beverage packaging machine to the beverage industry. We believe that Hana brand will become stronger and stronger in the international market, and we also believe that Tech-Long will also expand the international market as the development of users.

Text and Pictures by:Tech-long Paul/Mukee

Hana Water 的瓶装水产品



澳大利亚可口可乐 订购第一条达意隆PET热灌装线

— 可口可乐与达意隆的深层次合作

The 1st PET hot filling line for Coca-Cola Amital Brisbane Plant (CCA Australia)

— Deep cooperation between Coca-Cola with Tech-Long

背景资料 Background

可口可乐公司与澳大利亚可口可乐公司
TCCC & CCA

可口可乐公司（以下简称“TCCC”）拥有澳大利亚可口可乐公司（以下简称“CCA”）35%的股份，CCA的七个董事会成员中有两个由TCCC指定。CCA除自己的产品外，同时也生产可口可乐公司商标并将其配送或销售致设有分部的六个国家。Coca Cola (hereinafter referred to as “TCCC”) possesses 35% shares of Australia Coca Cola (hereinafter referred to as “CCA”), and two of the seven directors of CCA are appointed by TCCC, besides own products, CCA also produces Coca Cola products and distributes to 6 countries where set up Coca Cola branches.

TCCC 向CCA 提供其生产成品所需的浓缩液和饮料粉。每年双方公司都会联合制定销售及市场计划（包括品牌战略，行销执行，终端销售及批发价格）TCCC provides concentrated solution and beverage powder to CCA for production. Both parties will jointly constitute the market plan each year (including brand strategy, marketing implementation, terminal sale and wholesale price)

作为可口可乐系统的一部分，CCA可以近距离接触到由强劲广告和独一无二市场战略支撑起的世界最为人知的品牌饮料。CCA与TCCC互相合作，利用在技术和资产的互补在各自的市场上取得了极有益的市场占有率。As one part of Coca Cola system, CCA can approach the world most famous brand which is supported with powerful advertisement and outstanding market strategy. CCA and TCCC obtained the most favorable market share with complementary technology and assets through the cooperation.

TCCC 集中精力于终端消费市场，包括广告及市场营销，新品牌的开发，品牌创意及包装计划。这些营销行为都由TCCC投资进行。而CCA最初的市场活动集中在开发及维护巩固的客户关系，贯彻执行市场战略和计划。TCCC focuses on terminal consumption market, including advertisement, marketing, new brand development, brand originality and packaging plan. All marketing behaviors are invested by TCCC. However, the market activities of CCA focus on developing and maintaining client relationship, implementing market strategy and plan.

2006年9月18日，达意隆国际销售总监张胜（右二）与CCA项目负责人在CCA悉尼总部双方第一次会议后
On September 18th, 2006, Tech-Long International Sales Supervisor Zhang Sheng (2nd from the right) and Project Charger of CCA met in Sydney Head Office



>>>>开始 Begin

随着澳大利亚市场近年来对热灌装产品的需求大幅度攀升，而欧洲设备受原材料和服务等方面的影响价格居高不下，而达意隆与可口可乐中国瓶装厂的合作逐渐深入。澳大利亚可口可乐公司（以下简称CCA）将目光转向今年来在技术和质量都有长足进步的中国供应商-达意隆。

As the powerful increase to hot filling products in Australia market, and European equipments keep high price due to raw materials and service, the cooperation of Tech-Long and Coca Cola China Bottled Packaging Factory, Australia Coca Cola (hereinafter referred to as CCA) has transferred the vision to Chinese supplier --- Tech-Long who has outstanding improvement in technology and quality.

2006年9月15日至－18日，CCA 派技术专家到中国考查了包括达意隆公司在内的多家中国优秀设备供应商，与此同时，达意隆也派遣国际部销售总监张胜到CCA总部将达意隆的实力、设备等情况介绍给CCA，通过双方的互访加深了解并建立了初步的合作关系。

During September 15th -18th, 2006, CCA assigned technical experts to investigated several outstanding equipments suppliers, including Tech-Long, at the same time, Tech-Long also assigned the Sales Supervisor of the International Department Zhang Sheng to CCA Head Office for introducing Tech-Long’s strength and products. Both parties have set up primary cooperation relation through the investigation.

>>>>实施 Implementation

2006年11月15日，达意隆获得CCA正式邀请，派出国际销售总监张胜（Mr.Johnson Zhang）、大客户总监Mr.Inde Soor）和技术部经理许君凤先生（Mr.Xu Junfeng）一行三人到澳大利亚可口可乐布里斯班工厂参与PET热灌装生产线的前期技术谈判。在谈判过程中，CCA对于达意隆的设计能力、生产组织及管理能力、工程服务能力、语言能力和文件准备能力做了详细了解并表示满意。最终，获CCA董事会意向批准通过此项目，并决定首次向中国供应商定购灌装设备。之后，达意隆得知CCA董事会非常重视这条生产线，并期望达意隆将来能够有机会在CCA所属的澳大利亚、新西兰、斐济、印尼、韩国等区域（以上都是CCA的区域）有更大的作为。

On November 15th, 2006, Tech-Long received the formal invitation from CCA, and assigned International Sales Supervisor Zhang Sheng (Mr. Johnson Zhang), Key Client Supervisor Mr. Inde Soor) and Manager of Technology Department Mr. Xu Junfeng for the pre-phase technical negotiation for PET hot filling product line in the Australia Coca Cola Brisbane Factory. During the negotiation course, CCA has deeply realized and expressed the satisfaction to the design ability, production organization and management ability, engineering service ability, language ability and documents preparation ability of Tech-Long. Finally, with the approval of CCA Board of Director, this project was permitted and CCA decided to order filling equipment from Chinese supplier for the first time. Later, Tech-Long has known that CCA Board of Directors has attached high emphasis on this product line, and expected to cooperate with Tech-Long in such regions as Australia, New Zealand, Fijian, Indonesia and South Korea of CCA.

>>>>阶段性成果 Stage Achievements

2006年12月16日，达意隆与CCA在广州正式签订购销合同，标志着达意隆正式成为CCA认可的设备供应商，这也是在CCA历史上被认可的唯一中国供应商，达意隆也因此迈开了拓宽国际高端市场更坚实的一步。

On December 16th, 2006, Tech-Long and CCA formally signed the purchasing and selling contract in Guangzhou,

which means that Tech-Long has become the recognized equipment supplier of CCA, and Tech-Long is also the only one Chinese supplier with the recognition of CCA, and Tech-Long Started the solid step to develop the high grade market in the world.

>>>>深层次合作 Deep Cooperation

达意隆通过过去几年与太古可口可乐公司(SWIRE COCA-COLA)，生力公司（San Miguel)等国际大公司的合作中积累了很多宝贵的经验，通过双方伙伴式的合作，在技术和工程方面有了长足的进步，对新技术的开发和应用也有了自己的系统。

With precious experience through cooperating with such world famous corporations as Swire Coca Cola and San Miguel, with the partnership-type cooperation, Tech-Long has achieved outstanding progress in technology and engineering, and has developed own system in new technology development and application.

而CCA作为可口可乐公司（TCCC）成员，对质量和技术的要求可谓世界一流；在机械设计特别是卫生级设计（hygienic design）和快速更换（quck changevoer）；电气设计特别是在自动化控制则有更高的要求。在与CCA的商务洽谈中，对标准的认知成为谈判时的最大难点，有时双方为了一个细节的设计花费半天以上甚至更长的时间来讨论，最终取得共识。达意隆也从过程中理解客户技术要求，从根本上更改和提升设计思路，拓宽视野。双方对于达意隆的核心技术设备灌装机（filler）和杀菌机(pasteurizer）更是倾注了全部心血来逐条核对技术细节，以确保实施的可行性。

As the member of Coca Cola (TCCC), CCA has strictest requirements on quality and technology; and higher requirements on mechanical design, particularly hygienic design and quick changeover); electric design, particularly automatic control. During the negotiation with CCA, it is most difficulty for the cognition of standard, sometimes, it costs over half a day or even longer to discuss the design on some detail. Tech-Long has also understood client’s technical requirements, optimized the design thought and expanded the vision. Both parties are dedicated to the core technical equipment, filling machine and pasteurizer of Tech-Long for checking the technical details one by one for assuring feasibility.

CCA在这个项目上投入巨大，为确保项目的成功，花费巨资请工程监理公司协助达意隆保证项目的正常运行，并2次派遣Mr.Phill Dack(National Manufactureing Manager)、Mr.Gigy Philip (State Manager Operations & Logistics)来中国考察和谈判；达意隆同时也派出最强的技术班底和最优的生产组织管理系统来确保项目的成功实施，从而形成了战略伙伴式的合作关系的基础。通过与CCA的合作，使达意隆开始逐步实现以中国的价格制造欧洲标准的设备这一目标，达意隆见证了自己的成长，也更加坚信自己的国际化道路会越来越宽。

CCA has invested a lot in this project. In order to assure success, CCA has asked the engineering supervision company to assist Tech-Long to assure the normal work of the project, and assigned Mr. Phill Dack (National Manufacturing Manager) and Mr. Gigy Philip (State Manager Operations & Logistics) to China for 2 times; and Tech-Long has also assigned the strongest technical team and production organization management system for assuring the project, which formed the foundation for the strategic partner type cooperation. Through the cooperation with CCA, Tech-Long has gradually fulfilled the garget of manufacturing products according to European standard with Chinese price. Tech-Long witnesses the development of itself and believes that the road of



2006年12月16日，CCA 全球制造总监 Mr. Phill Dack(右二)、高级业务发展经理、高级物流主管 Mr. Gigy phlip(右一)与达意隆董事张颂明(左三)、总裁王忠(左二)、国际销售总监张胜(左一)在签约现场

On December 16th, 2006, CCA National Manufacturing Manger Mr. Phill Dack (2nd from the right), State Manager Operations & Logistics Mr. Gigy phlip (1st from the right) and Chairman of Tech-Long Zhang Songming (3rd from the left), President Wang Zhong (2nd from the left), International Sales Supervisor Zhang Sheng (1st from the left) are at the site of contract signing



达意隆大客户总监Inde Soor(左)与国际销售总监张胜(右)在CCA布里斯班工厂大厅

Tech-Long Key Client Supervisor Inde Soor (Left) and International Sales Supervisor Zhang Sheng (Right) are at the hall of CCA Brisbane Factory

项目简介

24000BPH 热灌装项目
瓶型：350ML、500ML、600ML PET瓶
瓶盖：38MM平盖及运动盖
产品：运动型饮料、绿茶饮料、果汁饮料

Introduction to the Project

24000BPH Hot Filling Project
Type of Bottles: 350ML, 500ML, 600ML PET bottle
Cap: 38MM flat cap and sports cap
Products: sports beverage, green tea beverage, fruit juice beverage



Text and pictures by:Tech-long Johnson

SANETA

来自 伊斯坦布尔山区 的珍贵矿泉水

SANETA

Precious mineral water from Istanbul mountainous area



前联合国秘书长安南在“世界水日”致辞中说“在新世纪，让我们再次承诺，为全人类有清洁、安全、健康的水而努力！”联合国计划开发署主任本·达克（Ben-dak）博士指出：“不是所有的水都适合饮用，真正的文明，必须饮用回归自然的健康水。”

The former Secretary-General of the United Nations Annan delivered a speech on “World Water Day”, which said “In the new century, we promise to work for clean, safe and healthy water for all human being in the world!” Director of The United Nations Development Programme Doctor Ben-dak pointed out: “Not all water is safe for drinking, and it is a must to drink natural and healthy water in the true civilization.”

当今国外健康饮水观念已成为主流。在国际上，天然矿泉水曾被称为贵族水。如法国人十分喜爱矿泉水，共有50多家大的矿泉水厂，维希是世界著名的矿泉水城。巴黎每条街的酒吧、车站、旅游景点、饭店、食品店都销售矿泉水，而且都是法国自产的。再如德国拥有235家较大的矿泉水企业，矿泉水年总产量近900万吨，出口的矿泉水不到80万吨，德国人均消费矿泉水量为130升/年……

Nowadays, drinking safe water in foreign countries has become a trend. Natural mineral water was once called noble water in foreign countries. French people love mineral water very much, and over 50 large mineral water factories have been built, and Vichy is a world well-known mineral water city. In Paris, people sell mineral water, which is made in France, in bars, bus stops, scenic spots, restaurants, and grocers in every street. For another example, in Germany, there are 235 large mineral water enterprises, with the annual output of mineral water up to 9 million tons and imported mineral water less than 800,000 tons. And the per capita consumption of mineral water is 130 liters/ year....

SANETA充分抓住这一趋势，在伊斯坦布尔以南50公



位于伊斯坦布尔山脉脚下的SANETA的生产工厂
Manufacturing factory of SANETA situated at the foot of Istanbul Mountain Range

里的山下建立了庞大的生产工厂，根据土耳其矿产资源规划调查，该地区具有明显优势和资源潜力的矿产资源，主要是饮用天然矿泉水、热矿水、建筑用砂、建筑用玄武岩等，其饮用天然矿泉水埋藏在地层深处，经深循环和自然过滤，是天然纯净、卫生安全的水；从营养学看，它含有多种人体必需的常量元素和微量元素，能调节人体的酸碱平衡，其化学成分和流量、水温等动态稳定，这些特征都是一般天然水所不具备的。SANETA took the advantage and built a huge manufacturing factory about 50 kilometers south of Istanbul. According to a survey of Turkey mine resources planning, the region is rich in mine resources, especially natural mineral water, thermal water, sand for building, basalt, etc. The natural mineral water is hidden deep under the stratum, and after deep circulation and natural filtering, it becomes natural, pure, safe and clean. In terms of nutrition, it contains multiple macro elements and microelements which are necessary for human body, and can adjust acid-base balance in human body. Unlike normal natural water, it has stable chemical element and flow, and water temperature.

SANETA公司于2005年2月获得了欧洲颁发的[天然矿泉水生产许可证]，同年，SANETA公司又获得了IBWA[国际瓶装水协会证书]和NSF[国家卫生许可证]。In February, 2005, SANETA gained “Production License of Natural Mineral Water” issued by Europe. In the same year, it was awarded certificate of IBWA (International Bottled Water Association and NSF (National Sanitation Foundation).

SANETA公司总裁Mr.Gursel Ercan说：“天然水中含有钠、钾、钙、镁、重碳酸盐和硫酸盐等人体不可少的常量元素。纯净水经过净化处理基本不含上述各种常量元素，而SANETA矿泉水不仅含有一般常量元素，而且含有符合规定含量的微量元素。由于三类饮料的化学成分不同，因此对人体的反应和生理作用也有所不同。其中矿泉水除了能起到饮用水的作用外，还具有营养、保健和防病的作用。”Mr. Gursel Ercan, Chairman of SANETA said: “Natural water contains necessary macro elements such as natrium, kalium, calcium, magnesium, bicarbonate and sulfate. And pure water usually does not contain the above macro elements after purifying treatment, while in SANETA mineral water, macro elements are not only contained but also in required content. The three types of beverage have different chemical elements, so human reaction and physiological function is also different. Among them, mineral water can be used for nutrition, heath caring and disease prevention as well as drinking”

SANETA集团董事长Mr. Cursel Ercan
Chairman of SANETA Group: Mr.Cursel Ercan





2006年12月13日，达意隆与土耳其SANETA集团正式签订了4条整线设备定单。合同总额270万美金。上图为SANETA集团董事长Mr. Gursel Ercan (左四)，销售经理Mr. Unsal Anli (右三) 与达意隆董事长张颂明先生 (左三)、总裁王忠先生 (右二) 及此项目相关人员在这意隆签订设备定单。

On December 13, 2006, Tech-Long signed a contract formally with Turkey SANETA for an order of 4 whole line equipments, with the total capital about US ¥ 2.7 million. In the picture above, Chairman of SANETA company Mr. Gursel Ercan (4th from the left), Sales Manager Mr. Unsal Anli (3rd from the right) and President of Tech-Long Mr. Zhang Songming (3rd from the left), CEO of Tech-Long Mr. Wang Zhong are signing a contract in Tech-Long.

土耳其SANETA选用达意隆4条整线

Turkey SANETA selects 4 whole lines produced by Tech-Long

目前，达意隆公司成功完成了与土耳其SANETA集团正式签订了四条整线设备定单，四条线设备已经在生产中，一场打造出口“精品”的战役在达意隆工厂开始了。在公司领导的指挥下，一项周密的计划下达到有关单位和生产一线。生产分厂马上行动起来，焊接现场焊花竟开，辊子堆焊在焊尘中日夜兼程，机加操作者们马不停蹄，装配工人们争分夺秒。计划用4个月时间完成所有设备，满足土耳其用户的需求。

At present, Tech-Long has successfully signed a contract with Turkey SANETA Group for 4 whole line equipments, which are under production. Thus a campaign of “creating excellent product for export” is under way in Tech-Long factory. Under the guide of leaders, a detailed plan is sent to relevant departments and manufacturing factory. In the factory, welding, rolling, operating, and assembling are all under way. It is planned to manufacture all equipments within 4 months so as to satisfy the requirement of Turkey users.

2006年12月10日，土耳其知名的SANETA公司总裁Mr. Gursel Ercan来到中国达意隆，与达意隆的领导进行了会谈。他直截了当地提出：需要达意隆在5月1日前提供4条线生产设备，在广州装船运往土耳其。

On December 10, 2006, the well-known Chairman of SANETA in Turkey, Mr. Gursel Ercan came to Tech-Long in China and had a meeting with its leaders. He required that 4 whole line production equipments be finished before May 1 and delivered to Turkey by ship in Guangzhou.

为了对达意隆的设备及综合实力有更深层的了解，SANETA集团2006年11月后的一个月先后两次到达意隆广州生产基地进行考察，和达意隆的工程师与技术人员进行了多次的技术交流。之后，他们分别到广州乐百氏、生力食品饮料有限公司、广州怡宝、广东太古可口可乐等公司考察达意隆设备的运行状况。同时，在这一个月的时间里，达意隆也委任多名工程师、技术人员专门负责此项目，将达意隆的设备和配线情况对SANETA的工程师和总裁进行了深入的探讨。SANETA公司总裁Mr. Gursel Ercan带领相关技术骨干重点检查了生力食品饮料有限公司，包括其质量、配管质量、配管外观、涂装清洁度等都达到要求，其中大小件的主要项目加工合格率达到98%以上，装配合格率为100%。到过许多国家的Mr. Unsal先生惊讶地说：“没想到中国有一家能力这么强的企业，现在我们放心了，相信不久，中国达意隆的设备一定会在全世界的高端客户中运转”。

To get a better understanding of Tech-Long equipments and comprehensive strength, SANETA Group visited the produce base of Tech-Long in Guangzhou twice in November, 2006, and had many technical communications with Tech-Long engineers and technicians. Later, they visited Guangzhou Robust, San Miguel Food & Beverage Co., Ltd., Guangzhou Cestbon, Guangdong Swire Guangdong CocaCola LTD to check the operation of Tech-Long equipments. At the same time, in the same month, Tech-Long appointed many engineers and technicians in charge of this project, who had deep communication with SANETA engineers and Chairman on Tech-Long equipments and assembling. Chairman of SANETA Mr. Gursel Ercan, with relevant technical staff, checked San Miguel Food & Beverage Co., Ltd., including the quality, pipe quality, pipe appearance, and coating clean degree. When seeing that the ratio of main process items qualified reaches up to 98%, and the ratio of assembling qualified is up to 100%, Mr. Unsal, who has visited many countries, said surprisingly: “I have never imagined there is such a strong enterprise in China, and we are confident now, and we believe that in the future China Tech-Long equipments will succeed in the world high-tech enterprises.”

这4条线设备将投入使用在SANETA集团下的矿泉水工厂、冰红茶工厂及五加仑工厂，通往欧洲市场的大门就这样向达意隆敞开了。2002年，当达意隆第一台旋转式全自动8头吹瓶机RJM8在广州工厂内诞生并成功试吹时，在国内包装业引起了轰动：中国人终于拥有了自己生产并可以和进口设备竞争的吹瓶设备！今天，我们不断进取的勇气已经成就了又一个梦想，与欧洲的高端设备竞争，并在管理模式、销售方式与职业精神、投资战略、人才招聘、思想观念等方面，将自己定位在全方位的发展战略道路，与用户共同进步！

The 4 line equipments will be put into use in the mineral water factory, iced black tea, and 5 gallon factories in SANETA Group. Therefore, the door to European market opens to Tech-Long. In 2002, when the first revolving full automatic 8-head bottle blow molding machines RJM8 was developed and successfully try blown in Guangzhou factory, it aroused a stir in domestic packaging industry: Chinese people finally possess its own self-produced bottle blow molding equipment which is comparable to imported equipments! Today, owing to our keeping improving spirit, we have made another dream come true, that is, competing with European high-tech equipments. We will hold complete strategic development in management mode, marketing style, professional spirit, investment, personnel employment, and concepts and we will keep progressing with our users.

Text and pictures by: Tech-long Owen/Mukee

苏丹之旅

Tour to Sudan

2006年8月，达意隆第一次出访苏丹，为用户提供项目协助及考察当地市场。苏丹位于非洲东北部，是非洲面积最大的国家。从首都喀土穆到另外一个城市克里马350公里的路，一路风沙，小中巴开着窗户，一个小时就已经完全灰头土脸，身上都是沙子了，包括首都喀土穆都是整日有风沙，可以说只有尼罗河沿两岸的范围内有人居住，其他地区全部被沙漠覆盖，这也是作为非洲第一大国的苏丹却只有3, 4千万人口的原因之一。

In August of 2006, Tech-Long visited Sudan for the first time, for providing the local customers with project cooperation and market investigation. Sudan is the largest country in Africa by area, located in the northeast of Africa. In the 350-mile way from capital city-Khartoum to Quelimane, sand in wind overflowing, you will get sand and dust all over the body in just one hour with the window of the minibus opened and the capital city Khartoum is all the same. Therefore, we can say that in Sudan people just live along River Nile and other parts of the country is covered totally by desert, which is one of the reasons why there are only 30-40 million people in the largest country of African.

苏丹经历了数十年内战，近年来在苏丹政府的努力和政府间发展组织协助下，苏丹政府先后与南方 8 个反政府派别签署《和平协定》，和平解决南方问题，巴希尔政府执政以来，采取了一系列整改措施，苏丹经济状况有所好转；现在的苏丹基本已处于百废待兴中，在未来的十年内将飞速发展。今年的阿拉伯各国首脑峰会就是在苏丹喀土穆召开，苏丹有望发展成为整个非洲文化，政治，经贸中心。

Having suffered from civil war for several decades, Sudanese government has solved the problem of stability by signing "peace agreement" with eight southern anti-government groups under the efforts of Sudanese government and Inter-Governmental Authorities on Development. Ever since the period of Bashir government, a series of reform measures

are imposed which make the economic situations of Sudan take a favorable turn. Everything in Sudan is waiting to be improved, and Sudan will develop at full speed in the coming ten years. The head summit of Arabian countries of this year is held in Khartoum Sudan, and Sudan is expected to become the cultural, political, commercial center of the whole Africa. We visit the factory of coca-cola and Pepsi Cola, acknowledging that all of the equipments they use are Germany & Europe imported. And the local third largest company Vinta Cola is even adopting the second-hand equipment of Europe, which means a new challenging opportunity for business for the civil manufacturers.

我们参观了可口可乐、百事可乐工厂，了解到目前他们使用的还全部是德国、欧洲的进口设备；而当地第三大的Vinta Cola采用的则是欧洲二手设备，对国内制造商来说，这也是一个新的挑战商机。We visited Coca Cola and Pepsi Cola factories, and got to know that at present they are still using imported equipments from Germany and Europe; the local third largest Vinta Cola are applying the second-hand equipments from Europe, which is a new challenge and opportunity for domestic manufactures.

达意隆在苏丹有三个项目，目前已经成功的启动了一个约300万美元的项目，这个项目安装了达意隆的水处理RO系统。目前用户已经设计好现代化的模板工厂，不久将正式投产，这个工厂将成为达意隆供苏丹用户参观的模板工厂。另外两个项目投资金额全部超过180万美元，这两个用户一致认为达意隆的设备是最能符合他们要求的设备，达意隆能够为他们提供周到的服务，两个项目正在启动过程中。

At present, a project of 3 million US dollar has been started in Sudan for installing the RO-water system of Tech Long and it is just one of our three cooperation projects with Sudan. Recently, users have finished designing the modernized sample factory, which will be put into operation in a short time, and this will be the first sample factory of Tech-Long for Sudanese

users to visit. The investment amount of other two projects are all over 1.8 million dollars, and the users of these two projects agree that equipments of Tech-Long are the most suitable ones for them. Tech-Long is ready to provide them with considerate services during the process of these two projects.

苏丹是一个干旱少雨的国家，年降雨量不足100毫米，解决好水的问题一直是苏丹政府的国策。政府也将逐步解决半沙化水利，实现港海水淡化。苏丹水力资源丰富，有2 0 0 万公顷淡水水域，饮用水前景十分广阔。中国一瓶500毫升矿泉水在超市约一块钱，在苏丹当地却卖到了3块钱，苏丹目前仅有土耳其人投资经营的一家超级市场，饮用水和饮料大部分来自阿联酋，利比亚等国家，随着苏丹同中国多元化合作的加强，原油出口供应的增加，当地居民的生活水平也将逐步提高，苏丹的水，饮料的需求量将不断增长，市场前景非常广阔，苏丹也将成为达意隆在非洲的重要市场之一。Sudan is an arid county with little rainfall of less than 100 mm per year. Therefore, finding the appropriate solution to the water crisis is always the notional problem of Sudanese government. And the government will also solve the semi-desertification water problem, realizing the desalinization of the harbor water. Sudan has abundant water resource covering 2-million-acre fresh water area, and the source of drinking water is utterly sufficient. The price of a bottle of 500 ml water is about one yuan in supermarket but the price turns to be three in Sudan. At present, there is only one supermarket invested and operated by Turkey. Most of the drinking water and beverage are imported from the U.A.E. and Libya etc. Along with the further of the pluralism in Sudan, the export increase of crude oil, the living standard of local people is increasing and the demand of water and beverage is growing as well. All the above shows that the potential is extremely vast and Sudan will become Tech-Long's one of the most important markets in Africae.

Text and Pictures by:Tech-long Paul/Mukee

Sudan

苏丹的城市具有欧洲风格或阿拉伯风格。每个城市基本上都是由中心区和外围区两部组成。城市四周围绕着城墙，城外郊区则与热带草原的村落相同，城市位置与水源有密切关系。

Cities of Sudan is overflowed with European and Arabian atmosphere. Every city is made up of two parts: Central District and Peripheral District. The city is surrounded by city wall, and the outskirts out of city is the same as the villages in tropical grassland. The location of the city has close relationship with source of water.

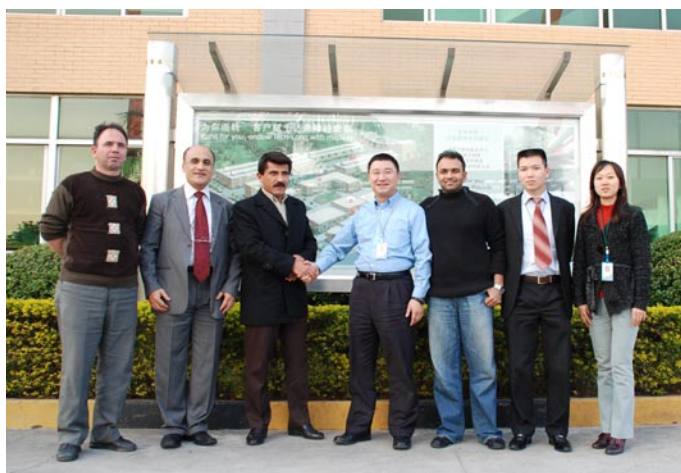
苏丹的饮料市场产品不是非常丰富，有非常大的发展空间。The beverage market is not very big in Sudan, but sees a hopeful future.



国际市场简讯报导

News on International Market

1

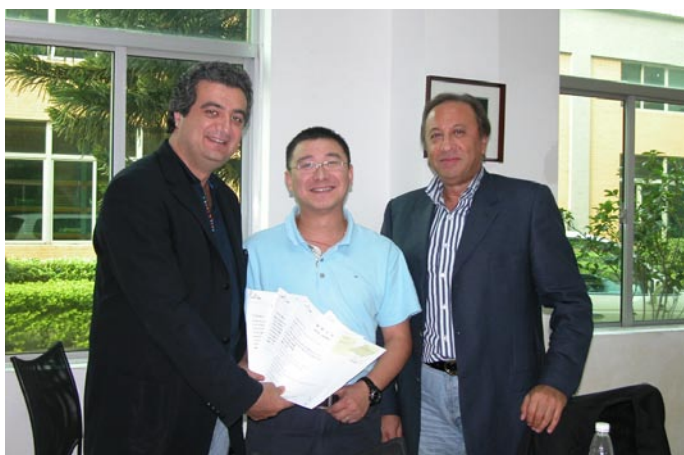


11月22日, 伊朗Behbahan Faridchips Co.与达意隆正式签订一套含汽灌装整线设备订单, 合同金额为150万美金, 右图为Behbahan Faridchips总经理Mr. Farzaneh(左三) 与达意隆国际销售总监张胜(左四)在达意隆总部签约后合影。

On Nov 22, Iran Behbahan Faridchips Co. and Tech-Long signed formally about an order of carbonized filling whole line equipment, with the total capital about US \$ 1.5 million. In the right photo, the general manager of Behbahan Faridchips Mr. Farzaneh (3rd from the left) and Tech-Long International Sales Supervisor Zhang Sheng (4th from the left) are pictured after contract in Tech-Long Head Office

Text by:Tech-long Choirma/Mukee
Picture by:Tech-long Adong

2



2006年10月20日, 埃及Aqua Belta与达意隆签订一条6升水灌整线订单, 合同总额为127万美金, 左图为Aqua Belta公司总裁(managing director) Mr.Alex J.Schwairy (右一)、营销总监 (market manager) Mr.Shkry(左一) 与达意隆国际销售总监张胜在达意隆总部签约现场。

On October 20th, 2006, Egypt Aqua Belta signed a contract with Tech-Long on an order of one 6-liter pour-Packaging whole line, with the total capital of US \$1.27 million. In the left picture, Chairman of Aqua Belta (managing director) Mr. Alex J. Schwairy (1st from the right), market manager Mr. Shkry (1st from the left) and Tech-Long International Sales Supervisor Zhang Sheng are contracting in Tech-Long Head Office.

Text by:Tech-long Adam/Mukee
Picture by:Tech-long Mukee



生力现场工程总监Danny (左一)、Val(左二)、水处理设备专家Linar(左三)、水处理车间主王伟江(右二)与达意隆项目负责人曾帆(右一)在广州达意隆总部进行生产现场设备平面布置确认。

The Engineering Project Supervisor of San Miguel Danny (1st from the left), Val (2nd from the left), expert of water treatment equipment Linar (3rd from the left), director of water treatment workshop Wang Weijiang (2nd from the right) and principal of Tech-Long project Zeng Fan (1st from the right) are confirming the arrangement of product equipments in Guangzhou Tech-Long Head Office.

3

生力集团项目,
达意隆顺利交付全部设备

*San Miguel Group Project,
Tech-Long successfully finished the
production of all equipments*

达意隆与生力(广东)食品有限公司(以下简称生力)的合作是达意隆到目前为止设备品种使用最全面的一项精品工程, 同样是一个非常复杂的项目, 达意隆自与生力签订高达1.5亿元的设备订单以来, 已于2006年4月至7月期间顺利交付了水处理系统、调配系统等设备, 并陆续从7月到12月期间交付了三条整线。

The cooperation between Tech-Long and San Miguel (Guangdong) Food Co., Ltd. (San Miguel in short), with the most complete equipments varieties involved, is a most delicate and complex project to Tech-Long by far. Tech-Long has successfully delivered water treatment system and assembling system equipments from April to July in 2006 after it had signed a contract up to RMB150 million with San Miguel, and successively delivered 3 whole line equipments from July to December.

2006年12月, 达意隆第一条热灌装线已在生力广东顺德龙江的生产基地全部就位, 这条生产线将在2007年2月17日正式进入调试阶段; 随后, 达意隆将陆续调试已经交付完成的CSD灌装线及水灌装线, 预计到2007年7月, 生力将正式投入生产, 产品也将陆续进入饮料市场。

On December, 2006, the first Tech-Long hot filling product line was finished completely in Guangdong Shunde Longjiang produce base, and will enter into debug stage on Feb 17, 2007. Subsequently, Tech-Long will successively debug finished CSD filling line and water filling line. It is predicted that by July, 2007, San Miguel will be formally put into product, and the products will successively participate into beverage market.

Text by:Tech-long Fan/Mukee
Picture by:Tech-long Lv Bin



企业长廊 Enterprise Story

达意隆斥巨资3000万引进大型数控加工中心，加工水平跃居世界先进行列
Tech-long furnished 30 million yuan to adopt the large-scale numerical control machining center, and the processing level leaps to the advanced ranks of the world



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■ 品质是企业生命的源头
Quality is the source of an enterprise's life

达意隆在发展过程中，一直都确信品质所带来的举足轻重的作用，对“品质是企业生命的源头”也有着非常深刻的理解，早在2000年就开始着手ISO的认证工作，同时开始向企业所有员工导入质量意识，不断加强员工的品质教育，从ISO的质量体系所体现的质量意识到质量对企业生存发展的影响；从人员方面的软件教育到设备上、量测具上的硬件增设，都做了重点投资，多方面提高员工品质监控水平；在配套设施方面也加大了投入，订购了相关的检测设备和仪器，设立了品控组织。2001年，达意隆取得了ISO德国莱因公司的国际质量体系认证，同年，达意隆凭借技术指标和质量保证的优势顺利地取得了上海申美可乐系统内的第一张灌装机的订单，从而开启了达意隆飞速发展的新的篇章。

In the course of development, Tech-Long always believes the very important function that quality brings, and has a deep understanding to “quality is the source of enterprise's life”. As far back as in 2000 the work of ISO authentication started, at the same time began to introduce quality-mind to the staff, strengthen quality education of staff; from the quality mind embodied in the ISO quality system to the impact of quality on the enterprise's survival and development; Special investment are put in from software education for personnel to the hardware setting up of the equipment or measurement tools, improve staff's quality and control competence in many aspects; Increased input in auxiliary facilities, ordered relevant checkout equipment and instrument and set up product control organization. In 2001, Tech-Long obtained the ISO

达意隆从创建到成为饮料包装设备制造行业中的领航者，只用了短短的五年时间，在这个过程中我们认为设备质量的保证是成功的最关键部分。

Tech-Long used only five years to become a leader in beverage packaging equipment manufacturing trade from its establishment. We think in this course the assurance of the quality of the equipment is the most key part of success.



大型数控加工中心
Large numerical control
processing center

international quality system authentication of Rhine Company of Germany. At the same year, Tech-Long obtained the first order of filling machine of Shanghai Shenmei Coke system smoothly relying on the advantage in technical indicator and quality guarantee, thus opened the new chapter for the development at full speed of Tech-Long.

■ 达意隆创建初期对零部件品质的控制

*Quality control for spare parts during
embryonic stage of Tech-Long*

达意隆在创建初期受自身条件限制，不得不将一些零部件发外加工，这就要求对一些大型精密零部件的加工和制造商的选择非常严格，达意隆采取了三方选定一票否决的方式进行，即零件的加工商在设备、场地、人员、技术符合加工条件后，再由公司的技术部、品控部和工艺师三方在现场认可后方执行委托加工，三方若有一方否决即放弃此加工制造商，从而有力地保障了零部件的加工质量，使达意隆的品牌在用户中的地位逐步提高。

Limited by the condition on the initial stage of establishment, Tech-Long had to have some spare parts processed outside, this demands strict selection of manufacturers to process and produce some large-scale accurate spare parts. Tech-Long took the mode of “selected by three sides and rejected by one vote”, namely when the part manufactures meet the requirement of processing in the equipment, place, person, technology, the technical department, product control department and technologist must approve at site, and then the consigned processing can start; if one of three sides reject and the processing manufacturer should be given up, thus the processing quality of the spare part was ensured effectively, the position of Tech-Long improves progressively among users.

■ 检测中心 确保零配件的精度

Monitoring center

Guarantee the precision of the accessories

企业要发展，就要在各方面进行长期的投入，达意隆在发展过程中也不断地加大投入，不光是在技术、人员、场地方面，质量保证的投入更是达意隆的重点投资，我们认为检测设备是控制手段的根基。

The development of enterprises requires long-term input in various fields. Tech-Long also increases input constantly in the course of development, not only in the aspects of technology, personnel, place, the input in quality guarantees is a key investment of Tech-Long. We think the checkout equipment is the foundation of control means.

在新产品推出前，达意隆首先想的不是如何推出市场，而是如何检测。比如在第二代吹瓶机推出前，达意隆首先的决策是建立高标准、高精度的检测中心，首次投资就达到二百万元，购入了硬度计、光学仪、色普仪、红外线测温仪、三座标测量仪等一批世界领先级检测设备。如红外线测温仪（日产）可精确地测量出模具内外的温度和其

它零件的表面温度，从而可准确地向技术人员提供参考数据，以便选择最适合材料和配件；而三座标（美国法若级合资）测量范围可精确到5um（微米），检测范围X轴方向10-800mm，Y轴由方向0-1200mm，Z轴方向0-900mm，可精确地测量出每个零配件的误差范围，从而有效地控制了零部件的质量关，同时向技术人员、品质人员提供了数字信息，另外检测中心还配有光学仪、色普仪等专业控测设备，从多方面确定零件加工后的可信、可行度。

Before the new products are introduced, what Tech-Long thinks is not how to put out the market, but how to measure. For example before the second generation of bottle blowing machine is produced, the first decision of Tech-Long is to set up high-standard, high-accuracy monitoring center. It invested 2 million yuan at the first stage to buy a batch of the advanced measuring equipment such as sclerometer, optical instrument, chromatograph, infrared thermoscope, three coordinate measuring apparatus, etc. The infrared thermoscope (made in Japan) can measure the temperature inside and outside the mould and the surface temperature of other parts accurately, thus offer accurate reference data for technical staff to choose suitable materials and fittings; The measure range of three coordinate (joint venture of U.S.A. and France) can be precise as 5um (micron), testing range along X axle direction is 10-800mm, and along Y axle is 0-1200mm, and along Z axle direction is 0-900mm, the error range of each of accessories can be measured accurately, thus the quality of the spare parts can be controlled effectively, at the same time it offered digital information to technical staff and quality personnel. In addition the monitoring center is furnished with professional control and measuring equipment such as the optical instrument, chromatograph, etc. which can ensure the quality and feasibility of the part from many aspects after it is processed.

■ 加工中心

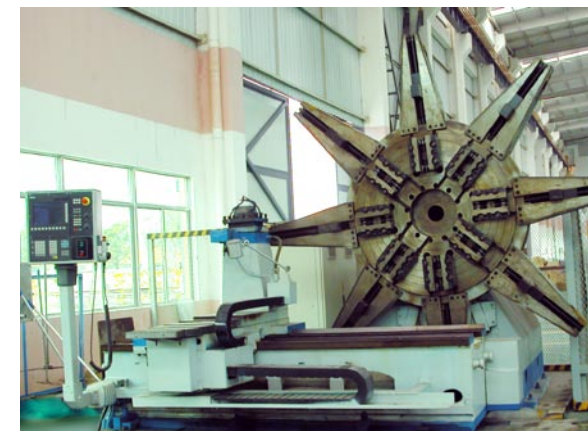
一流数数控设备多方面确保加工部件的品质

Machining center

*The numerical control equipment
guarantee the quality of processing part
in many aspects*

从2003年起，达意隆开始进行大型、高精密的设备投入。首先，增购了一台汉川加工中心，二台永进加工中心，二台德马数控机床，三台德马加工中心和一大批其它辅助设备，从而将整厂设备的加工能力提高了一倍，加工精度提高了一个等级，此批新购设备全部用于加工达意隆各类整机产品中的中小型的关键部件、精密配件和模具工件，从而使中小型的关键部件达到企业自制自控化。

From 2003, Tech-Long started to invest in large-scale and high-precision equipment. First of all, it purchased a Hanchuan machining center, two Yongjin centers, two Dema numerical control lathes, three Dema machining centers and other large quantities of auxiliary equipments, thus doubled the working ability of the equipment of the whole factory, machining and the machining accuracy has been improved. This batch of newly purchased equipments are all used in processing medium and small-scale key parts, accurate fittings and mould work pieces of all kinds of complete machine



大型数控加工中心
Large numerical control
processing center



大型数控加工中心
Large numerical control processing center

products of Tech-Long, thus the medium and small-scale key parts can realize automatic control by the enterprise.

2004年，达意隆再次投入了约2000万元购进了一批当今国内为数不多、具有代表性的大型数控设备：五米数控立车一台，加工直径5000mm，加工精度0.04mm，加工光洁度1.6，可车圆型、弧型、锥型等各类大型工件；一台TK6916/L80数控落地铣镗床，镗轴直径160mm，加工范围X轴方向8000mm，Y轴方向3000mm，Z轴方向1200mm，另外配有一个垂直铣头及万能铣头、一个高精度回转3000mmX3000mm工作台，整台设备的任意重复定位精度达0.05mm，加工精度可达0.03mm以内，加工粗糙度可达1.6mm；一台3.2米端面车，加工直径3200mm，可加工大型的环型、罐环形、板类件，加工精度达0.04mm，光洁度达1.6。这三台大型数控设备均已在2005年8月份投入使用，一改过往达意隆有控制而制造能力较弱的问题，使达意隆成为既有先进的检测设备和完善的质量控制，又有精度一流达到国际先进水准的加工设备的饮料设备制造商，从而结束了大型加工件靠外包加工中出现的周期长、反应慢、控制失误等瓶颈问题。

In 2004, Tech-Long invested about 20 million yuan to buy a batch of typical large-scale numerical control equipments that seldom seen in China: a five-meter numerical control vertical lathe machine, with a processing diameter of 5000mm , a machining accuracy of 0.04mm, a processing fineness of 1.6, and it can be used to process round, arc ,tapered and all kinds of full-length work pieces; A TK6916/L80 numerical control floor milling-boring machine, with a bore axle diameter of 160mm, and the processing range is 8000mm along X axle direction , 3000mm along Y axle direction , and 1200mm along Z axle direction. Also it is furnished with one vertical mill head and omnipotent mill head, a high precision turning 3000mmX3000mm workbench. The arbitrary repeated orient precision of the whole sets of equipment can reach 0.05mm , the machining accuracy can reach within the 0.03mm, the roughness of processing can reach 1.6mm; One 3.2 terminal surface car, with the processing diameter of 3200mm, which can process large-scale ring type , pot ring and board type pieces, the machining accuracy reaches 0.04mm, and smooth finish is up to 1.6. These three large-scale numerical control equipments came into operation in August 2005. Tech-Long's problem of having strong control ability but weak manufacturing capacity is solved, enable Tech-Long to become a beverage equipment manufacturer who has not only advanced checkout equipment and complete quality control, but the processing equipment with first-class precision and reaches the international advanced level, thus solve the bottleneck problem of long cycle, slow response, and controlling fault

when the large-scale processing pieces must be made outside.

大型数控加工设备主要用来加工达意隆主导产品吹瓶机的底架、回转支架、灌装环等大型零部件，用如此先进的数控设备所加工出来的大型零部件可确保与技术设计要求的精度达到一致，从而保障设备高速运转平稳、不跳动；定位灌装、吹瓶准确无误；设备还可以更超高速的运转，累积误差细微可控。整机装配运转可提高设计预定的运转速度，运作平稳无振动异响，能耗减底灌装吹瓶定位准确，大幅降低灌装、吹瓶的报废率，有效的提高产能，为用户降低了生产成本。

Large-scale numerical control process equipment is mainly used in large-scale spare parts such as chassis, gyrated support, filling ring, etc. of the bottle blowing machine, the leading product of Tech-Long. The precision of large-scale spare parts processed with such advanced numerical control equipment can be guaranteed to be consistent with that of designing requirement, thus guarantee the steady running of equipment at a high speed and free of vibration; The oriented filling and bottle blowing is accurate; The equipment can run with ultrafast speed, the slight accumulated error can be controlled. The final assembly running can improve and predetermined speed in the design, the operation is steady, without vibration and abnormal sound; the energy consumption has been reduced to the bottom and the localization of filling and bottle blowing is accurate, reduce the scrap rate of filling and bottle blowing by a wide margin, improve the productivity effectively and reduce the production cost for users.

■ 与用户的合作 *Cooperation with users*

达意隆的制造依靠先进的控制设备和一流的数控设备来控制零部件及加工部件的品质，在设备品质上真正为用户解决了后顾之忧，多年来达意隆不仅在设备的设计与技术方面给了用户信心，达意隆还将继续用管理与品质控制设备相运用的手段来确保产品品质回报用户。

Tech-Long uses advanced detecting equipment and first-class numerical control equipment to control the quality of spare parts and processing parts solve the worry of users on the quality of the equipment. For many years Tech-Long has not only given users confidence in design and technology of the equipment, it will also adopt the means of combining the management with quality control equipment to guarantee product quality and reciprocate users.

*Text by:Tech-long Zhang Zanming/Mukee
Picture by:Tech-long Hakim/Mukee*



检测中心
Monitoring
center

