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# 热烈欢迎您荏临 第二十八届中国国际塑料橡胶工业展览会 达意隆展位

# Welcome to visit Tech-Long

The 28th International Exhibition on Plastics and **Rubber Industries** 



时间: 2014.04.23-26

Date: 2014.04.23-26

地点:中国·上海新国际博览中心(浦东)

达意降展位号: E5 J41(E5馆)

Tech-Long Booth: E5 J41(E5)

Add: Shanghai New International Expo Centre, Pr China(Pudong)









# 守望丰收

# Expecting Harvest

昨天,我们头顶青天,脚踏泥泞 昨天,我们脚踏实地,不懈追求 今天,我们丰收在望,一路传递 收获的喜悦

今天,我们硕果累累,一路领略 丰收的实况

我们曾经憧憬,我们曾经追求 我们经历风雨,我们激情澎湃 我们专心专业,我们追求卓越

如今,

我们共同感动,我们共同欢唱 丰收的氛围在蔓延高涨 辛勤的汗水要在丰收的战场上 挥洒 释放 接下来

是低下头的细细思量 思量劳动的甘苦 思量收获的幸福 我们感受着一份沉淀 我们坚定着一份执着 我们信守着一份信念

未来,

我们翘首企望 我们庄严承诺: 将始终信守价值观、使命感和战略目标 斗志昂扬,勇往直前

未来,

当迈步从头越!

Yesterday, we worked hard day and night and overcame all difficulties
Yesterday, we stood on solid ground and never ceased our hearts to go forward Today, we are expecting a harvest,
To convey our happiness
Today, we are enjoying fruitful achievements,
To appreciate a real harvest
Once we had dreams; once we had pursuits
We have gone through trials and hardships; we have been energetic and passionate
We have been concentrated and

Now
We are moved together, singing joyfully together
The atmosphere of the harvest is spreading and flying high
Our arduous sweats are going to burst

PROFESSIONAL; WE HAVE KEPT PURSUING FOR

exceLLence

INTO BLOOM
ON THE BATTLefieLd for a harvest

Then
We are going to think carefully
To think about the sweetness and bitterness
in our work
To think about the happiness of the harvest
We feel its heaviness
We stick to our perseverance
We keep our belief

The future.

We are Looking forward to

We solemnly promise: we will always abide

by our values, missions and strategic goals

We will always work with high morale and

march forward courageously

The future
Starts now from the Beginning!









# 实力为王,奏响丰收乐章 COMPOSE A SONG OF HARVEST WITH ACTUAL STRENGTH

风雨坎坷拼搏路,逆流激进迎丰收。2013对达意隆来说可谓"收获颇丰"。面对全球经济低迷、资源需求持续、成本上升、环境可持续性要求、市场竞争加剧等多个考验,达意隆凭借着超强的企业实力,在研发创新、品牌形象、营销业绩、企业荣誉等各方面都获得可喜的成绩,强硬的技术力量为达意隆摘取了沉甸甸的果实,也进一步巩固了达意隆在国内液态包装行业的龙头地位。

#### 丰收乐章一:

#### 新产品问世,助力"体系升级"

2013年,达意隆 "超洁净定量灌装吹灌旋一体机" 震撼上市。该产品的设计理念引入了更多客户的需求和标准,不但在技术上为业界最先进,操作实用也更为专业化、人性化。作为行业中的标杆企业,达意隆凭借自身的实力,对技术研发一直倾情关注。此项新产品的问世,率先为达意隆的丰收图勾勒出一道优美的曲线。

#### 丰收乐章二:

#### 项目验收,再造"口碑王牌"

2013,达意隆多个项目验收大获全胜,这些项目不论产品,不分地域,达意隆均以优质的设备与良好的服务获得客户的高度认可。对达意隆而言,认可即是信赖,信赖汇聚口碑。实力的体现无需惊人的举动,无需豪奢的剪彩,也无需声势浩大的宣言。在产品同质化的热流中,"口碑"是一种通行的语言。良好的口碑将为达意隆的发展注入更深刻的内涵。

#### 丰收乐章三:

#### 荣誉不断,闪耀"品牌之光"

作为可口可乐、百事可乐、雀巢等全球知名企业旗下全资生产工厂指定的中国唯一一家供应商,2011年,达意隆以技术创新获得了可口可乐公司颁发的液态产品包装行业唯一的最佳工艺奖。今天,达意隆再次用优良的技术设备获得可口可乐的认可一中高速吹灌旋整线设备取得了进入可口可乐全球系统的通行证!这无疑成为达意隆的又一光环。2013的荣誉,几乎囊括了所有重要奖项,这是政府、社会对达意隆实力的认可。闪耀光芒的同时,达意隆的商标取得马德里成员国多个国家的认可,进一步提升了达意隆在国际市场上的知名度。未来,达意隆的品牌之路将愈迈愈宽。

#### 丰收乐章四:

#### 骄人业绩,一显"王者风范"

品牌建设、技术推广、精细化管理往往能推动销售的快速增长。2013,各方面都喜获丰收的达意隆,营销领域亦取得了卓越战绩。尤其欣喜的是,第一条无菌生产线投入生产,为达意隆的2013挥下了浓墨重彩的一笔。这是由营销引来的技术领域尝新,更是达意隆在市场上具进攻性的表现。企业高速增长源自于企业对核心业务的理解以及关联领域的快速渗透,相信这也将成为达意隆拓展领域的希望之星。



Through trials and hardships, we fight all the way against the difficulties for the harvest. The year 2013 is a "harvest year" for Tech-Long. By virtue of its extraordinarily powerful corporate strength, Tech-Long have made remarkable achievements technology innovation, brand image, sales achievement and enterprise honors, despite of multiple challenges such as the depressed global economy, continuous resource needs, increasing costs, the requirement of environmental sustainability, intensified market competitions, etc. The strong technical strength wins fruits for Tech-Long and further consolidates its leading role in the industry of domestic liquid packaging industry.

# Song of Harvest I: A new product supports "system upgrading"

In 2013, Tech-Long launched the "Ultra Clean Volumetric Filling" BFC (blowing-filling-capping) Combi-block, which is a great shock to the market. The design concept of this product takes in more customer requirements and standards. Technically, it is the most advanced in the industry. Moreover, its operation is more professional and user-friendly. As a benchmarking enterprise in this industry, Tech-Long has been devoted itself to technical research and development based on its own strength. The launch of this new product draws the first beautiful stroke of Tech-Long's harvest picture.

# Song of Harvest II: Project acceptance tops its goodwill

In 2013, Tech-Long successfully pass the acceptance in lots of projects. In these projects, whatever product it is and wherever it is, by virtue of its excellent equipment and good services Tech-Long has been highly recognized by its customers. For Tech-Long, recognition means trust, which accumulates to a reputation. To demonstrate one's strength, it is not necessary to conduct an astonishing act, or to make an extravagantly luxurious ceremony, or make high-profile declaration. In the trend of product homogeneity, the "reputation" is a prevailing language. A good reputation will inject more profound connotations into the development of Tech-Long.

## Song of Harvest III: Successive honors add "glamour to the brand"

As the exclusive supplier in China designated by wholly-owned production factories of world wellknown enterprises such as Coca Cola, Pepsi Cola, Nestle, etc., relying upon the technical innovation, Tech-Long won the unique optimal technology award in the liquid product packaging industry granted by Coca Cola in 2011. Today, with excellent technology and equipment, Tech-Long is approved again by Coca Cola its medium- and high-speed BFC Combi-block equipment obtain the permit to enter Coca Cola's global system. Definitely, this is another glory of Tech-Long. In 2013, It nearly wins all the important awards from the national grade to the provincial and municipal grade. These awards represent the recognition of Tech-Long's strength by the government and society. Glistening with these glories, Tech-Long also has its trademark recognized by several member states of Madrid Agreement, which further enhances Tech-Longs popularity in international markets. In the future, Tech-Long will stride towards a wider and wider brand road.

# Song of Harvest IV: Outstanding performance manifests the "champion position"

Brand construction, technology promotion and delicacy management always promote sales to increase quickly. In 2013, while enjoying harvests on all aspects, Tech-Long also makes outstanding achievements in marketing. In particular, its first sterilized production line has been put into operation, which constitutes a shining point for Tech-Long in 2013. This is the technical innovation arising from marketing as well as an aggressive performance of Tech-Long in the market. An enterprise's rapid growth comes from its own understanding of its core businesses and its rapid penetration to related domains. We believe it will become Tech-Long's star of hope in its expanding fields.

#### 相关链接:

## 百川汇海·深思本源·乐享丰收

#### -2013年营销总部年会日前成功举行

2013年12月23日,广州达意隆包装机械股份有限公 为客户提供更优、更快的全方位服务。 司如期召开一场主题为"百川汇海・深思本源・乐享 丰收"的年会。

公司总部张崇明先生及达意隆国际各服务代理、营 销总部成员等100余人与会。会上,张崇明先生做了 点发言:项目的全面验收体现客户对达意隆的高度 的开启。未来,我们将紧绕"为你而转"的理念,

华灯初上,大家其乐融融共进晚宴。董事长张颂明 先生、副董事长陈钢先生、营销总部张崇明先生、 各事业部总监、国际各区域代理莅临现场,与大家 共庆盛典! 席间,公司高层领导纷纷致辞,充分肯 总结发言,就多个项目全线验收的骄人业绩作了重 定2013年所取得的累累硕果。舞蹈、小品及情景剧 等表演精彩纷呈, 观众尽享视听盛宴。晚会在欢乐 认可,对达意隆而言,可喜的成绩更意味着新里程 的气氛中缓缓落下帷幕,大家举杯相庆,共同祝愿 更美好的2014年!



**Relevant links:** 

# PRESENTING ACHIVEMENTS, PONDERING SOURCE, ENJOYING HARVEST

-2013 Annual Meeting of Sales and Marketing Headquraters held successfully









Guangzhou Tech-Long Packaging Machinery Co. Ltd. held its Sales and Marketing Headquraters' annual meeting on Dec.23, 2013. The theme of this annual meeting is "Presenting Achivements, Pondering Source, Enjoying Harvest".

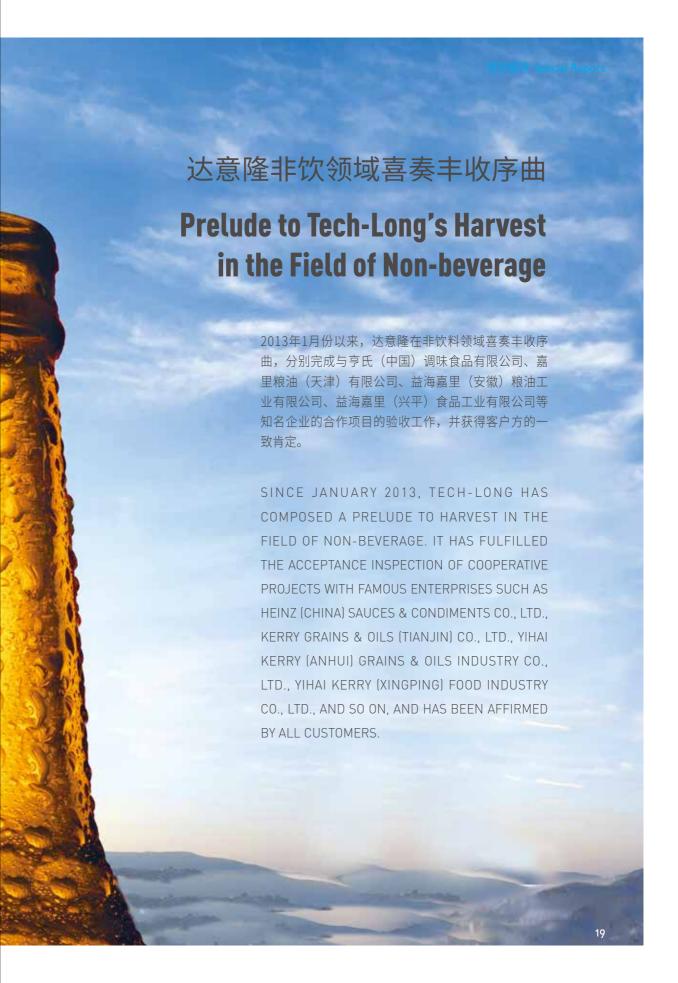
Corporate Headquarters Mr Chongming Zhang, prestigious international agents, and staffs of Tech-Long sales and marketing department took part in the meeting. During the meeting, Mr Chongming Zhang summarized the past one year's working, especially praised some key projects's full acceptance. Full acceptance of a project means the the approval of the customer to Tech-Long's equipment and service. As for Tech-Long, the glorious achievements mean the starting of the new expedition. In future, we will

implement our principle" runs for you" to provide a better and faster service to our customers.

When the evening lights are lit, all the attendees enjoyed the dinner. President of Tech-Long Mr Songming Zhang, Vice President Mr Gang Chen, Managing Director Chongming Zhang, directors of different division departments, intertional agents all arrived and enjoyed the banquet together. During the feast, the senior leaders of Tech-Long gave us a speech one by one and praised the achievements of sales and marketing department in 2013. Opusculum, scene plays, dance etc. were presenting splendidly, all the audience were engjoying in it. In a happy and joyous atmosphere, the meeting drew to a close, all the attendees cheers for each other and wish a better 2014.









#### 发展成长,实力打造品牌

近年来,除了专注于水、饮料领域这一主战线外, 达意隆成功开辟了调味品与日化行业领域。基于 在水、饮料行业积累的传统优势,达意隆将中、高 速的灌装生产线视为主要的目标市场,针对日化产 品包装对异型瓶、异型盖,以及高粘度产品的特殊 灌装需求,不断加强改良设备性能,丰富产品线, 完善产品生产制造能力。同时,不断梳理整合国内 外销售网络、市场、工程、服务、配件等一系列资 源,建立起以客户为向导,提升服务体系,最大化 的为客户创造价值的现代营销服务体系,完美的实 现了产业链延伸。几年间,与宝洁、亨氏、益海粮 油等全球知名企业保持长期稳定的良好合作,用实 力打造出非饮领域新天地。

#### 延续辉煌,底蕴成就未来

骄人的业绩背后,达意隆并未停滞前进的脚步。伴随着非饮料行业的迅猛发展与结构升级,达意隆充分表明了植根新领域的决心与信心。未来,达意隆将进一步加快产品升级和销售网络建设的速度,依托强大的产品优势和迅速拓展的市场网络以及精准的市场策略,继续保持飞速发展的势头,向着极具战略意义的第二市场迈出了更为自信的步伐。

# Grow up in development, build the brand with strength

During recent years, besides its focus on the main battlefield of water and beverage, Tech-Long has successfully explored the field of condiments and daily chemical industry. Based on its traditional edges accumulated in the industry of water and beverage, Tech-Long deems the medium- and high-speed filling production lines as its major target market. According to the special filling requirements of bottles and caps in abnormal shapes for daily chemical product packaging and high-viscosity products, it keeps improving equipment performance, enriching product lines and perfecting its product manufacturing ability. Moreover, it keeps systemizing and integrating domestic and foreign sources such as sales networks, markets, engineering, services and accessories to establish a modern marketing service system oriented at customers, enhancing the service system and creating maximum values for customers, thus realizing the expansion of its industrial chains perfectly. In several years, it has maintained long-term, stable and good

cooperation with globally renowned enterprises such as P&G, Heinz and Yihai Grains & Oils and has built up a new kingdom in the field of non-beverage by virtue of its actual strength.

# Extend the glories and make achievements in the future based on its accumulation

Although having achieved impressive performance, Tech-Long has never ceased to step forward. Along with its rapid development in the industry of non-beverage and structural upgrading, Tech-Long has fully revealed its resolution and confidence in taking root in the new field. In the future, Tech-Long will further accelerate its product upgrading and the construction of sales networks. Relying upon its strong product advantages and dealer networks expanding quickly as well as its creative and accurate market strategies, it continues to maintain the tendency of rapid development and stride more confidently towards the second market which has extreme strategic significance.

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# 实力印证品质

-- 达意隆2013雀巢项目全线验收

## STRENGTH CONFIRMS THE QUALITY

- Nestle Project of Tech-Long in 2013 Fully Accepted





五张验收单,见证达意隆的金牌实力

近日,雀巢验收服务小组喜讯连连:

4月24日,天津雀巢项目完成验收;

5月17日,越南雀巢项目完成验收;

5月31日,巴基斯坦雀巢项目完成验收;

6月29日,上海雀巢项目完成验收;

. . . . . .

一张张带有客户签字的验收单,纷纷由项目负责人带回达意隆。五张验收单,意味着客户对达意隆的设备认可、服务认可、品牌认可!

达意隆成立10多年来,无论是最初的五加仑设备和小瓶水灌装设备等单机的问世,还是2009年生产轻量瓶一体机的破茧而出,在行业内都被冠以"勇于创新"的头衔。2006年,达意隆与天津雀巢签订一台五加仑桶外洗刷机订单,拉开了与雀巢公司合作的帷幕。几年间,迎合雀巢产品对设备的需求,达意隆不断革新技术,提升产品性能,更是在2012年年末,倾力打造出"超洁净定量灌装吹灌旋一体机",新一代的超洁净洗瓶机其中一大特点就是上下瓶机构,其所有传动元件全部移到机架外,确保

机器内部的洁净与易清洁,达到雀巢"卫生"的理念要求。另外所有传动元件用保护罩,防止机器运转夹伤人员,完全达到雀巢"安全"理念要求。灌装机的机架采用隧道式结构,同时弧形顶板、所有折弯角度均大于90°、斜槽式底部、密封型大视窗及锥形视窗框体等特点无一不体现了超洁净、零死角的理念,使得设备更易清洁及净化。

目前,在雀巢客户长期的支持与帮助下,达意隆不断提升自身的研发能力,五加仑整线设备技术已达到世界领先水平,与雀巢集团的合作也进入黄金时段。据不完全统计,达意隆与雀巢集团合作设备已多达20余多,其中含7条超洁净五加仑生产线。此番雀巢公司各地项目的顺利验收,是雀巢对达意隆设备的进一步肯定,也是达意隆对雀巢公司最好的回报,相信双方今后的合作步伐将越迈越远,合作层次将越来越深。

# Five acceptance inspection forms proved the first-class strength of Tech-Long

Recently, Nestle Acceptance Inspection Service Team has reported successes one after another.

On April 24, Tianjin Nestle Project completed the acceptance inspection.

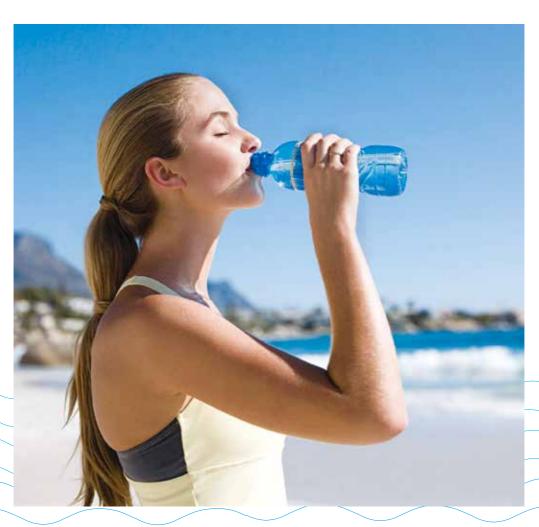
On May 17, Vietnam Nestle Project completed the acceptance inspection.

On May 31, Pakistan Nestle Project completed the acceptance inspection.

June 29, Shanghai Nestle Project completed the acceptance inspection.

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These acceptance inspection forms signed by customers were taken by project leaders back to Tech-Long. These five forms represent customers' approval on Tech-Long's equipment, services and brand.

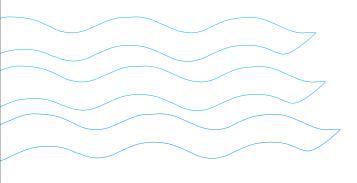


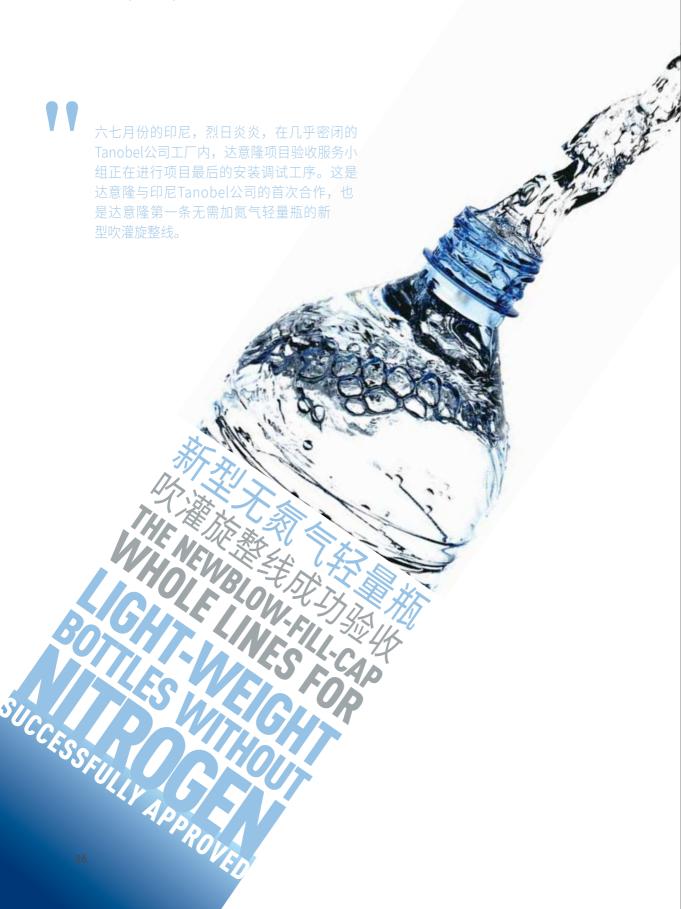
Over a decade since its establishment, Tech-Long has been entitled as the "innovative enterprise" in the industry, whether due to its initial single machines such as 5-Gallon filling equipment and small-bottle filling equipment, or due to its production of lightweight bottle combi-block in 2009. In 2006, the order of one 5-Gallon external washer between Tech-Long and Nestle Tianjin started mutual cooperation. For several years, pursuant to equipment requirements for Nestle's products, Tech-Long has continuously innovated its technology and enhanced its product performance. Moreover, at the end of 2012, it endeavored to build up the "Ultra Clean Volumetric Filling Combi-block". One of the major characteristics of the new ultra clean bottler washer is the bottle raising and dropping mechanism. All of its driving elements are moved outside the rack to ensure the interior of the machine is clean and easy to clean so as to meet Nestle's "hygienic" requirement. Besides, all driving elements have protection covers to prevent machine operation from injuring people and fully meet Nestle's "safety" requirement. The rack of the filling machine uses the tunnel-based structure. In addition, the arc-shaped head plate, all bending angles larger than 90°, slot-type bottom, sealed large window and conic window frame all reflect the concept of being ultra-clean



with no dead corner and make the equipment easier to clean and purify.

Currently, with the long-term support and help of its customer Nestle, Tech-Long keeps enhancing its own research and development ability. Thus, the 5-Gallon whole-line equipment technology has reached the leading level in the world and the cooperation with Nestle Group has entered a golden stage. Now, the cooperation between Tech-Long and Nestle Group on equipment has been over 20, including 7 ultra-clean 5-Gallon production lines. The successful acceptance of Nestle projects in different places is Nestle's further affirmation to Tech-Long's equipment as well as Tech-Long's best return to Nestle. It is believed that the cooperation between both parties will become wider and deeper in the future.







#### 责任就是力量

据了解,调试工作初期,项目就面临种种困难:未充入氮气的轻量瓶,瓶子薄,抗压能力差,容易被挤压变形,特别是在缓冲平台上的积料区和进入纸包机阶段,瓶子挤压力最大,这是纸包机环节一个很大的挑战;同时,客户自购的润滑系统设备与达意隆设备不能完美配合。对整线设备而言,任何一个细小环节都会影响到整体运行效率。面对错综复杂的事态,达意隆项目服务小组始终以"最快速解决问题,为客户创造更大价值"为己任,迅速整理思路,不惧现场环境的恶劣,积极寻求问题点,逐个击破。在调试安装小组与后方技术服务人员的共同努力下,问题终于迎刃而解。

#### 服务就是形象

而后,为确保设备能稳定高效投入生产,达意隆项目服务小组主动提出再次测试的要求与计划。经过双方共同努力与积极配合,设备运行稳定,二十四小时产能(15862箱),整线效率百分之八十九!同时,项目服务小组对现场逐一排查,并为客户量身定制了设备运行操作人员安排计划,为客户解决后顾之忧。

对达意隆而言,此次无氮气轻量瓶吹灌旋整线 的成功验收,并不意味着项目的结束,而是另 一个新服务的开始,未来,路更宽。



In Indonesia, it's getting really hot on June and July. The project approval and service team of Tech-Long is working on the last installation debugging. This is the first cooperation between Tech-Long and Tanobel Company of Indonesia to produce the very first blow-fill-cap whole lines for light-weight bottles without nitrogen.

# Responsibility is power

It is said that this project has faced many difficulties since the beginning of debugging. The light-weight bottles not yet filled with nitrogen have thin walls and limited compression strength, which means they are easy to be crushed and change the shape, especially when suffering the largest extrusion force in the buffering area of accumulation table or entering the wrapping machine. This was a major challenge during the wrapping.

What's more, the lubrication system from customer side cannot go well with Tech-Long's equipment. For whole-line devices, every small single step could have impacts on the general operation efficiency. Facing up to this tough and complicated situation, Tech-Long project and service team, whose motto is "Fastest solution to problems, biggest value for clients", has come up with a clear planning to proactively find out the issues and resolve them one by one, regardless of the bad conditions. With the cooperation of installation debugging team and technology service team, the difficult problems have finally been solved.



After that, Tech-Long
project and service team has
actively requested a second check
and offered a corresponding plan
to ensure that these devices could be
put into production stably and efficiently.
Thanks to the efforts and cooperation of both
sides, the devices have run stably with good
production of 15862 packs in 24 hours. The
whole-lines efficiency has reached 89%! Also,
the service team has checked the site very
carefully and tailored a staff plan of
device operation managing for its client so
as to prevent any further concerns.

The successful approval of blow-fill-cap whole Lines for light-weight bottles without nitrogen did not mean the end of this project but a new service beginning to Tech-Long. The road is getting even wider for the coming future.

Information offerred by: Liu yungui and Xiao heng

# 新产品4000桶/小时一加仑定量灌装生产线成功验收

SUCCESSFUL ACCEPTANCE
INSPECTION OF THE NEW
PRODUCT 4,000 BARRELS/HOUR
1-GALLON VOLUMETRIC FILLING
PRODUCTION LINE





光明媚的三月,北京蓝驰项目负责人携俄罗斯客户一行前往达意隆五加仑车间,客户本次达意隆之行的首要任务就是现场对北京蓝驰4000桶/小时一加仑定量灌装生产线设备进行验收。

一直以来,达意隆在桶装水设备产品组合上以五加仑生产线为主,一加仑生产线为辅。本项目采用机械阀灌装,灌装方式为流量计定量灌装,在此之前,一加仑生产线的最高产能在2000桶/小时。4000桶/小时,这是客户验收标准,这对技术人员来说是一个不小的挑战。

经过为期三天的FAT,生产线最终顺利通过验收。项目的成功验收,很大程度振奋达意隆人的信心,一方面完善了公司产品线,另一方面标志着达意隆一加仑技术水平达到一个新的高度。

n a sunny March, Beijing Lanchi Project leaders and customers from Russia visited Tech-Long's 5-Gallon workshop. The primary task of customers' visit to Tech-Long was to conduct the acceptance inspection of Beijing Lanchi's 4,000 barrels/hour 1-Gallong volumetric filling production line equipment.

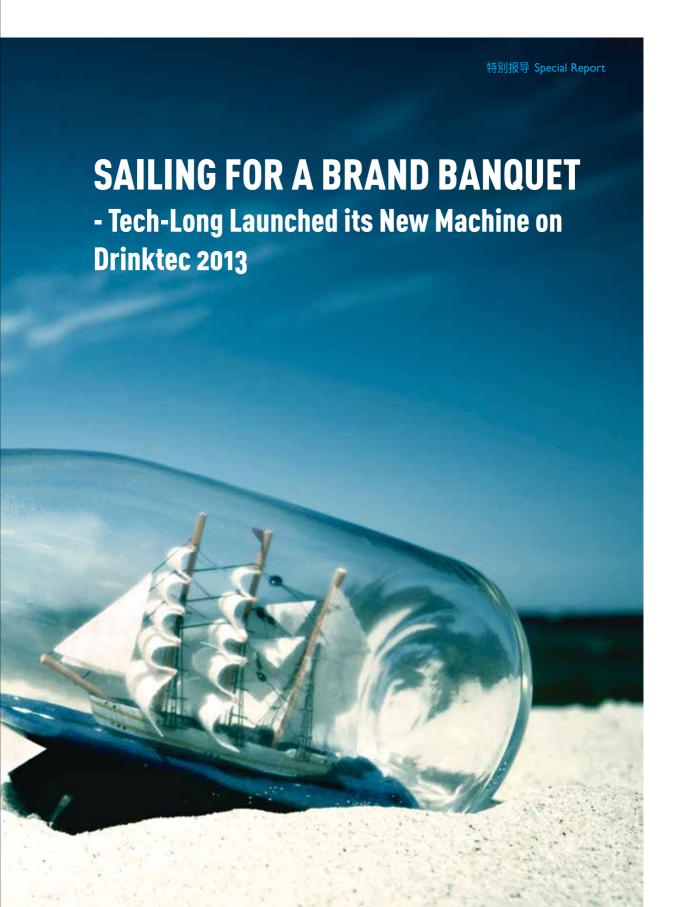
On the aspect of product portfolio, Tech-Long always takes the 5-Gallong barreled water production line as the principal part and the 1-Gallon production line as the auxiliary. In this project, mechanical valve filling is adopted and the filling method is flow meter-based volumetric filling. Previously, the maximum capacity of the 1-Gallon production line was 2,000 barrels/hour. 4,000 barrels/hour is the standard for customers' acceptance inspection, which is a great challenge for technical personnel.

Through three-day FAT, this production line finally passed the acceptance inspection successfully. The success acceptance inspection of this project encourages people of Tech-Long significantly. On one hand, it has improved the company's production line. On the other hand, it marks that Tech-Long's technology on 1-Gallon production line has reached a new level.

# 扬帆起航,共襄盛宴

—达意隆携新机全线出击drinktec 2013





每四年一届的慕尼黑国际饮料及液体食品技术博览 会(Drinktec)于2013年9月16日至21日在德国慕尼黑 新国际展览中心举行,成为万众瞩目的焦点。

来自于183个国家和地区的观众66886人,亲历了 Drinktec2013这一被誉为"饮料及液体食品技术的 奥林匹克"的品牌展览会。在为期5天的展会活动 中,全球77个国家共1445家参展商展示出他们最新 的产品及解决方案,方案覆盖整个工艺链:加工+灌 注+包装+营销。

较上届相比,参展人数增长14%。其中,日本观 众: 1,170 (翻倍),美国观众: 1,779 (增加 16%),中国观众:1,423 (增加45%),泰国观 众: 586, 意大利: 4,418, 俄罗斯: 2095, 瑞士: 1930。展商与观众对行业以及展会的好评率都高达 90%以上。这一数据强有力地说明液态食品包装潜 在的市场空间。

#### 新产品,璀璨面世

2013年9月16日, "Drinktec2013"隆重开幕。现 场可谓群星闪耀,行业各大品牌纷纷携明星产品亮 相。达意降以中国参展品牌最大场地面积的豪华阵 容,与国内外同行同台竞技,无论从品牌形象的丰 富程度,还是技术和设计创新的丰硕成果,达意隆 都尽显中国液态包装行业的领袖风范。其展出的 "超洁净定量灌装"吹灌旋一体机,更是凭借卓越 的技术和设计,以及前瞻的理念技压群雄、独领风 骚,成为本次展会一道靓丽的风景,成功地向世人 展示了达意隆品牌的魅力。

"超洁净定量灌装"吹灌旋一体机:采用了以客户 为导向的研发方式,在设计理念中更多的引入了客 户的需求和标准,不但在技术上为业界最先进,操 作实用中也更专业化、人性化。据了解,该设备产 能高达4万瓶每小时。其中,吹瓶机部分以RJM20 机型为基础,配备高压气回收系统,并优化灯箱和 温控系统,使用瓶胚静电除尘装置;灌装机部分采

用非接触式流量计定量灌装技术,同时围绕"安 全"、"卫生"、"环保"、"易于维护"等理念 作出大量改进。

#### 新格局, 谋略深远

有如一场超级嘉年华, 达意降展位吸引了全球各地 来宾参观,更有国际知名企业宝洁、雀巢、可口可 乐的高层领导深入了解达意降。

走进达意隆展厅,灰黄色调的设计与企业色彩 格调一致,相得益彰;全英文的展台标识, 散发着浓烈的国际化气息;精彩纷呈的宣 传演示活动-产品宣传片循环播放、客 户工厂设备运行实景切换,无一不向客 户传达着达意降肩负责任、传承品 质、放眼未来的豪情与气概。

展区内最引人注目的为产 品。通过现场试机首次成 功向客户展示了其优良 的设计性能,新产 品的实用性、操作 性、全面性获得 国际客户、代 理商的高度



赞誉。



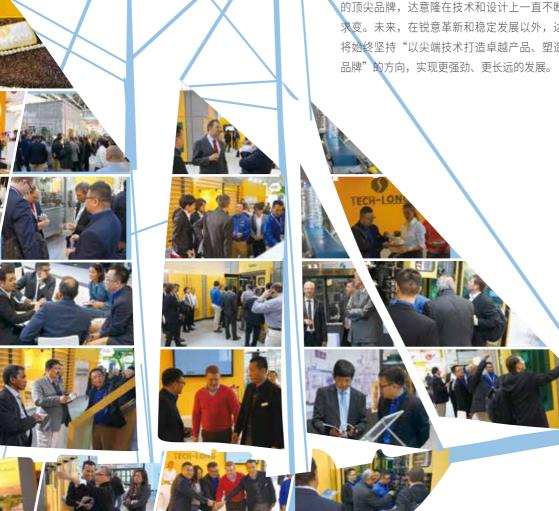


#### 新辉煌,伟业在望

在高手云集的"Drinktec2013"上,达意隆展出的不仅是其阵容强大的高端技术产品,更是其产品领先设计与科技带来的行业创新理念,而这只是达意隆创新科技的冰山一角。从2008年推出的吹灌旋一体机,到世界顶尖的五加仑超洁净技术,再到在Drinktec登场的"超洁净定量灌装"吹灌旋一

体机,达意隆始终以领先的创新技术不断引领着液态包装行业的创新浪潮。正是凭借着不竭的创新驱动,达意隆当仁不让地成为中国液态包装行业的龙头企业,同时也是该领域的技术和设计创新,及高端市场的引领者。达意隆正在推动着中国液态包装产业的进步与升级。

"我们卖的不仅是解决方案,更是一种梦想,旨在为客户带来最大便捷和最佳效率,从而真正改善现存缺点。"本次展会中达意隆的出色表现就是对这一理念的完美诠释。作为享誉中国,拥有多年历史的顶尖品牌,达意隆在技术和设计上一直不断创新求变。未来,在锐意革新和稳定发展以外,达意隆将始终坚持"以尖端技术打造卓越产品、塑造价值品牌"的方向,实现更强劲、更长远的发展。



Munich International Technology Trade Fair for Beverage and Liquid Food Industry (Drinktec) held once every four years was held from September 16 to 21, 2013 in the New International Exhibition Center in Munich, Germany, attracting attention of millions of people.

66,886 visitors from 183 countries and areas experienced Drinktec 2013, a brand expo honored as the "Olympics of Technology in Beverage and Liquid Food Industry". During the 5-day exhibition activities, 1,445 exhibiting companies from 77 countries in the world displayed their latest products and solutions, covering the whole process chain: processing + filling + packaging + marketing.

Compared with the last fair, the number of participants was increased by 14%. Among the visitors, there were 1,170 Japanese (doubled), 1,779 Americans (increased by 16%), 1,423 Chinese (increased by 45%), 586 Thais, 4,418 Italians, 2,095 Russians, and 1,930 Swiss. Over 90% of exhibiting companies and visitors made positive feedbacks on the industry and the fair. The data strongly indicates the potential market space for liquid food packaging.

#### Launch of the brilliant new product

On September 16, 2013, "Drinktec 2013" was opened grandly. The fair was shined by many brands and their star products in the industry. Tech-Long rivaled with domestic and foreign peers with a gorgeous appearance on the largest site among Chinese exhibiting brands. From abundant brand images to fruitful technical and design innovations, Tech-Long showed its leading

role in the liquid packaging industry in China. Its "Ultra Clean Volumetric Filling" BFC (blowing-filling-capping) Combi-block, in particular, took the lead and became a beautiful scenery at this fair due to its excellent technology and design as well as its forward-looking concept. It successfully demonstrated the charm of Techlong to the world.

The "Ultra Clean Volumetric Filling" BFC Combiblock adopts the customer-oriented research and development method and introduces more customer requirements and standards into the design concept. It is the most advanced technologically in the industry. Moreover, it is more professional and user-friendly in its practical operation. It is known that the capacity of this equipment is up to 40,000 bottles per hour. The Blow Molding Machine is based on the model RJM20, equipped with high-pressure air recovery system, optimized light box and temperature control system, and bottle preform electrostatic dust collector. The filling machine uses the non contact flow meter-based volumetric filling technology and is improved greatly around the concepts of "safety", "health", "environmental protection", "easy maintenance", etc.

#### New pattern based on profound strategies

Just like a super carnival, Tech-Long's booth attracted visitors from all over the world, especially higher management from international famous enterprises such as P&G, Nestle and Coca Cola for a further understanding of Tech-Long.

In the exhibition room of Tech-Long, the grayish yellow design was in conformity with the color of the enterprise. The logo on the booth fully in English spread a strong international sense. Wonderful advertising and demonstration activities, including the loop playback of the product advertising videos, and the switch to the actual scene of equipment operation in customers' factories, conveyed Tech-Long's responsibilities, quality and outlook to customers.

Products were the most attractive in the exhibition area. By the on-site machine test, it succeeded in demonstrating its excellent design performance to the customers for the first time. The practicability, operability and comprehensiveness of the new product were highly praised by international customers and agents.

The attendance of the international agents of Tech-Long is another highlight of Tech-Long Booth. The active participation of the international agents reflects the deep development of Tech-Long's localization. Tech-Long is setting up its overall service channels, improving its service efficiency and quality. Tech-Long focuses on future, it strengthenes our confidence to build a gobal express supply system.

With Tech-Long's characteristics, the elaborately designed brand booth fulfilled its mission to fully embody the brand essence of Tech-Long, "running for you". Aiming at providing carefree product purchase for customers, it has stepped

forward much more confidently in the global market with extreme strategic significant. We believe that the future world pattern of packaging machinery will much more splendid due to this.

#### New glories resulting in visible prosperity

On "Drinktec 2013" full of superior rivals, Tech-Long exhibited not only its multiple high-level technical products, but also the industrial innovative concepts arising from its products' advanced design and technology. Yet, all these are only a small part of Tech-Long's innovative science and technology. From the BFC Combiblock promoted in 2008, to the world leading 5-Gallon super-clean technology, to the debut of the "Ultra Clean Volumetric Filling" BFC Combiblock on Drinktec, Tech-Long has always led the innovation tendency in the liquid packaging industry with its leading innovative technology. It is the inexhaustible innovation drive that makes Tech-Long the leading enterprise in the liquid packaging industry in China as well as the leader of the technology and design innovation in this field and the high-end market. Tech-Long is now promoting the progress and upgrading of the liquid packaging industry in China.

"What we are selling is not only a solution, but also a dream. We dream of bringing about the most convenience and the best efficiency for our customers so as to truly improve existing defects." Tech-Long's outstanding performance on this fair is a perfect interpretation of this concept. As a top brand with a good reputation





#### 聚焦后市场,打造"服务价值+" FOCUS ON AFTER-MARKETS AND CREATE "SERVICE VALUE+"

- -- 达意隆倾力创办实训中心
- —Tech-Long Devoted to Build up the Practical Training Center

日前,广州达意隆包装股份有限公司客户实训中心 正式成立并投入使用。新实训中心将从客户端技术 人员模拟培训、为客户输送人才、工程人员技术提 升三个方面来为客户增值。

#### 充分利用实操基地,为客户带来高价值实训 ①客户端技术人员培训:

有别于传统的产品知识培训,而是集产品理论、模拟环境、现场实操于一体的新模式。除了在培训室通过PLC系统、绘图软件、核心零部件的展示加深技术人员的理论知识,更是以东莞宝隆、深圳达意隆、新疆宝隆等多个配有整线设备生产基地为实操基地,让客户端设备操作人员在车间与设备进行"零距离接触",从生产、工艺、程序、服务等方面结合,全面提升客户技术人员的实际操作与设备管理能力,降低设备管理成本。

#### ②储备培养技术人员:

通过"校企合作",吸纳一批批机械电气基础扎实的优秀学子,系统地安排培训,实现从普通操作人员到设备维护人员甚至到安装调试工程师的技能升级。所培养出的专业技能与服务能力兼备的综合型人才,按需求输送至客户的工厂。

#### 全面推行内训,完善服务体系

采取总部、分公司联合培训方式,加大力度提高工程服务人员的技术水平和服务能力,全面升级达意降售后服务体系,为客户解决后顾之忧。

日后,达意隆将紧密围绕"增创客户价值"这一主题,继续坚持以客户需求为导向,秉承创新无止境这一优良传统,通过系列服务新举措为客户带来前所未有的价值体验。









达意隆实训学校现场 On-the-spot Scene of Tech-Long Training School

To date, Guangzhou Tech-Long Packaging Machinery Co., Ltd has set up and put into use its customer training center so as to better help customers to obtain value-added services in the aspect of technical personnel stimulation training, talent cultivating and transporting, and the skill upgrading for engineering staff.

#### Fully utilize the field base, providing high-value training for customers

#### 1. Technician training for customers:

different from traditional product knowledge training, this is a new model that integrates product theory, simulation environment and practical operation of the site. Through its PLC system, mapping software and the display of its core components, technical personnel are bound to develop more in-depth theoretical knowledge. Moreover, its field base, i.e., several whole-line equipment production bases provided by the Dong Guan Baolong Packaging Material Co., Ltd, Shenzhen Tech-Long and the Xinjiang Baolong etc, allows operating personnel to realize "direct contact" with the equipments in the workshop. Combing aspects such as the production, processing, working procedure and service etc, it is now able to assist customers in completely elevating their technical staff's practical operating and equipment management ability, thus greatly reducing the cost of equipment management.



东莞宝隆生产基地厂房内景 Plant interior in the production base of the Dong Guan Baolong Packaging Material Co., Ltd

#### 2. Training the reserved talents:

attracting a batch of outstanding students with solid mechanical and electrical knowledge through "university-industry cooperation". Systematic training is then arranged so as to better develop and enhance technical skills for common operating personnel, equipment maintenance personnel and even for the commissioning engineers. Integrated talents that master both expertise and strong service capacity will be provided for all its customers in accordance with their specific requirements.

#### Full implementation of inner training to better enhance its service system

Adopting joint training among the head office and its various sub-branches, the company has focused more on improving the technical level and service capability of its engineering service staff and upgrading completely its after-sale service system for customers.

From today on, Tech-Long will continue to work on "creating added-value for customers", adhering to customers'specific demand, following the great tradition of endless innovation and bringing unprecedented experiences for all its customers through a series of services.



**CONSOLIDATE THE FOUNDATION AND EXPLORE RESOURCES,** 

# SEIZE THE OPPORTUNITY FOR SUCCESS

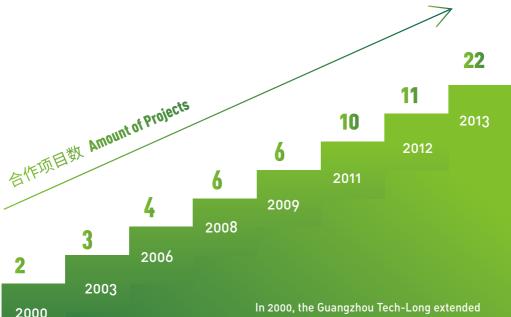
Tech-Long Launched the OEM Project with C'estbon



固本拓源,领"新"把握制胜先机

一 达 意 隆 携 手 怡 宝 开 启 O E M 项 目

#### 达意隆与怡宝合作项目 COOPERATIVE PROJECT CARRIED OUT BY TECH-LONG AND C'ESTBON



2000年,广州达意隆与怡宝展开第一次合作。多年来,达意隆与怡宝自投以及OEM工厂合作项目高达70多次。其中广州怡宝、江门怡宝、东莞莞怡、信联、深圳西满、重庆中富等工厂项目,均在设备安装运行后一致喜获圆满验收,并达到90%以上的高效率!近几年,达意隆与怡宝合作进程上一路高奏丰收乐曲。2013年,怡宝项目大获全胜,分别验收36000BPH瓶装水整线两条、43200BPH瓶装水整线3条!

its initial cooperation with the C'estbon Food & Beverage Co., Ltd. For years, Tech-Long has collaborated with the C'estbon in up to 70 times of OEM factory cooperation projects. Among them, factory projects in Guangzhou C'estbon, Jiangmen C'estbon, Dongguan Guanyi, Xinlian, Shenzhen Ximan and Chongqing Zhongfu have all achieved success in the audit with over 90% efficiency after the equipment installation and operation. These years, Tech-Long and C'estbon have harvested great achievements through cooperation. In 2013, C'estbon projects successfully passed acceptance check of two entire lines of 36000BPH bottled water and three entire lines of 43200BPH bottled water.

2013年8月29日,广州达意隆与广州华新集团控股有限公司、华润怡宝食品饮料(深圳)有限公司三方共同签订了《华润怡宝OEM项目战略合作框架协议书》,计划由广州华新达投资管理有限公司承接部分怡宝公司瓶装水代加工项目。广州华

新达投资管理有限公司是2013年8月初由达意隆与 华新集团联合成立,从事饮料代加工业务。本次 协议初步确定,未来两年华润怡宝将给予华新达 公司广东东莞市、广州市、江苏苏州市等区域的 "怡宝"瓶装纯净水产品代加工业务。此次协议



的签订促进了华新达公司业务的开拓,也意味着达 意隆未来业绩的提升。

据悉,华新达公司东莞、苏州、长沙、怀化等地的 怡宝OEM工厂拟于年底投产。目前,项目的设备订 单已优先列入达意隆各事业部的生产日程,相关工 作正在有序推进。华润怡宝项目的全面启动,强有 力的体现出达意隆在设备与人才管理上的优势;同 时,良好的口碑、设备的稳定性以及整线方案的解 决能力坚实了达意隆在新市场的稳步发展。未来, 达意隆将乘势而上,把握潮流趋势,立足于液态包 装机械行业的前沿!

On August 29, 2013, Guangzhou Tech-Long, Guangzhou Huaxin Group Holdings Limited and China Resources C'estbon Food & Beverage (Shenzhen) Co., Ltd. signed the Strategic Cooperation Framework Agreement on China Resources C'estbon OEM Project, in which it was planned that Guangzhou Huaxinda Investments Management Co., Ltd. would undertake part of C'estbon's bottled water OEM project. Guangzhou Huaxinda Investments Management Co., Ltd. was established jointly by Tech-Long and Huaxin Group at the beginning of August, 2013 for beverage OEM. As determined preliminarily in this agreement, China Resources C'estbon would offer Huaxinda "C'estbon" bottled purified water OEM business in next two years in Dongguan and Guangzhou of Guangdong Province, Suzhou of Jiangsu Province, etc. The signature of this agreement develops the business of Huaxinda and indicates the improvement of Tech-Long's future performance.



As reported, C'estbon OEM factories of Huaxinda in Dongguan, Suzhou, Changsha and Huaihua will be put into operation at the end of the year. Currently, the equipment orders for the project have been listed as a priority in the production schedule of each business department of Tech-Long and relevant work has been conducted orderly. The fully initation of C'estbon project of China Resources embodies the advantages of Tech-Long in equipment and talent management. Meanwhile, better goodwill, stable equipment, and turn-key line solution consolidate the development of Tech-Long in new market.

#### 行业先锋,品质保证

#### INDUSTRY PIONEER GUARANTEES THE QUALITY

- -- 达意隆商标荣获马德里成员国的授权认可
- —Tech-Long's Trademark Obtained the Authorization Approval of Member States of Madrid Agreement

近日,达意隆收到由美国、韩国、欧盟等多个国家 商标局共同颁发的商标授权认可证。

为加强商标在境外的保护力度,达意隆在2011年将国内获得注册的 TECH-I的标通过《商标国际注册马德里协定》分别向韩国、俄罗斯、新加坡、埃及、苏丹、土耳其、日本、哈萨克斯坦、美国、越南、欧盟等成员国申请商标认可并进行保护。该商标在2012年9月通过了日本特许厅和新加坡知识产权局的审核与获得授权保护后,2013年5月,又陆续获得了美国、韩国、欧盟和俄罗斯等国家或地区商标局的授权认可。

该商标取得马德里成员国的认可,提升了达意隆在 国际市场上的知名度。通过马德里公约进行商标的 申请保护,也进一步增强了商标信誉度。

Recently, Tech-Long received the trademark authorization approval certificate jointly issued by trademark bureaus of several countries such as the U.S., Korea, European Union, etc.

To intensify the protection of its trademark in foreign areas, in 2011, Tech-Long applied for trademark approval and protection of its trademark TECH-LONG registered in China to state members of the Madrid Agreement Concerning the International Registration of Marks such as Korea, Russia, Singapore, Egypt, Sudan, Turkey, Japan, Kazakhstan, the U.S., Vietnam, EU, etc. In September 2012, this trademark was approved by Japan Patent Office and Singapore Intellectual Property Office and obtained the authorization protection. In May 2013, it obtained the authorization approval issued by trademark bureaus in such countries or areas as the U.S., Korea, EU and Russia.

The trademark approval obtained from member states of the Madrid Agreement enhances Tech-Long's brand awareness in international markets. The trademark protection applied through the Madrid Agreement further strengthens the trademark credibility.

Text by: Wang yannan

#### 俄罗斯饮料供应商代表团 莅临达意隆考察参观



俄罗斯代表团与达意隆高层合影留念 Group Photo of Russian Delegation and TL President

2013年10月9日-11日,俄罗斯饮料供应商考察代表团莅临达意隆考察参观。在2012年北京展会上,达意隆董事长张颂明先生曾亲自接待并宴请此团部分成员,但当时客户在中国停留时间较短因而未至达意隆总部考察。经过一年多的联系沟通及业务拓展,达意隆再次盛邀并成功组织30位来自俄罗斯各地共15家知名品牌饮料生产厂家的高层管理人员前来参观考察。

此次代表团的来访,得到了公司高层的高度重视。 达意隆特别安排技术交流会,详细了解了每位客户 的需求,为客户进行现场咨询,及时解决技术难 题,讲解达意隆设备技术工艺知识,提供初步的方 案及建议。 此外,达意隆就参观支持问题进行沟通,先后安排了代表团对信联智通怡宝五加仑生产线、增城信联怡宝水高速生产线吹灌旋一体机及东莞清溪宝隆工厂的参观。为期三天的考察参观,完美呈现出达意隆整线设计方案的实力。同时,达意隆高层领导的亲密接见,让客户感受到了达意隆对其此行的无比热情与关注。

此次与俄罗斯考察团的友好会晤,提升了达意隆的 国际品牌形象,同时也为今后达意隆在俄罗斯市场 的发展添砖加瓦!

### A DELEGATION OF RUSSIAN BEVERAGE SUPPLIERS VISITED TECH-LONG

rom October 9 to 11, 2013, a delegation of Russian beverage suppliers visited Tech-Long. On the exhibition in 2012 in Beijing, Songming Zhang, President of Tech-Long, entertained partial members of this delegation personally. However, at that time due to time limit, the customers could not visit the headquarters of Tech-Long. By over a year's contact, communication and business development, once again, Tech-Long invited and successfully organized 30 senior management personnel from 15 well-known beverage producers in Russia for a visit.

The company's senior management attached much importance to the delegation's visit. Tech-Long arranged a technical exchange meeting specially to have a detailed understanding of each customer's requirements, provide onsite consultation for customers, solve technical problems timely, explain technical know-how of

Tech-Long's equipment, and offer preliminary solutions and suggestions.

Besides, Tech-Long communicated on visit support and arranged the delegation to visit Xinlian Zhitong C'estbon 5-Gallon production line, BFC Combi-block in Zengcheng Xinlian C'estbon high-speed production line and Baolong factory in Qingxi, Dongguan. The three-day visit perfectly reflected Tech-Long's strength on whole-line design solutions. Meanwhile, the close interview with senior leaders of Tech-Long made customers feel its extraordinary enthusiasm and concern.

The friendly meeting with the Russian delegation enhances Tech-Long's international brand image and benefits Tech-Long's development in Russian markets in the future.

Text by: Yi lixin Information offerred by: Makcum Hu







STATUS 实

#### 合力共行 创新共赢

—达意隆与东鹏饮料强强联手,打造国内首条无 菌吹灌旋生产线



# COOPERATION AND INNOVATION FOR A WIN-WIN SITUATION

—Tech-Long and Eastroc Beverage Cooperated to Build up the First Sterilized BFC Production Line in China

立于1987年的深圳市东鹏饮料实业有限公司是一家民营股份制饮料企业,是深圳市老字号的饮料生产厂家。旗下有广州市东鹏食品饮料有限公司、广东东鹏维他命饮料有限公司、安徽东鹏食品饮料有限公司三大生产基地。

"东鹏"是华南地区一个著名的饮料品牌,在消费者和食品经销、批发、零售商中享有较高信誉,产品市场覆盖广东、海南、福建、江西、广西、浙江等省,是一个南方市场极具影响力的饮料品牌。目前,"东鹏"产品包含:东鹏特饮维生素功能饮料,广东岭南特色饮品(东鹏九制斋)、非物质文化遗产饮品、茶饮料、果蔬汁饮料、清凉饮料、植物浸提饮料、果味饮料(乳味饮料)、植物蛋白饮料、饮用纯净水品类。

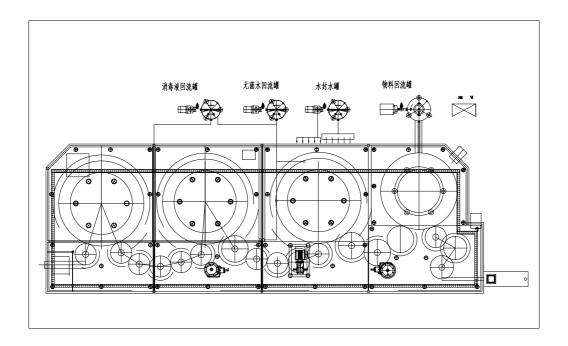
#### 同声相应,从无到有的互利共赢

达意隆与东鹏的合作可谓源远流长,2011年,一台吹瓶机揭开了双方的合作序幕。随后不到一年的时间里,双方再次传出喜讯,2012年,3台吹瓶机从某种程度上反映出东鹏对达意隆设备的认可。至2013年6月,东鹏再次订购达意隆多台设备。几年间,达意隆在技术方案、服务能力、创新能力、综合成本等方面,始终备受东鹏高层的认可。合作互通之中,东鹏饮料已日益人心,达意隆设备技术也越发精良。

#### 同心相知,价值成就缔造辉煌

为了拓展市场,打造成全国知名品牌,东鹏饮料在安徽省滁州经济技术开发区新建工厂,地处城北工业园杭北路,总建筑面积近20万平方米,总投资11.6亿元。项目计划采用已在美国、西欧、日本的同类领域起着主导地位的新工艺——无菌常温灌装。这种工艺不但在常温下不需添加食品防腐剂,还可在不经冷藏的条件下可延长产品的保质期,更好地保留产品营养成分和风味特色。这样不仅可选用不耐热的PET包装瓶,降低产品包装成本,还能根据产品特性设计使用各种形状独特的包装瓶,更为重要的是能满足现代人健康、营养的饮用要求。

然而,无菌常温灌装项目无论在技术标准上还是公司的整体实力上,对设备供应商都有着极高的要求,全球仅有寥寥几家公司具备这种能力。东鹏饮料经过在全国范围内多次实地考察和技术测试,了解到目前达意隆是国内唯一一家在能在真正意义上达到"无菌"技术的公司。同时,除了技术上的绝对优势,达意隆的整线设备供应能力与由始至终解决问题的服务体系也很好的展示出其综合实力。最终,东鹏饮料做出选择——由达意隆为东鹏提供国内首条36000瓶/时新型高速无菌吹灌旋生产线的空白,把国内无菌吹灌旋生产线的技术、制造与应用水平推向新的高度。



根据东鹏饮料发展规划,安徽滁州工厂顺利投产 3 可降低客户在后续设备维护管理方面的成本 后,将会在全国其余工厂分步推进该生产线。对达 4 减小设备的使用占地面积; 意隆而言,这是营销引来的技术领域尝新,更是达 5 降低瓶子输送过程中受污染的风险; 意隆在市场上具进攻性的表现。未来,无菌吹灌旋 生产线在果汁、功能饮料、茶及奶制品饮料灌装行 业将会得到广泛应用, 达意隆也必将成为国内无菌 灌装设备发展的风向标。

#### ■ 相关链接:

无菌灌装设备在国外发展多年,但在国内尚处于发 展阶段。此次达意隆集团推出的无菌吹灌旋设备在 国内尚属首例,它由达意降吹灌旋技术结合无菌灌 装的工艺自主研发而成。它的技术要点在于:

- 1 一体化:由吹瓶机和灌装设备直接相结合而成;
- 2 中间没有风道送瓶环节,降低客户对硬件设备 的投入;

- 6 采用低温灌装,减少产品的受热时间,降低能耗;
- 7 物料产品采用高温瞬时杀菌,可以保持产品的 营养成份和口感风味不流失;
- 8 可以使用轻量化的瓶型, 节约PET包装材料的成本;
- 9 瓶型的设计可以多样化,不需考虑耐热情况;
- 10 更加适合干热敏感性的产品的灌装, 如奶制品类饮料等。

为了提高设备运行的稳定性, 本机在设计时做了很 多预防性的措施: 如不合格的瓶形自动剔除, 反盖 自动剔除等。有效阻止不合格的包装容器进入灌装 主机影响机器的正常运行。因此本套设备既具有普 通吹灌旋设备的特点,又符合无菌冷灌装的工艺要 求,还具有自身独特的优势特点,设备高效简洁, 能够给使用厂家带来实实在在的利益,将会成为未 来无菌灌装设备的首选。



stablished in 1987, Shenzhen Eastroc Beverage Co., Ltd. is a private corporate beverage enterprise and a time-honored beverage manufacturer in Shenzhen. It has three production bases, namely, Guangzhou Eastroc Food & Beverage Co., Ltd., Guangdong Eastroc Vitamin Beverage Co., Ltd. and Anhui Eastroc Food & Beverage Co., Ltd. "Eastroc" is a famous beverage brand in South China and enjoys a high reputation among consumers, food dealers, wholesalers and retailers. Its product markets cover Guangdong, Hainan, Fujian, Jiangxi, Guangxi, Zhejiang, etc. It is a very influential beverage brand in the market of South China. Currently, "Eastroc" products include Eastroc special vitamin functional drinks, Guangdong Lingnan special drinks (Eastroc Jiuzhizhai", intangible cultural heritage drinks, tea drinks, fruit and vegetable juice drinks, cool drinks, plant-digested drinks, fruit-flavored drinks (milk-

flavored drink), vegetable protein drinks, purified water for drinking, etc.

#### Mutual benefits and win-win results starting from scratch

The cooperation between Tech-Long and Eastroc started from a long time ago. In 2011, a bottle blow modling machine revealed the prelude to the cooperation of both parties. In less than one year after that, good news was heard from both parties again. In 2012, three bottle blowing machines reflected Eastroc's recognition of Tech-Long's equipment to some extent. By June 2013, Eastroc has purchased several sets of equipment from Tech-Long. For years, Tech-Long has always been esteemed highly by senior management of Eastroc on the aspects of its technical solutions, service ability, innovative ability and comprehensive costs. Through the cooperation, Eastroc Beverage has become

increasingly popular and Tech-Long's equipment and technology has become more and more excellent.

#### Glories based on values

In order to further expand the market and build a nationally renowned brand, EASTROC BEVERAGE CO.,LTD has established, in the Economic and Technological Development Zone in Chuzhou City, Anhui Province, a new plant, which is located in the Hangbei Road within the Chengbei Industrial Park and takes up approximately a total construction area of 200,000 sg.m. The total investment amounts to RMB 1.16 billion. Our project is about to adopt a brand-new technology that is playing a dominant role within its own domain in the United States, Western Europe and Japan, i.e., the aseptic filling technique at ambient temperature. Such a unique technique exempts the use of food preservatives at room temperature and helps prolong the shelf-life of our products without depending on refrigerated storage, thus retaining the nutritional ingredients as well as the special flavor of of our products. On this account, PET packaging bottle which is not heat-resistant could be widely employed. which helps in some ways to reduce our packaging costs. Moreover, packaging bottles of various unique shapes could also be designed and put into use according to the product's feature. It can best fit consumers' desire for healthy and nutritious drink contemporarily.

Nonetheless, the aseptic filling project at ambient temperature has posed demanding requirements on our equipment suppliers, both in the aspect of their technical standard and the overall corporate strength. So far, only a couple of companies in the world are competent and qualified. Through many field reviews and technical test across the country, it realized that the Guangzhou Tech-Long Packaging Machinery Co., Ltd is currently the only one that masters the "sterilization" technology in the true sense in China. In addition to its absolute advantage in technology, the company has demonstrated to us its comprehensive strength by its supplying capacity for complete set of equipments along with its well-developed service system that aims at solving problems readily all the time. Therefore, we have taken great delight in selecting Tech-Long as our partner. The company has provided for our 36000 bottles a brand-new high-speed aseptic filling and blow spinning production line which sets a precedent in China and promotes the technology, manufacturing and application of the production line to a higher level.

According to the development planning of Eastroc Beverage, after the successful operation of Chuzhou factory in Anhui, it will popularize this production line step by step to its rest factories in China. As for Tech-Long, this is its initial step in the technical field arising from marketing and the aggressive performance in the market. In the future, the sterilized BFC production line will be widely applied in the filling industry of fruit juice, functional drinks, tea and dairy product drinks and Tech-Long will certainly become the wind vane indicating the development of domestic sterilized filling equipment.

#### Nelevant links:

Sterilized filling equipment has been developed overseas for many years, but it remains at the development stage in China. The sterilized BFC equipment launched by Tech-Long is the first in China and is manufactured based on Tech-Long's independent research and development combining the BFC technology with sterilized filling technology. Its technical points lie in the following.

- 1 Integration: it is combined by the bottle blowing machine and the filling equipment directly.
- 2 The omission of bottle transportation via air conveyors reduces customers' inputs in hardware equipment.
- 3 It can reduce customers' costs for subsequent equipment maintenance and management.
- 4 It reduces the equipment's floor space for usage.
- 5 It reduces the risk of being contaminated during the process of bottle transportation.
- 6 The adoption of low-temperature filling reduces the time that products are heated and reduces energy consumption.
- 7 The materials and products use hightemperature instant sterilization, which can maintain the products' nutrients, taste and flavor.
- 8 The use of lightweight bottles saves costs for PET packaging materials.
- 9 The bottle models can be designed differently without considering heat resistance.
- 10 It is more suitable for filling heat-sensitive products, for example, dairy product drinks, etc.

In order to improve the equipment's operation stability, in designing this machine, many preventive measures are adopted, for example, automatic elimination of unqualified bottle shapes, automatic elimination of reversed bottle caps, etc. It effectively prevents unqualified packaging vessels from entering the main filling machine and influences the normal operation of the machine. Thus, this equipment has characteristics of common BFC equipment and complies with the technological requirement for sterilized cold filling. Moreover, it has unique advantages. This efficient and concise equipment can bring about manufactures with actual benefits and will become the first choice among sterilized filling equipment in the future.

#### Text by: Jiang xiping

# RESPONSIBILITIES

-Successful Acceptance of Laiyang Luhua Water Plant Project

一 莱 阳 鲁 花 水 厂 项 目 验 收 喜 报

花集团,一家大型的民营企业、中国民族品牌、农业产业化国家重点龙头企业,一直以来以"科技创新和质量兴企"为企业发展战略,将健康饮食生活融入中国人的生活,旗下鲁花油系列产品,分别于不同时段获得"国家级放心油"、"人民大会堂国宴用油"、"营养健康倡导产品"等殊荣,成为齐鲁大地乃至全国的知名品牌。

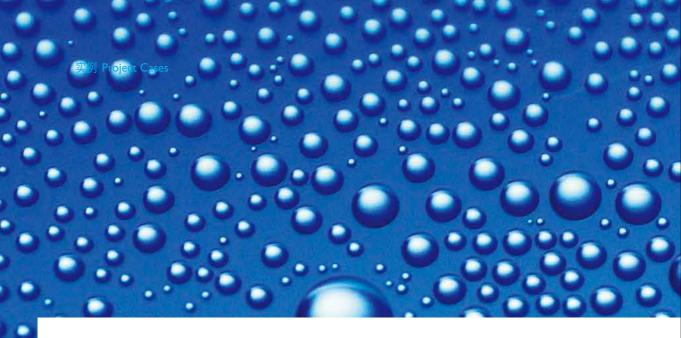
莱阳鲁花矿泉水有限公司,是鲁花集团旗下企业,公司以健康饮用水生产、经营为主,包括桶装水、瓶装矿泉水等工艺先进的多条生产线。自成立以来,始终秉承"客户至上,以人为本"之精神,创意展翅之理想,立志于建立一个和谐、透明的产品供应链。

2012年,达意隆与莱阳鲁花达成战略合作,由达意 隆为莱阳鲁花提供一条瓶装水整线。2013年4月, 达意隆项目验收服务小组在客户工厂为项目进行最 后的安装调试工序。该项目对时间、质量要求非常 高,设备到达工厂时,客户现场就已撤掉了原旧设 备。"断货"成了客户即将要面临的问题。同时, 客户公司总裁要在短期内来厂视察,这一状况再次 缩短了安装调试的时间。 "时间",成为了项目此时最紧张的问题,项目小组拿出最高警惕度,争分夺秒进行每一个程序的工作。在距鲁花集团总裁考察还有3天的时候,设备终于顺利安装完毕并进入调试过程。然而,后期调试却面临着更艰难的问题,由于膜包机进瓶分瓶程序有问题,整线调试过程中设备一直未能调试到最佳状态,得知这一情况,达意隆技术部人员连夜乘机赶到,在最短的时间内为客户解决问题并进入生产模式,最终获得客户的高度认可。

第3天,鲁花集团总裁带着地方政府一行人员来到车间视察,了解到现场只用19天便完成所有的安装调试工作而且取得如此良好的设备运行状况,不禁对达意隆项目服务小组急顾客之所急,想顾客之所想的真诚服务所深深打动,当即表示:新计划的1500桶五加仑线,希望与达意隆再携手!

在高标准、高强度下莱阳鲁花项目取得圆满成功, 这不仅仅是一次技术上考验,更是一个团队成熟与 否的体现。对达意隆而言,服务就像一面旗帜,每 一位达意隆人都将始终肩负企业的社会使命和责 任,完美诠释"为你而转"的美好理念。



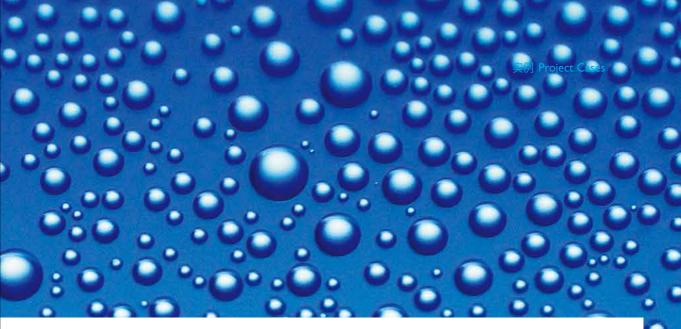


uhua Group, a large private enterprise, a brand of the Chinese nation and one of the national key leading enterprises in agriculture industrialization, has always adopted the enterprise development strategy of "making the enterprise prosperous based on technological innovation and excellent quality" and integrated healthy diet into the life of Chinese people. Its Luhua oil series products obtained special honors at different times such as "National Trustworthy Oil", "Oil for State Banquets in the Great Hall of the People", "Product Advocated for Nutrition and Health", etc. It has become a famous brand in Shandong Province and even in China.

Laiyang Luhua Mineral Water Co., Ltd. is an enterprise subordinate to Luhua Group and mainly engaged in the production and sales of healthy drinking water, including multiple technically advanced production lines of barreled and bottled mineral water. Since its

establishment, it has adhered to the spirit of "customers first and people oriented", endeavored to realize its goals based on originality, and been determined to build up a harmonious and transparent product supply chain.

In 2012, Tech-Long and Laiyang Luhua reached the strategic cooperation that Tech-Long would provide Laiyang Luhua with an entire line for bottled water production. In April 2013, Tech-Long's Service Team for Project Acceptance Inspection conduct the final installation and commissioning at the customer's factory for this project, which had a very high requirement for time and quality. When the equipment arrived at the factory, the customer had already removed the original old equipment on the site. Thus, "supply shortage" became a problem approaching to the customer. In the meantime, President of the customer company would visit the factory in a short time, which shortened the



time for installation and commissioning again.

At that moment, "time" became the tensest problem in the project. The project team got alerted to the most extent and raced against time to conduct each procedure. Just three days before the visit of President of Luhua Group, the equipment was finally installed and was about to be commissioned. However, more difficult problems were encountered in the commissioning later. Due to the failure of the bottle taking and separating procedure of the film packaging machine, the equipment could not be commissioned to its best condition during the whole-line commissioning process. Once receiving this news, Tech-Long's technical personnel arrived at the site by plane overnight and solved the problem in the shortest time for the customer to make it enter the production mode. At last, it was highly praised by the customer.

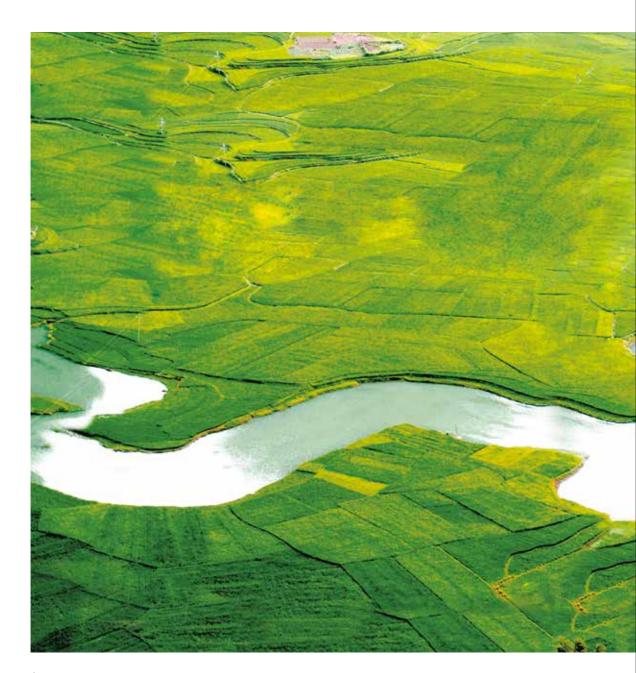
On the third day, President of Luhua Group visited the workshop with some local government officials. When knowing that all the installation and commissioning work were completed within 19 days on the site and the equipment operation was so good, he was deeply moved by the sincere services of Tech-Long Project Service Team and expressed at once that he hoped to cooperate with Tech-Long again on the newly planned 1,500-barrel 5 Gallon production line.

The success of Laiyang Luhua Project at such high standards and intensity is a technical test and reflects the team maturity. For Tech-Long, services are like a flag. Each person of Tech-Long will always undertake the enterprise's social missions and responsibility to perfectly interpret the good concept of "running for you".

Text by: Zhang mingcai

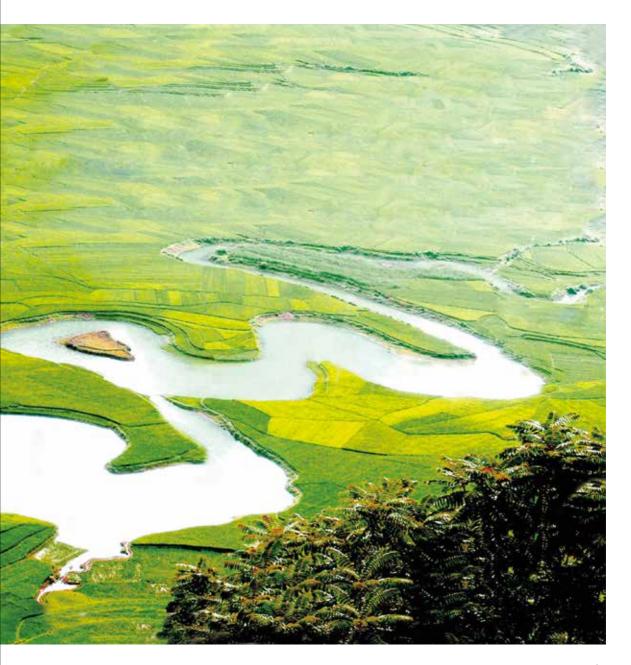
#### 长寿之乡的绿意

—达意隆与广西巴马寿乡矿泉水有限公司:为一个美好意愿生产圣水



#### **GREEN IN THE VILLAGE OF LONGEVITY**

—Tech-Long and Guangxi Bama Shouxiang Spring Water Co., Ltd.: To Produce Holy Water for a Good Wish



#### 一切缘于水

"百岁老人唱山歌,阿哥阿妹来对和",这是流传在广西巴马瑶族自治县传来的歌谣。广西巴马是世界公认的五大"长寿之乡"之一,在这里,居住着百岁以上寿星86位。几十年来,巴马的长寿现象吸引诸多中外科学家来此进行实地考察,认为巴马的长寿现象与当地的阳光、空气、地磁、风景等因素有着千丝万缕的联系,而其中"水"则是至关重要的因素,尤其是水中矿物质及微量元素的均衡是长寿基因的保证。巴马长寿"因好水在中国",在巴马,无论是美如仙境的地貌,千奇百怪的溶洞,还是被誉为陆地神仙的长寿群体,无一不是大自然中最具魔力的魔术师——水的杰作。国际自然学会长森下敬一博士曾这样评价巴马:"巴马是天上遗落在人间的一片净土,就像中国龙嘴里的含珠子",并称巴马的水为长寿圣水。

#### 为一个美好意愿而合作

正是对巴马优越地理环境和丰富水资源的充分认可,广西巴马寿乡矿泉水有限公司准备开发丰富资源,生产优质矿泉水。此项目首期投资金额达壹亿元,计划首期年产100万吨矿泉水。

寿乡公司用了半年时间对国内、外知名饮料设备生产企业进行了全面的考查、比较和评估。达意隆凭借自身优越的核心竞争力,赢得寿乡公司的信任,最终寿乡公司选择了达意隆,双方于2013年4月初签订了一条43200瓶/小时高速矿泉水生产整线及一条4500瓶/小时10L瓶矿泉水生产整线。

达意隆团队与寿乡公司的接触可以追溯到2009年。 立项之初,客户计划生产五加仑桶装水,后因交通 不便、客户群体的改变等原因而中断项目。但达意 隆并没有就此放弃,依然与客户保持着密切的联



巴马寿乡公司陈董事长与达意隆张董事长亲密合影 Group Photo of President Chen of Bamashouxiang Spring Water Co., Ltd and President Zhang of TL



#### All comes from water

"When centenarians sing, boys and girls join in". This is a ballad from Bama Yao Autonomous County in Guangxi. Bama, Guangxi, is world acknowledged one of the five "villages of longevity" with 86 centenarians living here. For decades, the longevity in Bama has attracted many domestic and foreign scientists to make field investigations here. They believe that the longevity in Bama is closely related to local sunshine, air, terrestrial magnetism, scenery, etc. Among those factors, "water" is the most crucial one, especially the balance between mineral substances and microelements in the water, which is a guarantee for the gene of longevity. The longevity in Bama is because "there is high-quality water in China". In Bama, whether the beautiful landform, strange karst caves or the group with longevity reputed as immortals on the land, all these are masterpieces of the most magical magician in the great nature—water.

Dr. Keiichi Morishita, Chairman of International Natural Medicine Association, once made a comment to Bama, "Bama is a pure land left by the heaven, just like the pearl in the mouth of Chinese dragon", and he called water in Bama as holy water for longevity.

#### Cooperation for a good wish

As the superior geographical environment and abundant water resource in Bama are fully recognized, Guangxi Bama Shouxiang Spring Water Co., Ltd. plans to develop these rich resources and produce high-quality spring water. The initial investment in this project reaches RMB 0.1 billion yuan and it is planned to produce 1 million tons spring water annually in the first period.



Shouxiang Company made comprehensive inspection, comparison and assessment of domestic and foreign famous beverage equipment manufacturers in half a year. By virtue of its outstanding core competitiveness, Tech-Long won the trust of Shouxiang Company and became the final winner. In early April 2013, both parties signed an agreement on a whole high-speed spring water production line (43,200 bottles/hour) and a whole 10L-bottled spring water production line (4,500 bottles/hour).

The contact between Tech-Long and Shouxiang Company can be dated back to 2009. At the beginning of project approval, the customer planned to produce 5-Gallon barreled water. Then, due to inconvenient traffic, changes of the customer group and other reasons, the project was suspended. However, Tech-Long did not give up, but still kept close contact with the customer and discussed and shared domestic latest industrial information and market analysis regularly with the customer. During this period, Tech-Long developed four customers (Bama Uni-President, Bama Huoguan, Bama Naguan and Bama Impression) and laid eight production lines in Bama, a small county with an area of only 1,971 square meters and a total population of less than 250,000. Once again, Tech-Long proved its strength by its actions.

While feeling the rapid growth in the market and industry of drinking water in China, the customer also witnesses the rapid development of Tech-Long. Ultimately, upon a long-term market investigation and inspection of professional equipment, both parties reached a cooperation



intention and concluded a contract at last. Shouxiang Spring Water soon became the largest drinking water producer in bama and even in Guangxi. Both parties are full of expectations for their first cooperation. They believe that with their mutual efforts, more and more people can enjoy the holy water for longevity on the pure land and both parties will have a bright future of cooperation.

#### Text by: Hou jianze

#### 成就价值,与客户共成长

-陕西兴平益海嘉里秤重灌装机投产运行

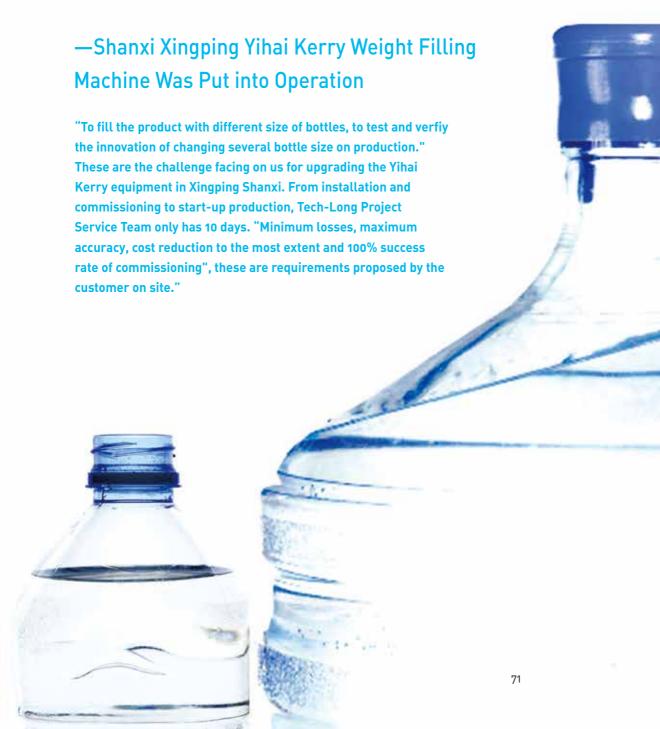
"要对不同的瓶型品种进行生产灌装,在生产现 场测试和验证多种瓶型快捷互换生产。"这就是 益海嘉里陕西兴平的工厂搬迁生产技术升级项目 所面临的挑战。从安装调试到试产,达意隆项目 服务小组只有10天的时间, "最低的损耗,最 高的精度,尽可能降低成本,100%的调试成功 率"这是客户现场提出的要求。







# CREATE VALUES AND GROW UP WITH CUSTOMERS TOGETHER



2007年,益海嘉里(兴平)食品工业有限公司正式成立,总投资为8800万美元,占地面积461.2亩,位于兴平市食品工业园内,是西北地区最具规模的集油脂、面粉、大米加工、贸易为一体的粮油生产企业之一。

2012年,达意隆与益海嘉里陕西兴平分公司达成战略合作,由达意隆为兴平益海提供一套称重灌装机设备。这是益海嘉里集团的又一个工厂搬迁生产技术升级项目,由于区域供货的优越性,该生产基地的产量需求远远大于益海集团其它区域的生产基地。因此,整个项目对设备技术、工程工期、成本控制要求也非常高。同时,项目的成败,关系着该厂区能否及时跟上供应链。立项之初,达意隆就根据项目的实际情况,为客户工厂量身定制了项目方案,设备的选择与实地的结合,完美的满足了该工厂的立项要求。

相比于过去的抽真空或者容积式的灌装机,此次项目的秤重灌装机最大的优点就是高精度和非接触式灌装,一年将节省100到200万元的油。同时,相对传统抽真空可使瓶坯的克重降低,瓶坯的成本也大大降低,这对兴平益海嘉里而言是一笔可持续的成本有效节约。同时,该项目设备属于通用型灌装机,可以对不同的瓶型品种进行生产灌装,适用范围的扩大化,更是减少了客户在生产设备的成本投入。

对于秤重式灌装机来说,多种瓶型互换生产为设计创新,很多技术需在生产现场测试和验证。以最快的时间调整设备,使其最大限度的符合现场的生产要求,是项目安装过程的最主要目的。同时,需对客户操作和技术人员进行培训沟通,使其在试产期间就可以上岗生产,尽量缩短试产到批量生产的时间。整个项目安装留给达意隆只有10天的时间。时间紧,任务重,为赶进度,达意隆项目服务小组夜以继日争取时间,最后在既定的时间内顺利安装。而后,达意隆工作人员根据客户要求,一个星期切

换一个品种进行生产测试,最终以完美的表现完达到了客户的生产要求。

此次项目的完美投产,达意隆凭借自己得丰富经验 为兴平益海嘉里提供优质的设备与服务,力求达到 一种双赢的局面。相信双方将紧握合作新契机,再 攀事业新高峰!

N 2007, Yihai Kerry (Xingping) Food Industry Co., Ltd. was established formally with a total investment of 88 million dollars and a floor area of 461.2 mu. Located in Xingping Food Industrial Park, it is one of the largest grain and oil manufacturing enterprises integrating the processing and trading of grease, flour and rice.

In 2012, Tech-Long and Shaanxi Xingping Yihai Kerry Company concluded a strategic cooperation agreement that Tech-Long would provide Xingping Yihai Kerry with a set of weighting and filling machine equipment. This was another factory removal and production technical upgrading project of Yihai Kerry Group. Owing to the excellent regional material supply, the output demand of this production base was far more than that of Yihai Group's production bases in other regions. Thus, the whole project had very high requirements for equipment technology, project duration and cost control. Moreover, the success of this project determines whether this factory could meet the demand of supply chain timely. At the beginning of project approval, based on the actual situations of the project, Tech-Long customized a project solution to combine equipment selection and practical requirement so that it perfectly met the factory's requirement at the time of project approval.

Compared with previous vacuumed or flow meter-based filling machines, the biggest advantages of weight filling machine in this project are its high accuracy and non contact filling, which will save oil worth of RMB 1 million to 2 million yuan annually. Moreover, the gram weight of the bottle preform is reduced and its cost is also reduced greatly. This is sustainable and effective cost conservation for Xingping Yihai Kerry. Besides, as the project equipment belongs to universal-type filling machines, it can be operated for the production and filling bottle models. The expansion of the application scope reduces the customer's cost input in the production equipment.

As for the weight filling machine, the interchangeable production of different bottle size was design innovation and many techniques should be tested and verified on the production site. The most principal goal in the process of project installation was to adjust the equipment in the shortest time to make it meet the onsite production requirements to the largest extent. Besides, training and communication should be conducted for the customer's operating and technical personnel to make them qualified for production during the period of start up production so as to shorten the time from start up production to batch production to the greatest extent. Tech-Long had 10 days only for the installation of the whole project. As the time was short and the task was heavy, to keep up with the progress, Tech-Long Project Service Team worked day and night to make time and finally succeeded in the installation within the time specified. Then, as required by

the customer, Tech-Long's workers conduct production tests by changing to another model every week. Ultimately, it completed the customer's production requirements with perfect performance.

For the satisfying operation of this project, Tech-Long provides excellent equipment and services for Xingping Yihai Kerry with the help of its abundant experience and tried to make a win-win situation. It is believed that both parties will seize new opportunities for cooperation and scale new heights in their businesses.

#### Text by: Guang yongju



## 悠悠山泉,淌清甜

达意隆携手润京水业打造"武当山泉"



# MOUNTAIN SPRING TASTES FRESH AND SWEET

—Tech-Long and Runjing Water Industry Build up "Wudang Mountain Spring"

### 问道武当山、养生太极湖!

湖北丹江口润京水业有限公司由湖北丹江能源投资 (集团)有限公司于2013年1月注册成立,坐落于巍 巍武当山下,悠悠汉水河畔,利用南水北调中线水 源地优势资源开发天然饮用水,是丹江口市委、市 政府大力扶持的重点骨干企业。公司注册资本2000 万元,在丹江口市水都工业园占地100亩,投资1.6 亿元,建设成年生产处理40万吨天然饮用水企业。 武当山泉饮用天然水以国家一级水源保护区、南水 北调核心水源地、被誉为"亚洲天池"的丹江口水 库深层水为水源,天然清纯、口味甘甜,富含多种 对人体有益的矿物元素。

#### 用口碑建立优势

达意隆与武当山泉的合作,起源于达意隆在农夫山泉得到的极大认可和良好口碑。2012年12月份,原农夫陈厂长来到润京水业,项目启动后,特邀请了丹江口电力集团程董事长及陈书记等人到达意隆公

司进行参观考察,达意隆在整体实力上给予程董事长非常良好的印象,当时就表示不需再考察其他设备供应商。面对这种情况,达意隆迅速给出反应,在公司领导人的带领下,回访丹江口润京水业,并在设备技术和工厂布局上最快速度的给予整厂解决方案。

### 以实力促就成功

对润京水业而言,从接触、考察、回访、技术交流、正式投标,短暂的两个月内,达意隆所展现出来的专业和负责任的态度充分体现出过硬的核心竞争力。2013年1月23日,该项目招标会议正式召开,达意隆公司凭借着高性价比、强大的技术实力和优质的服务,与润京水业签订了一条43200BPH天然水整线交钥匙工程,设备涵盖外围空压、冷水、净化、吹灌旋一体机、后段输送、纸箱、膜包、码垛整线。





## Learn Taoism in Wudang Mountain and preserve health by taking water in Taiji Lake.

Hubei Danjiangkou Runjing Water Industry Co., Ltd. was registered by Hubei Danjiang Energy Investments (Group) Co., Ltd. in January 2013. Located on the foot of the lofty Wudang Mountain and on the bank of the Han River, it is a key enterprise greatly supported by Danjiangkou Municipal Party Committee and Municipal Government to develop natural drinking water by use of superior resources from water sources in the middle line of the south-to north water transfer project. The company's registered capital is RMB 20 million yuan; its floor area is 100 mu in Danjiangkou Water City Industrial Park. With an investment of RMB 160 million yuan, it will be constructed to a natural drinking water enterprise with the annual production and processing capacity of 0.4 million tons. The natural drinking water of Wudang Mountain Spring is from the deep water in Danjiangkou Reservoir, which is one of the national first-level water source protection zones and the core water source in the south-to-north water transfer project and is honored as the "Heaven Pool in Asia". It is natural and pure with a sweet taste and full of several mineral elements beneficial to human bodies.

#### Advantages based on the reputation

The cooperation between Tech-Long and Wudang Mountain Spring originated from the great acceptance and good reputation of Tech-Long gained in Nongfu Spring. In December 2012, Mr. Chen, former factory director of Nongfu Spring, left for Runjing Water Industry. After the project was started, first of all, he invited President of Danjiangkou Electric Power Group Mr. Cheng, Secretary General Mr. Chen and others to visit Tech-Long. As President Mr. Cheng had a very good impression of Tech-Long's overall strength, he expressed onsite that it was not necessary to inspect other equipment suppliers. In this situation, Tech-Long responded quickly and paid a return visit to Dangjiangkou Runjing Water Industry under the leadership of company leaders and provided a whole-factory solution to equipment technology and factory layout in the shortest time

#### Success promoted by strength

In the short two months from the contact, inspection, return visit and technical exchange to the formal bid, the professional and responsible attitude demonstrated by Tech-Long to Runjing Water Industry fully reflected its superior core competitiveness. On January 23, 2013, the bidding meeting of this project was held officially. By virtue of its higher cost performance, strong technical strength and excellent services, Tech-Long signed a contract with Runjing Water Industry on a complete turn key line of 43200BPH natural water. The equipment included Air compressor, chiller, purification system, BFC combi block, conveyors, wrap around packer, shrink wrapper, palletiser etc.

Text and picture by: Hong feng



## 合作无止境

## 一衡山信联36000瓶/小时水线顺利验收

"11年前,达意隆第一台RJM10吹瓶机首次进入信 联公司的生产线。

11年间,信联和达意隆之间的合作从第一年的1个项目迅速增加到第十一年的16个项目。

多年来,无论是最初的单机设备,还是后面的整线设备提供,每一次合作的背后都是默契与信任的结晶。 每一次握手,都标志着双方的合作前景光明一片。"

2013年1月,新年伊始,达意隆项目服务小组传来 喜讯,衡山信联36000瓶/小时水线效率高达90%以 上,项目顺利验收!

这是达意隆与信联的第15个项目。作为达意隆的老

客户,2011年年底,信联智通经过长时间的考察,并结合自身使用设备的实际情况进行科学的评估,与达意隆再次签订3条吹灌旋整线水线项目,分别安装在广州新塘和衡阳衡山两个分厂,为国内知名品牌"怡宝"代工。

2012年7月,项目设备到达客户工厂。在项目经理李 佐平的带领下,由服务工程师曾日行、肖恒、彭石 华、陈文汉、田林暖、郑慰鹏人员组成的项目安装小 团队,在现场无任何温度调节设备的情况下,不顾天 气炎热,争分夺秒的安装调试设备。8月底,设备开 始整线机电调试,9月10号,终于开始整线试产,之 后便开始陆续生产。最后在2013年的1月份,经过工 程师多日的现场观察和跟踪,整线设备已能够稳定运 行并达到90%以上的效率,项目顺利验收。

## **ENDLESS COOPERATION**

## —Successful Acceptance Inspection of 36,000 bottles/ hour Water Production Line in Hengshan Xinlian

"11 years ago, the first RJM10 blowing machine of Tech-Long entered the production line of Xinlian Company for the first time.

During these 11 years, the cooperation between Xinlian and Tech-Long has increased quickly from one project in the first year to 16 projects in the eleventh year.

For years, whether it is the initial single equipment or the provision of whole-ling equipment afterwards, the cooperation at each time indicates the tacit understanding and trust. The handshake at each time marks the bright future of the cooperation between both parties."

In January 2013, at the beginning of the year, good news came from Tech-Long Project Service Team that with the efficiency of up to over 90% the 36,000 bottles/hour water production in Hengshan Xinlian passed the acceptance inspection smoothly.

This is the 15th project cooperated by Tech-Long and Xinlian. As a regular customer of Tech-Long, at the end of 2011, upon long-term inspection and the scientific evaluation based on its actual

situation of equipment use, Xinlian signed three BFC whole water production line projects with Tech-Long again, which would be installed at two branches in Xintang, Guangzhou, and Hengshan, Hengyang as the OEM of domestic famous branch "C'estbon".

In July 2012, the project equipment arrived at the customer's factory. Led by project manager Li Zuoping, the project installation team constituted by service engineers Zeng Rixing, Xiao Heng, Peng Shihua, Chen Wenhan, Tian Linnuan and Zheng Weipeng made full use of every minute to install and commission the equipment despite the hot weather due to lack of temperature conditioner on the site. At the end of August, the whole-line electromechanical commissioning of the equipment started. On September 10, the whole-line start up production was started finally. Then, production was started successively. At last, in January 2013, through days of onsite observation and follow-up by engineers, the whole-ling equipment could operate stably and reach the efficiency of over 90%. Thus, the project acceptance inspection was succeeded.

Text by: Zeng rixing

## 印尼市场长驱直入

## **MARCH INTO THE**

PT. SINAR SOSRO(以下简称SOSRO),成立于1940年,是印尼市场最大的茶饮料公司,产品种类多样,包括茶饮料、果汁饮料和饮用水产品,在这个人口众多、气候炎热的国度, SOSRO占有的非碳酸饮料市场份额高达65%以上,市场号召力可见一斑。1990年,SOSRO公司着眼看未来,将瓶装水事业作为新的开发项目,正式生产瓶装饮用水 Prim-A,市场一片大好。

2012年,两条18000BPH吹灌旋整线设备揭开了达意隆进攻印尼市场的序幕,凭借设备优越的品质在当地竖起一面光鲜旗帜。自此,达意隆正式进军印尼市场,在获取到SOSRO的新投资上线计划后,达意隆项目负责人高度重视。SOSRO公司对饮料生产设备的要求很高,一直采用欧洲的灌装包装生产设备。为此,达意隆专门成立了由销售、技术与项目管理人员的项目小组,并与客户进行多次技术讨论与沟通,最终以过硬的实力及出台的设计方案获得了客户的认可和信任,与达意隆签订了一条从吹瓶灌装到贴标、纸箱包装机、码垛机的24000BPH吹灌旋整线!

#### 盛开在印尼的达意隆之花

继与SOSRO签订的24000BPH吹灌旋水线后,达意 隆乘势而上,于2013年4月与SOSRO总部集团下的 饮用水公司PT. TIRTA PURBALINGGA ADIJAYA饮用 水公司签订了又一条24000BPH水灌装线。

与SOSRO公司水生产线的紧密合作,不仅表明客户对达意隆设备技术的充分认可,为以后双方在茶饮料生产线方面的合作奠定了良好的基础,随着合作的深入,达意隆的品牌将伴随着良好的口碑迅速传遍到印尼市场!

PT. SINAR SOSRO (hereinafter referred to as SOSRO), established in 1940, is the largest tea beverage company in the Indonesian market. It has diversified products including tea beverage, fruit juice drinks and drinking water products. In such a country with a large population and hot climate, the market share of SOSRO's non-carbonated beverage is up to over 65% so that its market appeal is apparent. In 1990, looking forward to the future, SOSRO took bottled water as a new development project and formally began to produce bottled drinking water Air SOSRO, which enjoyed a good market situation.

In 2012, two lines of 18000BPH BFC wholeline equipment uncovered the prelude to Tech-Long's progress in the Indonesian market. With excellent equipment, it established a striking

# INDONESIAN MARKET

brand in local areas. From that moment on. Tech-Long marched into the Indonesian market formally. When obtaining SOSRO's investment plan in new lines, Tech-Long's project leader attached high importance. As SOSRO had a very requirement for production equipment for drinks, it always adopted European filling and packaging production equipment. Thus, Tech-Long set up a special project team composed of sales, technical and project management personnel, conduct technical discussions and communication with the customer for several times, and finally obtained the customer's approval and trust by its superior strength and design solution. The customer signed a contract with Tech-Long on a whole 24000BPH BFC line including blower to labeller, wrap around packer, and palletiser.

## A flower of Tech-Long blooming in Indonesia

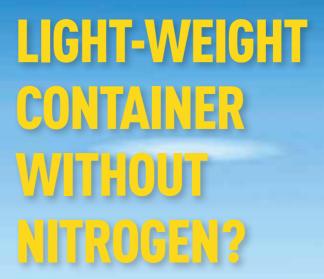
After the 24000BPH BFC water production line signed with SOSRO, Tech-Long rode on the mamentum and signed another 24000BPH BFC water production line with PT. TIRTA PURBALINGGA ADIJAYA, a drinking water company subordinate to SOSRO headquarters in April 2013.



The close cooperation with SOSRO on the water production line indicates the customer's full acceptance of Tech-Long's equipment technology and lays a good foundation for both parties' cooperation on the production line for tea beverage in the future. With deeper cooperation, Tech-Long's brand will be spread over the Indonesian market quickly with a good reputation.

Text and picture by: Oscar Feng





Able To Satisfy
Personalized Demand,
Tech-Long Expanding
Itself To The Arab Market

## 轻量瓶不加氮?

一达意隆直击个性化需求 拓展阿拉伯市场 拉伯现代工业公司(Dala)成立于1999年, 目前该公司拥有10多条高速生产线,主要 生产各种口味的无菌包果汁及0.2L-5L等 不同规格的瓶装水等饮料,发展迄今已成为沙特乃 至整个海湾地区(GCC)都赫赫有名的大型饮料生产企 业。

2012年,沙特Dala公司作为达意隆的老客户,计划上一条36000BPH水线以扩大产能,并邀请达意隆参与竞标。公司上下立即组织资源,销售人员奔赴沙特与客户会谈。了解到客户期望新线做轻量瓶后,销售人员结合达意隆与可口可乐,百事可乐等国际饮料巨头在轻量瓶项目合作的经验,有针对性地向客户介绍在高速生产线及轻量瓶方面的优势,并成功邀请到Dala公司高层来中国工厂参观。

一个月后Dala公司高层如约而至。在陆续参观达意 隆为可乐等客户提供的数条生产线后,Dala公司肯 定了达意隆的轻量瓶技术和整线交付能力。特别是 在参观长沙某国际品牌代工厂的36000BPH轻量瓶生 产线时,客户为设备的流畅运行及工厂生产日报上 的高效率所折服。在随后的商务会谈中,Dala公司 经过审慎的考虑,决定将该项目交给达意隆,并由 原计划上一条水线,增加为两条36000BPH轻量瓶水 线!

在项目启动初期,达意隆根据Dala公司提出的要求,多次修改布局,最终在达意隆全体技术团队的全力支持下,在有限的现有厂房基础上完成了布局设计。

随后Dala公司告知因当地法律法规,该轻量瓶项目不能加氮。这对国内外设备供应商来说都是一个全新的课题和挑战。达意隆集中公司技术力量,从瓶胚及瓶型设计开始,一步步地对该项目进行论证,针对潜在问题提出多套解决方案。经过多次试验,最终成功得到验证,及时交货并获得客户的认可。

与Dala公司的再度携手,标志着达意隆在中东高速 饮料生产线市场的又一胜利,同时也是达意隆更进 一步掌握轻量化及环保技术,强化作为国际上寥寥 几家能够提供轻量化整线话语权的又一里程碑。

感谢Dala公司对达意隆一如既往的支持和信任。相信在Dala公司及达意隆的紧密合作之下,该项目一定会取得完满的成功,期待双方在未来共同发展,共创辉煌!

stablished in 1999, Arab Modern Industry Company (Dala) owns over 10 high-speed production lines and mainly produces fruit juice in different tastes and bottled water in different specifications from 0.2L to 5L. Dala up till now has become a well-known large beverage manufacturer in Saudi Arabia and throughout the whole GCC area.

In 2012, as a regular customer of Tech-Long, Arab Dala planned to expand the capacity of a 36000BPH water production line and invited Tech-Long to participate in the bid. Tech-Long organized the resources immediately and salesmen went to Saudi Arabia to meet the customer. After getting to know that the customer expected the new production line to produce light-weight bottles, in combination with the experience in light-weight bottles projects cooperated between Tech-Long and international beverage giants such as Coca Cola, Pepsi Cola, etc., salesmen made a targeted introduction to the customer about the advantages on highspeed production lines and light-weight bottles and invited Dala to visit factories in China.

One month later, Mr. Sager the General Manager of Dala arrived on time. After visiting several production lines provided by Tech-Long for customers such as Coca Cola, Dala affirmed Tech-Long's technology on light-weight bottles and the whole-line delivery ability. Especially when visiting the 36000BPH light-weight bottle production line in an OEM in Changsha for an international brand, the customer was impressed by the smooth operation of the equipment and the high efficiency on the factory's daily production report. In the business negotiation later on, upon cautious consideration, Dala determined to offer this project to Tech-Long and increased from one water production line on the original plan to two 3600BPH light-weight bottle water production lines.

At the initial stage when the project was launched, according to the requirements proposed by Dala, Tech-Long revised the layout for several times and finally completed the layout design based on the limited existing factory with the full support of the whole technical team.

Then, Dala told that this light-weight bottle project cannot be filled with nitrogen due to local laws and regulations. This was a brand new topic and challenge to equipment suppliers both home and abroad. Tech-Long concentrated its technical strength to demonstrate this project step by step from the design of bottle preform and model and proposed multiple solutions to potential problems. After tests for several times, the verification was succeeded at last and the equipment was delivered in time and well received by the customer.



The second time of cooperation with Dala marks another success of Tech-Long in the Middle East market of high-speed beverage production lines. Also, it is another milestone of Tech-Long that it further masters the light-weight and environmental protection technology and reinforces its voice as one of a few of enterprises in the world which can provide light-weight whole production lines.

Thank Dala for its support and trust for Tech-Long as always. It is believed that under the close cooperation between Dala and Tech-Long this project will certainly succeed completely and it is expected that both parties can develop together and make achievements together in the future.

Text and picture by: Calvin Liao

实例 Project Cases



印度的交钥匙工程



度,是印度共和国(Republic of India)的 简称,位于亚洲南部,是南亚次大陆最大 的国家,全境气候炎热,大部分属于热带 季风气候,而印度西部的塔尔沙漠则是热带沙漠气候。夏天时有较明显的季风,冬天的季风特征则不明显。因地处热带,印度市场含汽饮料产品十分畅销,其中可乐和百事两大品牌产品就占了含汽市场份额80%以上。近年来受健康饮食观念影响,人们开始将饮料选择目光投向瓶装水,果汁和功能饮料产品等;据2012年印度饮料行业协会调查报告,非碳酸饮料市场同比2011年增长了22.73%,市场增长潜力巨大。

印度Megha Springs PVT. LTD. 是一家生产饮料和膨化食品的生产商,工厂在印度西南部海滨城市Mangalore,拥有工人超1400人,年产值超3500万美金,旗下的饮料产品有芒果汁,汽水,纯净水和苏打水等;尤其是它的Bindu产品,享有"印度王老吉"美誉,在本地十分畅销。

达意隆与客户的关系建立已有三年之久,一直保持 良好沟通和联系。期间,客户在2012年孟买包装展 上到访达意隆展位,并透露2013年的新PET瓶含汽整线计划。消息不胫而走,同行业设备供应商纷纷与客户取得联系并报价。但达意隆设备性能与品质一直深得客户信任与青睐,一番比较下来,客户最终确认三家候选供应商:达意隆、台湾设备、某欧洲设备。

与此期间,达意隆了解到,客户此次需要采购的是从前处理到膜包末端的整线工程,这一需求大大凸显了达意隆的竞争优势。在5月份客户的广州之行,达意隆的项目负责人陪同客户参观了广州太古可乐的吹灌旋整线,设备实际运行性能的稳定性与高效性再一次为达意隆取得客户信任。经过三天的实地考察与谈判,达意隆最终凭借着专业的技术、本地化的备件与工程服务打动客户,成功拿下项目。

印度Megha项目的签订对于达意隆在整个南亚市场的开拓发展具有重大意义,它既是印度的第一条含汽吹灌旋整线,也是整个南亚的一个样板工程,对于一个含汽产品占主导地位的大市场,意义深厚。印度Megha项目将是达意隆印度市场版图上插上的一支鲜明旗帜。

ndia, short for the Republic of India, locates in southern Asia and is the largest country on the South Asian Sub-continent. With the territory, the climate is hot; most areas belong to the tropical monsoon climate while the Thar Desert in the west of India is the tropical desert climate. In summer, there is obvious monsoon while in winter the monsoon is not so obvious. As it is located in the tropical zone, the sparkling beverage products are sold quite well in the Indian market. Among them, Coca Cola and Pepsi Cola account for over 80% of the market share of sparkling beverage. In recent years, as influenced by the concept of healthy diet, people begin to turn their eyes on drink selection to bottled water, fruit juice and functional drinks, etc.; according to the investigation report of India Beverage Industry Association in 2012, the market of non-carbonated beverage increases by 22.73% as compared with that in 2011 so that the market growth potential is huge.

India Megha Springs PVT. LTD. is a manufacturer of beverage and puffed food. Its factory is in Mangalore, a coastal city in the southwest of India. Its employees exceed 1,400 and its annual output value exceeds 35 million dollars. Its beverage products include mango juice, soft drink, purified water and soda water, etc.; especially, its product Bindu, honored as "India Wanglaoji", is quite popular in the local area.

The relationship between Tech-Long and the customer was established three years ago and they always keep good communication and contact. During this period, the customer visited Tech-Long's booth on Bombay Package Exhibition in 2012 and revealed its plan for new PET bottle sparkling beverage whole lines in 2013. The news spread like wildfire. Peer equipment suppliers contacted the customer and made quotations. However, as Tech-Long's equipment performance and quality were always



Megha 公司与达意隆双方项目负责人在新建项目工厂的亲密合影 Group Photos of Project Team of TL and That of Megha Company on the site of Megha new Plant

trusted and favored by the customer, upon comparison, the customer finally confirmed three candidate suppliers: Tech-long, Taiwan equipment and a European equipment.

During this period, Tech-Long got to know that what the customer needed to purchase this time was a whole-line project from pre-processing to film packaging end. Such a demand greatly highlighted Tech-Long's competitive edge. During the customer's visit to Guangzhou in May, Tech-Long's project leader accompanied the customer to visit the BFC whole line for Coca Cola in Taigu, Guangzhou. The stability and efficiency of the equipment's actual operational performance won the customer's trust for Tech-Long again. Through three-day field investigation and negotiation, Tech-Long persuaded the customer finally and took the project successfully by virtue

of its professional technology, localized spare parts and engineering services.

The conclusion of India Megha Project has great significance to the exploration and development of Tech-Long in the whole market in South Asia. It is the first sparkling BFC whole line in India and also a sample project in the whole South Asia. It has profound meaning for such a large market led by sparkling beverage products. India Megha Project will become the one bright flag erected by Tech-Long in the map of Indian market.

Text and picture by: Wayne Liu





## 旗开得胜 继往开来

--达意隆牵手MUSE全面进入南苏丹市场



2013年7月,达意隆国际销售部传来新捷报,位于南苏丹的MUSE AF LTD公司采购我司—条24000瓶/小时含汽整线,包括前处理系统和一套72腔注塑机系统。这是继继埃塞俄比亚、刚果金、坦桑尼亚后非洲市场又一新成绩。

在南苏丹这个刚成立的国家,一切几近空白。这里环境相当恶劣,常年烈日炎炎,沙尘众多。MUSE AF LTD是乌干达国内排名第三的进出口商,月进口约为400条货柜。经营范围包括矿山车队,电子设

备,农贸机械等等。客户在南苏丹有土耳其设备, 但由于设备不稳定,效率差,影响产能,准备购买 新设备加大产能。

在这种形势下,达意隆销售人员抓住契机,前后三次与公司技术人员前往乌干达与南苏丹商谈,做好各种售前工作以及规划布置图等等工作,后又成功邀请客户参观达意隆设备工厂——广州可乐、深圳达意隆工厂及长沙中富工厂。参观期间,客户了解到,早在2004年,达意降就开始与可口可乐合作,



达意隆高层与项目负责人热情接待客户 TL Senior Director and Project Representatives Recept Customer hospitally

至今已长达10年,设备总数高达80多。这对达意隆设备的质量是最好的见证,加上参观工厂现场的轻量瓶生产线以及超洁净灌装等设备的良好运行,客户最终对达意隆产生了高度信任和认可。同时,面对客户当地供水系统不完善等困难,达意隆销售前后多次前往当地与客户商谈,及时提供给客户足够的信息和信心。

此次与MUSE的合作,在东非市场上是一次极大的成功,为达意隆在非洲,尤其是东部非洲市场的进一步开拓又打下了坚实的基础;同时,也意味着达意隆大产量的吹灌旋设备再一次成功的进军非洲市场。未来,在非洲经济不断发展,购买力不断提升的利好之下,达意隆的吹灌旋一体机技术产品将会受到更多非洲国家的青睐。翘首非洲大陆市场,达意隆人更有信心!

n July 2013, Tech-Long International Sales
Department reported a new success that
MUSE AF LTD in South Sudan purchased
our company's one 24000 bottles/hour sparkling
beverage whole line, including the preprocessing system and a set of 72-chamber
injection molding machine system. This is
another achievement made in African market
after in Ethiopia, Democratic Republic of Congo
and Tanzania

In South Sudan, a country newly established, everything is nearly blank. The environment here is rather bad. The sun is extremely hot and the dust is much throughout the year. Muse AF Ltd is the third importer in Uganda with the

monthly import volume of about 400 containers. Its business scope includes the vehicle fleet for mining, electronic equipment, machinery for agricultural trade, etc. The customer has Turkey equipment in South Sudan, but intends to buy new equipment to increase the productivity since the unstable and low-efficiency equipment influences the productivity.

In this situation, Tech-Long's salesmen seized the opportunity and went to Uganda and South Sudan with our company's technicians for negotiation for three times, conducted presale work and planned the layout drawing, etc. Then, they successfully invited the customer to visit Tech-Long's equipment factory—Coca Cola factory in Guangzhou, Tech-Long factory in Shenzhen and Zhongfu factory in Changsha. During the visit, the customer learnt that Tech-Long started to cooperate with Coca Cola in as early as 2004 and their cooperation lasted for 10 years by now with the total equipment amount of over 80. This was the best proof for the quality of Tech-Long's equipment. In addition, by visiting the good operation of the factory's onsite light-weight bottle production line and the super-clean filling equipment, etc., the customer highly trusted and accepted Tech-Long at last. Moreover, with regard to the customer's difficulties such as incomplete local water supply systems, Tech-Long's salesmen went to the local area to negotiate with the customer and provide the customer with enough information and confidence in time

The cooperation with MUSE is another great success in the market of East Africa and lays



solid foundations for Tech-Long's further exploration in Africa, especially in the eastern African market. Meanwhile, it signifies that Tech-Long's large-output BFC equipment marches into the African market successfully once again. In the future, with the continuous development of African economy and the continuous increase of the purchasing power, Tech-Long's technical products like BFC Combi-block will be welcomed by more African countries. Looking forward to the markets on African continent, Tech-Long is much more confident.

Text and picture by: Sam Hu





## 产品CE认证有序推进,备战欧洲市场APPLYING PRODUCTS CE CERTIFICATE IN SEQUENCE, READY FOR MARCHING ON EUROPEAN MARKET

CE,CONFORMITE EUROPEENNE的缩写,是欧共体质量认证安全标志。通过安全测试的相关设备将获得CE的测试报告及证书。凡贴有"CE"标志的产品可在欧盟各成员国内销售,这是欧盟法律的强制性要求,因此CE被视为制造商打开并进入欧洲市场的"护照"。

2012年,达意隆便与工业产品认证行内最权威的TUV南德公司合作,开始设备的CE认证。据了解,此次认证涵盖公司现有机型。2012年2月24日,吹瓶及灌装设备CE认证正式启动。5月22日,以雀巢项目为基础完成的直链式五加仑灌装机样机通过CE安全检测。2013年1月23日,吹瓶机系列产品也通过CE安全测试。随后,包括饮料、非饮料产品、包装、贴标在内的产品也逐步进入紧张的认证阶段,目前相关工作进展相当顺利。CE认证,不但能提高达意隆自身产品的实力,也将为公司整线拓展欧洲市场打下坚实的基础。

CE, the abbreviation of CONFORMITE EUROPEENNE, refers to the safety mark of EC quality certification. Relevant equipment passing the safety test will obtain CE testing report and certificate. Products labeled with "CE" mark can be sold in EU member states, which is a compulsive requirement in EU law. Thus, CE is deemed as the "passport" for manufacturers to open and enter the European market.

In 2012, Tech-Long cooperated with TUV SUD, the most authoritative company in the industry of industrial product certification, to start the CE certification of equipment. It was understood that this certification covered all existing machine types of the company. On February 24, 2012, the CE certification of bottle blowing and filling equipment was formally started. On May 22, the prototype of straight-chain 5-Gallon filling machine completed based on the Nestle project passed the CE safety testing. On January 23, 2013, series products of bottle blowing machine also passed the CE safety testing. Then, products including beverage and non-beverage products, packaging and labeling entered the intense certification stage gradually. Currently, relevant work is being carried out smoothly. The CE certification can enhance the strength of Tech-Long's products and will also lay a solid foundation for the company to explore the whole European market.

Text by: Wang yannan

## 专利之尺 量创新水平 RULER OF PATENT SCALES A NEW LEVEL

### -- 达意隆跻身开发区专利创造十强企业

—Tech-Long Ascends to Top Ten Enterprises in Patent Creation in the Development Zone

近日,为表彰先进,树立典型,加快知识产权强区 建设,促进区域专利事业跨越式发展,广州开发区 对专利创造20家先进企业(科研机构)予以通报表 彰。达意隆以年申请92件专利跻身开发区专利创造 10强企业。据统计资料显示,至2012年底,有110 余家世界500强企业落户科学城,占广州世界500强 企业的40%。这里拥有国家电子信息产业基地、海 外高层次人才创业基地等13个国家级基地。据萝岗 区官方资料显示,除此类世界500强企业以外,科学 城已聚集了300多家国家和省、市级以及跨国企业 研发机构, 汇聚1000多家高科技企业, 3000多名海 归在此创新创业。在开发区众多高科技企业中,达 意隆一直积极进取,以行业一流企业为学习标杆, 从未放弃创新。作为拥有国家级企业技术中心的高 新技术企业, 达意隆掌握了液体包装整线的核心专 利技术,并拥有行业最卓越的技术研发团队。此次 表彰将成为鼓励和推动达意隆进一步自主创新的动 力,使达意隆早日跻身国际一流液体包装供应商行 列!

Recently, in order to commend advanced organizations and set up models, accelerate the construction of a strong zone on the aspect of intellectual property and promote leapfrog development of regional patent cause, Guangzhou Development Zone reported and commended 20 enterprises (scientific research institutions) advanced at patent creation. With the annual application of 92 patents, Techlong ascends to Top 10 enterprises in patent creation in the Development Zone. As indicated

by statistical data, by the end of 2012, over 110 of world top 500 enterprises have settled in the Science City, accounting for 40% of the world top 500 enterprises in Guangzhou. Here locates 13 national bases such as the national electronic information industry base, overseas highlevel talents incubator base, etc. According to official data of Luogang District, besides such world top 500 enterprises, the Science City has gathers over 300 national, provincial, municipal and multi-national enterprises and research and development institutions, over 1,000 hightech enterprises, and over 3,000 overseas returnees for innovation and entrepreneurship. Among plenty of high-tech enterprises in the Development Zone, Tech-Long has always made progress positively, learnt from firstclass enterprises in the industry and has never given up innovation. As a high-tech enterprise owning a national-level enterprise technology center, Tech-Long has mastered the core patent technology of liquid packaging complete line and owns the most excellent technical research and development team in the industry. This commendation will become the driving force encouraging and promoting Tech-Long's further independent innovation and make Tech-Long rank among the first-class liquid package suppliers in the world.

Text by: Wang yannan

## 宝洁亚太区供应链团队 一行荏临达意隆参观调研

# P&G ASIA PACIFIC SUPPLY CHAIN DELEGATION VISITED TECH-LONG FOR INVESTIGATION



宝洁团队一行参观达意隆工厂 P&G Delegation to Vist Tech-Long

013年9月,宝洁亚太区供应链代表团一行40 余人远赴中国考察各设备供应商。9月3日在 考察广州期间,代表团专程前往广州达意隆 包装机械股份有限公司参观。

在此之前,宝洁全球供应链副总裁曾荏临广州达意隆参观,当时对达意隆的研发能力和制造水平给予了很高的评价。值此供应链代表团考察调研设备供应商之际,双方借机相互了解,寻求下一步合作机会。在听取达意隆公司简介、参观完生产车间后,代表团们对达意隆赞不绝口,尤其对达意隆的历史及快速发展表示出浓厚的兴趣。

此次代表团的来访,对促进双方交流合作有重要的 意义,两公司必将深化交流,互信合作,在未来的 商业领域开拓一片新的土地。

n September 2013, P&G Asia Pacific Supply Chain Delegation consisting of over 40 people came to China to investigate equipment suppliers. On September 3 during their visit to Guangzhou, the delegation paid a special visit to Guangzhou Tech-Long Packaging Machinery Co., Ltd.

Before this visit, the VP of P&G supplier chain visited Guangzhou Tech-Long and spoke highly of Tech-Long's research and development ability and manufacturing level at that time. Taking the opportunity that the supply chain delegation inspected and investigated the equipment suppliers, both parties had an understanding with each other and sought for further cooperation chances. After listening to the brief introduction and Tech-long and visiting the production workshop, the delegation were full of praises for Tech-Long and, in particular, showed keen interest in Tech-Long's history and rapid development.

The visit of the delegation has great significant to the promotion of the communication and cooperation between both parties.

Both companies will certainly deepen their communication, trust and cooperate with each other to explore a new land in the future commercial field.



## 改进就是创新 IMPROVEMENT IS INNOVATION

- —从软管到线槽,吹瓶机采用新布线方式
- —From Flexible Tubes to Cable Tray, Blow Molding Machine Use a New Wiring Method







改进后 After Improvement

某种程度,当技术达到一定成熟阶段,产品基本上已经定型,就会越来越难研究出新的技术。要想突破创新,只有从产品质量着手,不断改进。对于技术的追求,达意隆一直锲而不舍,永不止步。每一个细节的改变,源自对市场的尊重。下面,吹瓶机电气装配布线方式设计改变就是一个很好的例子。

以前达意隆吹瓶机的布线,都是采用软管走线的方式,来连接各个部分的电路, 这种布线方式,不仅要钻一百多个孔,还要消耗大量波纹管,费时又费力,而且凌乱缺乏美观。

在CE认证过程中,达意隆改用线槽布线,走线槽布线,比以前的软管方式更加方便,大大提高了效率,而且整齐大方又美观。

布线方式的不同,虽然与设备功能关联不大,但是 从产品质量和外观的角度来说久却很好的改进。只 有精益求精,产品才能不断完善,为客户创造更多 的附加价值。

o some extent, when technology reaches a certain mature stage and the product is basically approved, it will be more and more difficult to study new technology. To make a breakthrough for innovation, we have to set about from product quality and keep improving it. Techlong has always pursued for technical innovation perseveringly and unceasingly. The change of

every detail originates from the respect towards the market. The following design change in the electrical assembly wiring of the bottle blowing machine is a very good example.

Previously, the wiring of Tech-Long's bottle blowing machines uses the routing method via flexible tubes to connect circuits in each part.In this wiring way, we have to drill over one hundred holes and consume a lot of corrugated tubes. It is time and energy-consuming, messy and not heautiful

During the process of CE certification, Tech-Long changes the wiring by use of cable tray; see the figure on the right:

The wiring via cable tray is more convenient than via flexible tubes previously. It greatly enhanced the efficiency and is neat and beautiful.

Different wiring methods are not quite related to equipment functions. However, from the perspective of product quality and appearance, it is very good improvement. Only by constantly striving for perfection, products can be better and better and we can create more added values for customers.

Text by: Cheng fengji



## 达意隆**博士后**科研工作站获批成立

# TECH-LONG POST-DOCTORAL RESEARCH WORKSTATION WAS APPROVED TO ESTABLISH

日前,经人力资源和社会保障部、全国博士后管理 委员会批准,达意隆建立博士后科研工作站的申请 正式获批。此举标志着行业首家博士后科研工作站 将正式落户达意隆,实现了行业内博士后科研工作 站建设的零突破,为行业内人才培养与科技创新提 供强有力的技术支撑。

此番获批博士后工作站是政府对达意隆实力的认可和对发展前景的期许。该工作站针对行业内技术瓶颈问题,推动技术进步、科技创新和产业升级发展。推进产学研结合,既发挥高校人才科研优势,又发挥企业的市场主体作用,在科研和生产实践中,吸引培养一批高层次创新型人才,为行业经济发展提供人才支撑。

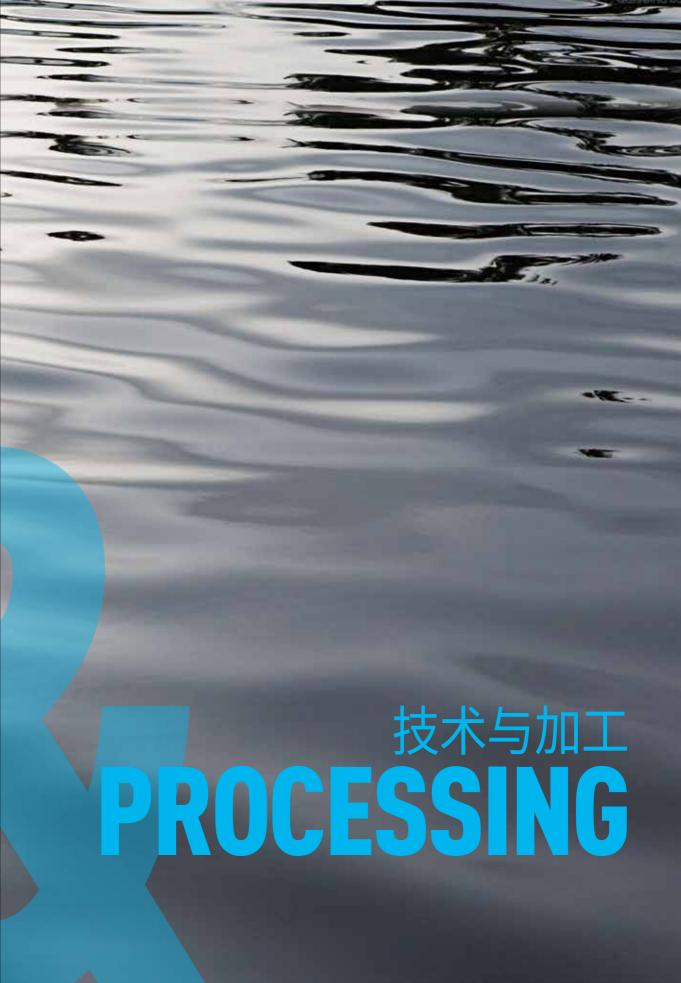
A few days ago, as approved by the Ministry of Human Resources and Social Security and the National Post-Doctor Regulatory Commission, the application of Tech-Long to establish a post-doctoral research workstation is approved officially. This marks that the post-doctoral research workstation will be settled formally in Tech-Long, which is the first in the industry.

It breaks through the situation that there is no post-doctoral research workstation in the industry and provides powerful technical support for talent cultivation and scientific innovation in the industry.

The post-doctoral research workstation approved this time is the government's recognition of Tech-Long's strength and its expectation for the development outlook. This workstation aims at technical bottleneck problems in the industry and promotes technical progress, scientific and technical innovation and industrial upgrading and development. By promoting the combination of enterprises, university and scientific research, it will give full play to the advantage of scientific research conducted by university talents, and play the role of the enterprise as a main market subject. In the scientific research and production practices, it will attract and cultivate a batch of high-level innovative talents and provide talent support for the industrial economic development.

Text by: Wang yannan





黏稠物料、小颗粒酱 料的灌装

FILLING TECHNOLOGY OF VISCOUS MATERIALS AND SMALL GRANULAR SAUCES





近年来,广州达意隆包装机械股份有限公司进 军调料品市场,成功开发了食用油、酱油、酱 类等灌装设备,开拓了广阔的市场。在酱类酱 装上,较大颗粒、黏稠度大、流动性差的的 料,比如黄豆酱、花生酱等,针对物料等 性,一般使用回转式活塞阀酱料灌装机灌 一般使用回转式活塞阀酱料灌装机灌 而对于像番茄酱、辣椒或无颗粒的酱料灌装加 后流动性较好、小颗粒或无颗粒的酱料灌装加,则采用2011年下半年、公司成功开发的适用,则采用2011年下半年、公司成功开发的适用,可不含颗粒或含有较小颗粒的酱料的灌装机。可以的灌装机及灌装侧,均已申请了专利保护。)

### 一、小颗粒酱料灌装 机的灌装要求

酱料灌装时对灌装机通常有以下几点要求:

#### 1、尽量少的回流量

回流量过大,灌装效率自然降低;物料泵的功率要求也会很大,能耗增加,而且物料缸、回流罐都要设计得很大,机器整体都要加大设计,外观上、成本上都没好处。所以,通常都希望回流量越少越好。

#### 2、无瓶不灌装,灌装无滴漏

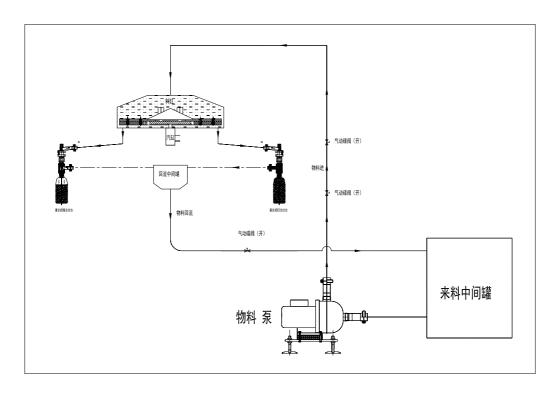
这是减少浪费、保证灌装环境洁净卫生的关键。酱料由于其流动性差,有物料外泄时,往往粘在机器上,污染环境;同时,如果灌装时滴漏严重,滴漏的物料可能会滴到瓶子外壁或瓶口上,对后续的封盖、贴标等工序造成影响;而且环境卫生,细菌减少,是对产品质量的基本保护,所以对于酱料灌装,无瓶不灌装,灌装少滴漏显得更加重要。

#### 3、自动进行CIP清洗

保证对灌装机的管道、物料缸的清洗干净,可灌装 多种不同的酱料,实现一机多用。

#### 图1 灌装工艺流程图

#### Figure 1 Filling Process Flow Diagram



#### 4、保证操作的方便、高效。

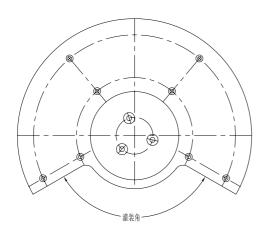
包括CIP时、换瓶型时所花费的时间和人工,以及工人的劳动强度等。

### 二、小颗粒酱料灌装 机的灌装工艺

小颗粒酱料灌装机,大致采用以下工艺流程: 物料由中间罐泵上灌装机顶部的物料缸,通过管道进入各个灌装阀中,阀打开后流入瓶子,灌装物料至预定液位后通过阀自身的回流通道回流至位于灌装机中部的回流罐中;阀不打开时,即直接由阀的回流通道回流至回流罐,与新供物料一起再由物料泵泵上进料管道进行灌装。其工艺流程图如图1所示:

#### 图2 物料分料盘图

#### Figure 2 Figure of Material Distribution **Plate**



#### 三、实现小颗粒酱料 灌装的技术保证

酱料不同一般的饮料,流动性不好,不能用一般的 饮料热灌装机(为常压灌装)来灌装;达意隆公司 针对酱料的特性,综合酱料灌装的要求,对灌装阀 和物料缸进行了全新的设计,采用了微正压灌装的 方式,即利用物料缸物料满缸后,物料泵过来的物 料的压力来推动物料的流动;同时在物料缸中设计 一个分料盘,配合全新设计的灌装阀一起,控制物 料的灌装区间和排压区间,实现灌装下料稳定,不 起气泡。排压自如,物料在瓶中不往外泄。下面对 这种新型的灌装阀及物料缸的分料板做个介绍。

#### 1、小颗粒酱料灌装物料分配盘

为了使灌装性能稳定,结合灌装阀的功能,特别设 分料盘的扇形缺口的设计,有两个好处:

计了此物料分料盘,就是在一个圆盘上开了一个扇 形的缺口,如图2所示。其工作原理如下:物料缸底 部按照每台机灌装阀的数目开有相同数量的孔,每 个孔的下面焊接有与每个灌装阀对应相连的管件; 物料分料盘紧压在物料缸底部,用特制的机构固 定。当物料缸旋转时,因为物料分料盘是固定的, 所以物料缸底部的孔将相继经过物料分料盘的扇形 区域。物料缸中装满物料时,经过物料分料盘扇形 区域的孔将有物料流出至灌装阀,其它的孔则被物 料分料盘遮住与物料隔开不再下料,也就是说,开 口扇形区域为灌装机的灌装区域,其余遮挡为排压 区域。这样,只要根据灌装机的转速,和灌装压力 下的灌装阀的下料速度,即可计算出灌满一瓶子物 料时,所需要的扇形角度,从而可以控制物料的灌 装流量和排压时间。

应用举例:一台60头的灌装机,灌装500ml的瓶 子,要求产量为每小时18000瓶;设在某一给定灌装 压力下,灌装阀灌满一瓶500ml瓶的番茄酱所需时 间为4秒。计算物料分料盘的扇形角度。

计算如下:

①先计算设备回转一圈所用的时间(也即每个瓶子 回转一周的时间)

18000/60=300 (瓶/分钟) 300/60=5 (圏/分钟)

1/5=0.2 (分钟/圈) 也则0.2\*60=12 (秒/圈)

②再计算所需的扇形角度

 $\theta = 4/12*360° = 120°$ 

如果用P代表小时产量,M代表灌装机头数,T代表 灌装阀灌满一瓶的时间,θ代表分料盘的扇形角度, 上面的计算过程可简化为下面的公式:

 $\theta = [P*T/(3600*M)] *360°$ 

此角度值为理论最小值,可根据需要适当增大。

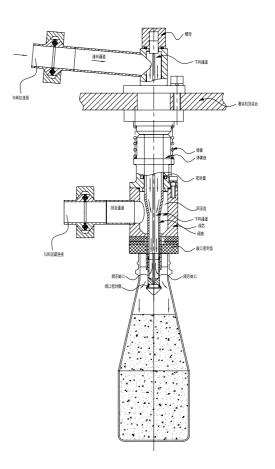
- 1、根据灌装需要设定下料区域,大致控制了物料的灌装流量。这与一般的灌装工艺有很大的区别。通常的设计,都是灌装阀打开就开始下料,灌装阀关闭才停止下料,瓶子灌满后多余的物料将全部回流,回流量很大。经过分料盘的扇形缺口的设计,使得灌装阀关闭前物料已经停止回流,大大减少了物料的回流量。
- 2、对灌装后的瓶子有一个卸压的作用,防止瓶子在 受压状况下离开灌装阀时引起瓶内物料的溅出。灌 装时,瓶口与阀口密封垫密封,由于是加压灌装, 物料在瓶子中会产生一个蓄压。如果瓶子在关阀后 没有释放瓶子内的压力就离开灌装阀,将会引起瓶 子内压力波动,从而带动物料溅出。分料盘正好解 决了这个问题:灌装完成后,由于分料盘的隔阻, 灌装阀内不再有下料,也就不再有外加压力,而回 流管路末端开放于非封闭的回流罐内,所以,瓶内 压力将会随着阀内多余物料的回流,自行释放至常 压。此时瓶子离开灌装阀,将不会引起瓶子内压力 波动,从而不会带动物料溅出,保证了灌装的平稳 性。

#### 2、小颗粒酱料灌装的灌装阀

一种简易型灌装阀结构,如下图所示,主要由阀 芯、管身、管头、阀座、中套、弹簧以及用于将阀 芯、管身和管头串接固定一起的连接杆组成;该阀 芯、管身和管头串接固定一起的连接杆组成;该阀 动、管身和管头保次由下往上对接;该阀芯、管身 和管头上均设置有流道,各流道连通而形成灌装通 道,该管头上设置连通灌装通道的灌装口;该阀座 上下活动地套装于阀芯和管身外,阀座上下活动地套装于阀芯和管身外,将中套和弹簧 被芯、管身和管头串接固定一起,并配合将阀座可 大下活动地套装于阀芯和管身外,将中套和弹簧很 大下活动地套装于阀芯和管身外,将中套和弹簧很 大下活动地套装于阀芯和管身外,将中套和弹簧很 大下活动地套装于阀芯和管身外,将中套和弹簧很 大下活动地套装于阀芯和管身外,将中套和弹簧很 大下活动地套装于阀芯和管身外,将中套和弹簧很 大便,从而便于对灌装阀进行彻底清洁,保证灌装 物料的品质。

#### 图3 灌装阀灌装状态

#### Fig 3 The filling state of the filling valve



#### 工作原理如下:

- 1、瓶子进入某个阀正下方时,特定的托瓶机构使瓶子上升,直至瓶口紧压在阀底的瓶口密封垫上,瓶口被密封。
- 2、瓶子继续上升,灌装阀弹簧被压缩,灌装阀被打 开。
- 3、当灌装机回转至灌装区域时,物料经进料通道进入阀芯的下料通道,后从阀芯缺口流进瓶子中,灌装开始。
- 4、瓶子内的液位上升至阀座下端的管口后,瓶子内 液位不再上升,继续下来的物料,挤过阀芯与阀座

下端的管壁之间的间隙,流入回流腔中,再由回流通道流进回流罐里。

- 5、当灌装机回转离开灌装区域后,由于灌装机物料缸内分料盘的隔阻,缸内不再下料,阀内物料、瓶内的压力通过回流物料慢慢释放至常压。
- 6、托瓶机构带动瓶子下降离开灌装阀,灌装阀弹簧 复位,阀口关闭。至此完成了一个灌装流程。

图3所示,为阀关闭时的物料流动示意,分两种情况:

- 1、当阀下没有瓶子时,阀没有被打开。此时当阀经过灌装机的灌装区域时,物料经进料通道进入下料通道后,直接从阀芯缺口进入回流腔,经过回流通道进入回流罐;
- 2、瓶子灌满后的关阀状态,此时灌装停止,阀内少量残留物料缓慢回流。

由灌装过程及灌装阀的结构可见,此阀具备无瓶不 灌装的功能。当没有瓶子进入灌装机时,阀不会被 打开,自然没有物料流出。

由灌装过程及灌装阀的结构可见,瓶子离开灌装阀 后,阀关闭,阀芯末端的密封圈与阀座下端的管口 内壁密封,阀内物料不会泄漏。

这种小颗粒酱料灌装阀,机构简单,装拆方便,设计巧妙,功能完善,配合物料分料盘的使用,是小颗粒酱料灌装的首选。

#### (3) 小颗粒酱料灌装的CIP

传统酱料灌装机一般没有自动CIP清洗功能,是用人工拆卸清洗,工作强度大,效率低。而本文的小颗粒黏稠酱料灌装在阀上装上假杯后,将进料管与CIP系统连接,即可以实现全自动CIP循环,大大减少工人的工作量,同时提高了整机的自动化程度。

# 四、小颗粒酱料灌装 的应用前景

小颗粒黏稠酱料灌装机,除了应用在番茄酱、辣椒酱、果酱、蚝油等加热后流动性较好、小颗粒或无颗粒的酱料灌装中外,还可以用来低速灌装酱油等液态物料,可以说是全能灌装机,应用非常广泛,非常适合于小颗粒或无颗粒酱料灌装,同时又兼容酱油、耗油等产品的场合。此设备的开发成功,满足了客户多种物料兼容灌装的需求,为公司拓展了新的领域。首台小颗粒酱料兼容酱油耗油灌装的灌装机在广州亨氏美味源公司成功使用,随后9台辣椒酱机在美国汇丰公司成功投产,随后也获得一定订单,受到客户的一致好评。





Recent years, Guangzhou Tech-Long Packaging Machinery Co., Ltd. has stepped into the market of condiments and successfully development filling equipment for edible oil, soy, sauces and so on, and expanded a wide market. On the aspect of sauce filling, for sauces with large granules, high viscosity and poor liquidity such as soybean paste, and peanut butter, according to the material characteristics, rotary Piston-valve sauce filling machines are often used for filling; however, for sauces with good liquidity, small granules or none granules after being heated such as tomato sauce, chili sauce, fruit jam and oyster sauce, filling machines developed successfully in the latter half of 2011 and applicable for sauces containing none granules or small granules are used. This kind of filling machine has a wide scope of application and can be controlled accurately without leakage. It can realize CIP circulating cleaning and is quite well received by customers. (Both the filling machine and filling valve below have been applied for patent protection.)

I. Filling requirements for small-granule sauce filling machines

Below are the requirements on filler for filling sauce:

#### 1. Minimum quantity of recirculation

If the quantity of recirculation is too large, the filling efficiency will be reduced naturally; the power requirement for the material pump will be enlarged and the energy consumption will be increased; moreover, the material cylinder and recirculation tank should be designed in a large volume so that the overall machine should be designed larger, which is not good to both

the appearance and cost. Thus, generally, it is expected the quantity of recirculation should be as small as possible.

# 2. No Bottle No Filling, No Leakage in Filling

This is the key for reducing waste and guaranteeing the clean filling environment.

As the liquidity of sauces is poor, when some materials leak, usually they will stick to the machine and contaminate the environment; meanwhile, if dropping leakage is severe at the time of filling, leaked materials may possibly drop to the external wall of the bottle or bottle mouth and have influences on subsequent working procedures such as capping and labeling. Moreover, the environmental health and bacteria reduction are the basic protection

for product quality. Thus, for sauce filling, it seems more important that the machine does not conduct filling without a bottle and conducts filling without leakage.

#### 3. Automatic CIP tank.

Ensure that the pipeline and material tank of the filling machine is cleaned; it can fill several different sauces and use one machine for multiple purposes.

# 4. Ensure convenient and efficient operation.

Include the time and manpower consumed at the time of CIP and exchanging bottle models, as well as workers' labor intensity.

# II. Filling process of small-granule sauce filling machines

Small-granule sauce filling machines generally adopt the following technological processes. The materials are pumped via the intermediate tank to the material tank on the top of the filling machine and enter each filling valve via the pipelines; when the valve is open, they flow into the bottle; after reaching the predetermined liquid level, the filled materials flow back via the valve's recirculation channel to the recirculation

tank in the middle of the filling machine. When the valve is closed, they flow back directly via the valve's recirculation channel to the recirculation tank and are pumped again via the material pump with newly supplied materials together into the feed pipeline for filling. The process flow diagram is as indicated in Figure 1.

# III. Technical guarantee for small-granule sauce filling

Different from common drinks, the liquidity of sauces is poor and they cannot be filled by common hot filling machine for drinks (normalpressure filling); according to the characteristics of sauces, in combination with requirements for sauce filling, Tech-Long conducted brand new design of the filling valves and material tank to use the micro-positive pressure filling, namely, to promote the material flow by pressure from pumped materials after the material tank is filled fully. In the meantime, a material distribution plate is designed in the material tank to cooperate with the newly designed filling valve to control the material filling zone and pressure discharge zone, so as to realize stable material dropping during filling without causing bubbles. The pressure is discharged freely and materials in the bottle do not escape. This new type of filling valve and the material distribution plate in the material tank are introduced as below.

# 1. Material distribution plate for filling small-granule sauce

In order to stabilize the filling performance, this material distribution plate is designed specially based on the functions of the filling valve. It is to open a fan-shaped gap on a disk as indicated in Figure 2. Its working principle is as follows. At the bottom of the material tank, holes are opened in the same quantity as that of the filling valves in each machine. Under each hole, corresponding pipe fittings are welded to connect with each filling valve. The material distribution plate is pressed tightly at the bottom of the material tank and fixed with a special mechanism. When the material tank rotates, as the material distribution plate is fixed, the holes at the bottom of the material tank pass the fan-shaped area on the material distribution plate one by one. When the material tank is fully loaded with materials. materials passing holes on the fan-shaped are on the material distribution plate flow out to a filling valve and other holes are covered by the material distribution plate and separated from the materials so that materials cannot be dropped any more. In other words, the opening fan-shaped area is the filling area of the filling machine and the rest covered area is the pressure discharge area. In this way, the fan-shaped angle required for filling a bottle of materials can be calculated only based on the rotating speed of the filling machine and the dropping speed of the filling valve under the filling pressure. Thus, the material filling flow and pressure discharge time can be controlled.

An example for application: A 60-head filling machine is used to fill 500ml bottles and it is required that the output is 18,000 bottlers per hour; assumed that under a certain given filling pressure, it takes 4 seconds for a filling valve to fill up a 500ml bottle of tomato sauce. Calculate the fan-shaped angle of the material distribution plate.

It is calculated as below:

Firstly, calculate the time for the equipment to rotate a round (i.e., the time for each bottle to rotate a round)

18000/60=300 (bottles/minute)

300/60=5 (rounds/minute) 1/5=0.2 (minute/round), i.e., 0.2\*60=12 (sedonds/round)

Then, calculate the required fan-shaped angle  $\theta$ =4/12\*360°=120°

If P represents the output per hour, M represents the head number of the filling machine, T represents the time for a filling valve to fill up a bottle, and  $\theta$  represents the fan-shaped angle of the material distribution plate, the above calculation process can be simplified into the following formula:

 $\theta = [P*T/(3600*M)]*360°$ 

This angle is the theoretical minimum valve and can be increased appropriately as required.

The fan-shaped gap design of the material distribution plate has two benefits:

- 1. The material dropping area can be set based on the filling requirement so that the filling flow can be controlled basically. This is different greatly from common filling processes. In general design, the materials are dropped when the filling valve is opened and the dropping is stopped when the filling valve is closed; all the redundant materials after the bottle is filled up will flow back and the recirculation volume is large. The design of the fan-shaped gap on the material distribution plate stops the recirculation of materials before the filling valve is closed so that the recirculation volume of materials is reduced greatly.
- 2. The pressure relief acted on the bottles after it is filled up can prevent materials within the bottle from spilling out when the bottle leaves the filling valve under a pressure. At the time of filling, a sealing gasket is used for sealing between the bottle mouth and valve mouth. As the filling is pressurized, materials can generate an accumulated pressure in the bottle. If the bottle leaves the filling valve without releasing the pressure within the bottle after the valve is closed, the pressure within the bottle will fluctuate and cause the materials to spill out. The material distribution plate solves this problem very well. When the filling is completed, due to the separation of the material distribution plate, materials dropped will not exist in the filling valve any more so that the external pressure will not exist. In addition, the terminal of the return

line is opened in the unsealed recirculation tank. Thus, the pressure within the bottle will release automatically to a normal pressure with the recirculation of redundant materials in the valve. At that time when the bottle leaves the valve, the pressure within the bottle will not fluctuate so that it will not cause the materials to spill out and ensure the stability of filling.

# 2. Filling valve for small-granule sauce filling

It is a simple structure of a filling valve as indicated in the figure below. It is mainly composed of the valve core, tube body, tube head, valve seat, outerwear, spring and the connecting rod used to connect and fix the valve core, tube body and tube head together. The valve core, tube body and tube head should be connected from bottom up. A flow pass is set on the valve core, tube body and tube head and these passes are connected to form a filling channel. A feeding hole is set on the tube head to connect with the filling channel and the filling hold is set on the side of the valve core to connect with the filling channel. The valve seat can be fit adjustably up and down outside of the valve core and tube body and the adjustment up and down can open or close the filling hole correspondingly. Then, by use of the connecting rod to connect and fix the valve core, tube body and tube head together and by fitting the valve seat adjustably up and down outside of the valve core and tube body, the outerwear and spring are fit outside of the tube body. The structure is simple and the cost is low; the disassembly and assembly are convenient.

Thus, it is easy to clean the filling valve thoroughly to ensure the quality of materials filled.

#### **Operating principles:**

- 1. When the bottle runs to the place right under a certain valve, a specific bottle-lifting mechanism lifts the bottle until the bottleneck is tightly pressed to the packing seal at the bottom of the valve, and the bottle is sealed.
- 2. The bottle continue to rise until the spring of the filling valve is compressed, and the filling valve is open.
- 3. When the filling machine brings the bottle to the filling area, the material runs through the feeding channel to the falling channel of the valve core, then flows into the bottle through the valve outlet, thus the filling starts.
- 4. When the liquid level in the bottle has risen to the pipe orifice at the bottom of the valve seat, the liquid level will not rise any more. The running material will flow back to the reflux cavity through the clearance between the valve core and the bottom of the valve seat. Then the material will go to the reflux accumulator through the reflux channel.
- 5. When the filling machine brings the bottle away from the filling area, no material will fall from the material cylinder because of the obstruction by the separating tray in the material cylinder.

  The amount and pressure of the material in both

the valve and the bottle decline to a normal level as the material return to the reflux accumulator.

6. The bottle-lifting mechanism descend with the bottle away from the filling valve, then the spring of the filling valve returns to its former situation and the valve outlet is closed. Thus a whole filling process is completed.

Figure 2 shows the flowing courses of the material when the valve is closed, which have two kinds of conditions:

- 1. When there is no bottle under the valve, the valve is closed. In this case, when the valve runs through the filling area of the filling machine, the material enters the falling channel through the filling channel and goes directly into the reflux cavity through the valve outlet, then enters the reflux accumulator through the reflux channel.
- 2. When the bottle is full, the valve is closed. In this case, the filling is stopped, and the small amount of residual material in the valve will reflux slowly.

According to the filling process and the structure of the filling valve, this valve is equipped with the function of filling bottles only when there is one under the valve. When there is no bottle entering the filling machine, the valve will not be opened, and no material will flow out of the valve.

According to the filling process and the structure of the filling valve, when the bottle leaves the filling valve, the valve closes and the sealing ring

at the end of the valve core will seal the valve by sticking to the internal wall of the pipe orifice at the bottom of the valve seat, so the material inside the valve will not leak out

This kind of granulated sauce filling valve has many advantages such as its simple structure, easy disassembly, skillful design, and multiple functions. Coordinating with the separatory plate, this machine is the first choice for filling granulated sauce.

#### The CIP (clean-in-place) of the Granulated Sauce Filling Machine

Traditional granulated sauce filling machines usually are not equipped with the automatic CIP cleaning function. It has to be cleaned by manpower, which requires high working intensity and has a relatively low efficiency. But the granulated sauce filling machine introduced above has been equipped with a CIP cup to the valve, which can be connected the feeding pipe with the CIP system, thus activates the automatic cycle and it can reduce a lot of working hours of the workers and can increase the degree of automation of the complete machine.

# IV. The Usage Prospect of Filling Machine of Granulated Sauce

The filling machine for thick granulated sauce can not only be used to fill sauces that gain quite good fluidity after being heated and with/ without small particles (such as ketchup, chili sauce, jam, oyster sauce etc.) but also be applied in filling liquid sauce (such as soy sauce) at a lower speed. It meets all different needs of filling and is comprehensively applicable, making it quite suitable for those who need to fill both granulated sauce and non-granulated sauce and other products such as soy sauce and oyster sauce. The successful development of this device helps meet clients' multiple needs of filling different materials with one machine. This allows the company to develop better in new fields. The first filling machine for granulated sauce and product such as soy sauce and oyster sauce worked successfully in Heinz Meiweiyuan (Guangzhou) Food Company, followed by another 9 chili sauce filling machines being applied successfully in HSBC Company in America. New orders have come after that and the company has earned commendations from clients.

Text and picture by: Xie qibo

# 全伺服贴标: 包装行业发展新趋势



贴标机作为包装生产线上一个不可或缺的组成部分,由于包装的作用正发生翻天覆地的变化,因此贴标机也受到越来越多人的重视。

#### 包装——产品的"5秒钟广告"

为了吸引更多顾客的眼球,激发顾客的购买欲望从而促使顾客成功下单,商家在产品的包装上不断推陈出新。在这个商品竞争白热化的时代,同类商品的功能和价格趋于相同,商品的美学价值在消费者的选择中起到了举足轻重的作用。一个精美的外观包装就像"5秒钟广告"一样,包装越是吸引顾客的注意,它的销量则越高。在食品饮料行业,消费者能直接面对包装效果集中在产品的造型和标签。因此贴标机的性能就尤为关键。瓶型和标签的发展趋势也就成为了贴标机发展趋势的决定性因素。

#### 消费需求推动贴标方式的演变

在食品饮料行业中, 瓶子的造型从传统最简单的圆

形瓶向多元化不断发展。研究表明,视觉复杂程度 为中等的瓶型形态,所产生的吸引力和愉悦感最 强,太简单或太复杂的瓶型形态,产生的吸引力和 愉悦感相对较弱。为了吸引顾客的注意,瓶型由圆 形向椭圆形、长方形、正方形、正多边形不断地演 化,新的瓶型逐渐成为货架上的新宠。以往传统的 贴标机只能满足造型简单的圆形瓶贴标需求,这类 瓶型的贴标比较简单,标签的粘接位置与瓶身的造 型没有固定的位置关系。传统的贴标机只能把标签 粘贴在指定高度的圆周范围内,也就是所说的非定 位贴标,对于其他椭圆形、长方形、正方形或正多 边形等具有中等复杂程度的瓶型贴标就无能为力 了,因为这些瓶子有一个共同的特点就是标签的图 案与瓶子的造型有一定的对应关系,也就是所谓的 定位贴标。尽管现在有通过凸轮机构来实现简单形 状的方形瓶定位贴标机,但由于机械结构复杂,应 对瓶型的能力及设备运行速度都受到极大的限制。 如需应对更复杂的瓶型或高速产能的生产线就会显 得力不从心。

# FULL-SERVO LABELING: A NEW TREND IN THE DEVELOPMENT OF PACKAGING INDUSTRY

#### 缔造行业新技术 催生行业新发展

针对于异型瓶定位贴标的需求,作为领先的包装设 备供应商,达意隆研制了最新的全伺服贴标机。这 将为具有前瞻性思想和营销理念的饮料生产商创造 收益提供坚实的基础。全伺服贴标机在应对各种形 状瓶型的定位贴标都能得心应手,对于非定位贴标 的瓶型更是轻而易举。我们把伺服控制这一项新技 术应用在贴标机上, 成功地运用伺服控制系统找到 瓶身需要贴标的位置,把瓶型固定在需要贴标的位 置上。在贴标的过程中, 伺服系统控制瓶型自转, 自转的速度与瓶子的形状、标签传输的速度相匹 配,使得标签最终可以完美地粘贴在瓶型所需的位 置上! 以往传统的机械结构复杂,零件的加工与设 备的调试都很困难,在贴标的过程中,凸轮控制瓶 型自转,速度与瓶型的匹配关系很难达到理想的状 态,容易造成扯动标签使之拉伸和松弛的状况,且 标签的错位偏差要远远大干伺服控制系统结构。

贴标行业从最开始的手工贴标、半自动贴标往全自动贴标高速发展。贴标机的发展从最开始的冷胶贴标机,逐步发展到现在的套标贴标机、不干胶贴标机和热熔胶贴标机。面对市场不断提出的各种需求,全伺服系列贴标机以能够襄括市场上绝大部分瓶型与标签,以更加精确的贴标精度、操作与维护更简便为优势,以更能保证自动化生产需求,必然成为贴标机行业未来发展的趋势。

As an indispensable part of the packaging production line, labeling machines are attracting more and more attention due to the great changes of the functions of packaging.

# Packaging—"5-second advertisement" for a product

In order to attract more customers, inspire their purchasing desire and promote them to place an order successfully, sellers make innovations constantly in product packaging. In the era full of fierce commodity competitions, as the functions and prices of similar commodities become same, the aesthetic valve of a commodity plays an important role in a consumer's selection. An exquisite appearance package is just like a "5-second advertisement". The more the package attracts the customer's attention, the higher its sales volume will be. In the industry of food and beverage, consumers can directly face the product style and labels concentrating the packaging effects. Thus, the performance of a labeling machine is of vital importance. The development trend of bottle models and labels become a decisive element for the development trend of labeling machines

# Consumer demands promote the evolution of labeling methods

In the industry of food and beverage, bottle shapes develop constantly from the traditionally simplest circle to diversified shapes. According to studies, bottle models with the intermediate visual complexity can generate the strongest attraction and pleasure; too simple or complicated bottle models can generate relatively weaker attraction and pleasure. To attract customers' attention, bottle models evolve constantly from circle to oval, rectangle, square and regular polygon and new bottle models gradually become new favorites on the shelves. Traditional labeling machine can only meet the labeling requirements for simple circular bottles as it is simple to label on such a bottle shape and the position to paste the labels does not have a fixed relation with the bottle shape. Traditional labeling machines can paste the labels within the circumferential scope at a designated height, which is the so-called non-positioned labeling. They cannot label on other bottles in an intermediate complicated shape such as oval, rectangular, square or regular polygon as these bottles have a common character that the label patterns have certain corresponding relations with bottle shapes, which refers to the so-called positioned labeling. Although currently there are positioned labeling machines for labeling on rectangular bottles in a simple shape by use of the cam mechanism. However, due to the complicated mechanical structure, the ability to deal with bottle models and the equipment's

operating speed are largely restricted and they will be powerless to deal with more complicated bottle models or production lines requiring for high-speed outputs.

# Create new technology in the industry and expedite new development in the industry

According to the requirements for positioned labeling on bottles in abnormal shapes, as the leading packaging equipment supplier, Tech-Long has developed the up-to-date full-servo labeling machine, which will provide a solid foundation for beverage manufacturers with a forward-looking thought and marketing concept to create benefits. The full-servo labeling machine can proficiently deal with positioned labeling on bottle models in different shapes and handle bottle models requiring non-positioned labeling with great ease. We have applied the new technology of servo control to the labeling machine and successfully used the servo-control system to find the position for labeling and fix the bottle shape to the position for labeling. During the labeling process, the servo system controls the bottle model to rotate and the rotating speed matches the bottle shape and the speed and label transportation so that the label can be pasted perfectly to the required position of the bottle model at last. Traditional mechanical structures are complicated and the part processing and equipment commissioning are difficult. During the process of labeling, the cam controls the bottle model to rotate and it is



difficult for the speed to match the bottle model ideally. It is easy to pull the label to make it stretched or loosened and the label's misplaced deviation is far more that the result of the servo control system structure.

The labeling industry develops at a high speed from the original manual labeling, semi-automatic labeling to full-automatic labeling. The labeling machines develop gradually from the original cold-glue labeling machine to current trapping labeling machine, non-dry sticker labeling machine and hot melt glue labeling machine. With regard to various requirements proposed constantly by the market, the full-

servo series labeling machines can cover most bottle models and labels in the market. Their advantages are more accurate labeling precision and simpler operation and maintenance so that they can meet the requirements of automatic production better. Definitely, they will become development trend of the labeling machine industry in the future.

Text and picture by: Nian yunbiao







# JAPANESE TEAAND COFFEE



日本的茶饮料和咖啡饮料市场的介绍

#### 一、有关日本的饮料市场

#### 饮料市场整体的介绍

2011年度日本饮料的市场规模是361亿日元,应该说和中国的市场差不多,价格会高一些,数量约有中国的1/10.咖啡饮料和茶饮料,两个加起来要占整个日本饮料市场的47%,产品数量较多。

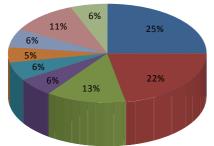
# 二、日本的茶饮料市场以及咖啡饮料的介绍

#### 1、规格和制造标准

茶饮料基本上没什么标准,但是标签上需要特别指出原料。咖啡比较特殊,有一个标准,规定100克产品的生豆使用量。如果生豆使用量在5克以上才能叫做咖啡,如果是2.5克到5克的是咖啡饮料,如果是2.5克以下在1克以上只是加了咖啡的饮料。如果达到了乳饮料的标准,在乳饮料里面加一点咖啡,也只能说是乳饮料,不能说是咖啡饮料。

# 2011年度饮料种类市场份额(按金额计算)





▶咖啡饮料和茶饮料约占市场份额的一半

#### 软饮料的制造标准

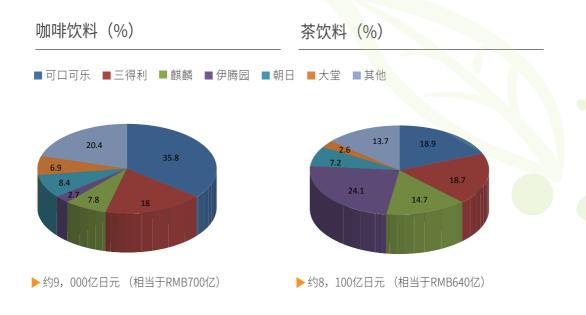
不需要 杀菌和 除菌	CO2压力在98kpa(20℃)以上, 不含植物或动物的组成成分。		
	Ph4.0以下	65℃、10分钟 同等以上	
	Ph4.0以上	85°C、30分钟 同等以上	
需要杀	85°C、30分钟 同等以上		
菌和除	<b>菌和除</b> Ph4.6以上且 水分活性超过 0.94(咖啡饮料、茶饮料)	<u>(保存在10℃以上时)</u>	
菌		120℃、4分钟 同等以上	

▶日本的制造标准(食品卫生法、厚生省告示第213 号、1986年起)



#### 2、主要厂家的市场占有率

按厂家分类的销售规模构成(2010年度)



#### 3、茶的分类

茶	不发酵茶(绿茶)	蒸制(日本式)- 煎茶、焙的茶等 锅炒制(中国式)- 中国绿茶等
	半发酵茶(乌龙茶)	在软饮料中加入甜味和牛奶
	微生物发酵茶(黑茶)	普洱茶等
其他	麦茶等的谷物茶	

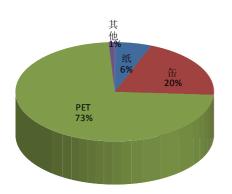
#### ▶在日本除了红茶以外几乎都是无糖的

#### 4、有关茶饮料市场及产品介绍

茶在日本约占饮料的1/4,日本茶分为不发酵茶、 半发酵茶、发酵茶和微生物发酵茶等,发酵的茶里 面基本上是红茶, 红茶以外的茶基本上市不放糖 的,所以在日本茶的分类是把红茶单独拿出来,作 为嗜好的一种饮料来做的。日本茶中绿茶占了40% 以上,接下来是红茶,还有一个在中国市场上海 不是很多的混合茶叶有15%左右的市场份额。在日 这两年出现一些无糖的红茶,还有一些就加一些香

他的茶还是有区别的, 红茶有原味的红茶还有加奈 的奶茶、柠檬红茶和其他的无糖的红茶。从这三、 四年来的趋势来看,奶茶、无糖的红茶有一定的增 长趋势。红茶消费者基本上市女性为主,男性比较 喜欢咖啡,所以把红茶也做了一个分类,来吸引男 性消费者。针对女性的话首先是健康,比如说零 食。在中国也是这样,做红茶基本上会放糖,最近 本,茶饮料的容器3/4左右都是塑料瓶。红茶跟其 味,使人又一些清爽的感觉,或加一些水果等。

#### 按容器区别的构成



▶ PET容器是主流

#### 各厂家的份额(2011年度)



▶前四位占了约90%

在无糖茶、绿茶整个市场,关键点在哪里?各个厂家的以口味多样性,来提高茶本身的价值,每一个厂家有着不一样的方法去体现多样性。有的会追求一些附加值,所谓的附加值就是说,可能一般乌龙茶在家里直接泡就可以,所以追求的是在家里冲泡的时候不能达到的一些价值,例如抹茶,还有就是茶里面加了一些碳酸或者果汁蔬汁,还有就是茶的容量。还有的产品做得很浑浊,或适合某个场合的例如吃饭可以用。还有对健康意识的一些要求,如对脂肪、胆固醇,降低血压功能等,比如加茶多酚来减少脂肪,还加了一些五谷杂粮的成分等。2011年茶的产品特别多,例如抹茶,出现较多抹茶拿铁,抹茶咖啡等,都是带有抹茶这个关键词的产品。

5、咖啡饮料市场及产品介绍

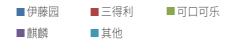
跟中国也有一些不一样,日本的茶饮料,基本上是用PET瓶的,但是咖啡基本上都是罐装的。日本的咖啡比较多,从总体而言有低糖或者叫做微糖的,或者是清咖啡,这个趋势是在逐渐增长。在日本30几岁以上的男性喝罐咖啡的很多,有遵循一些健康

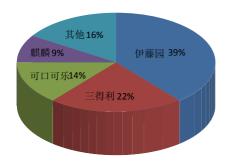
意识,有一系列低糖的或者是无糖的产品。遵循消费者需求的,还有大包装的,针对女性的拿铁,PET包装的,不同场合,不同时间的。还有一个特点是从普通的口味变成低糖的变化,各个厂家在低糖的微糖产品当中做比较好的。零系列的,在日本做得也是比较好的咖啡饮料。

日本是一个比较成熟的市场,一个成熟的市场不能 发掘新的消费者需求是不行的,所以各个厂家必须 来挖掘这些消费者不同的消费需求来开发更多的产 品。虽然日本市场刚才看到整个有1000多种新的产 品,经过淘汰,还是有残存的,也就是说经过不同 的产品开发以后,适应不同的消费者需求,会有好 的产品以后,适应不同消费者的需求,会有好的产 品留下来,虽然可能是1%或2%,但绝对是一个好 产品,淘汰的产品,厂家会去沟通,然后再去发现 新需求,然后再这样循环、反复发展,形成一个成 熟的市场。

转自《中国饮料》

#### 市场占有率





▶ 前四位品牌占了约85%

#### 按种类分类的市场规模变迁



▶罐装是主流

#### I. Japanese Beverage Market

## Overall introduction to the beverage market

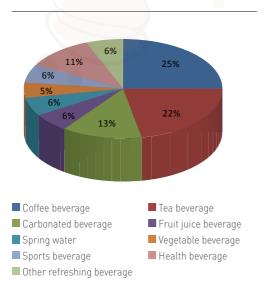
In 2011, the volume of Japanese beverage market is 36.1 billion yen, which is similar to that of Chinese market. But the prices are higher and the quantity is about 1/10 of Chinese market. Coffee and tea products dominate the entire Japanese beverage market, they account for 47% of the total volume.

#### li. Introduction To Japanese Tea Beverage Market And Coffee Beverage

## 1. Specification and manufacturing standards

Basically, there are no standards for tea beverage, but the raw materials should be indicated on the labels. Coffee is special and there is a standard for it, specifying the usage amount of raw beans in 100g product. If the usage amount of raw beans is over 5g, the product can be named as coffee; if the usage amount is 2.5g to 5g, it belongs to coffee beverage; if the usage amount is below 2.5g and above 1g, it is only beverage added with coffee. If it reaches the standard for milk beverage and a little coffee is added into the milk beverage, it can be named only as milk beverage instead of coffee beverage.

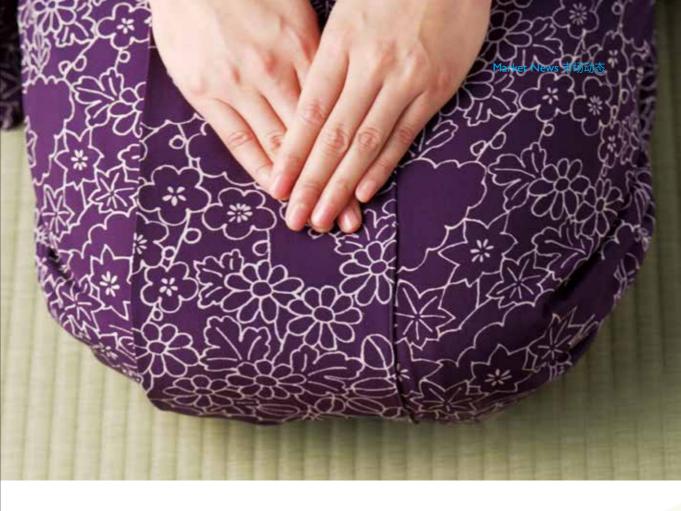
#### Market Shares (Based On Amounts) In 2011 By Beverage Category



▶ Coffee and tea beverage accounts for almost half of the market shares

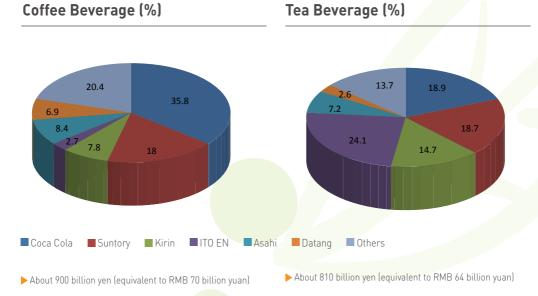
Processing Standards For Soft Drinks				
Sterilization and disinfection not required	CO2 pressure above 98kpa (20°C), without plant or animal ingredients.			
	Below Ph4.0	65°C, 10 minutes; equal or above		
	Above Ph4.0	85°C, 30 minutes; equal or above		
Sterilization and disinfection required	Above Ph4.6 and water activity exceeding 0.94 (coffee and tea beverage)	85°C, 30 minutes; equal or above (when stored at the temperature of above 10°C)		
. oqun ou		120°C, 4 minutes; equal or above Effective methods that can kill or eliminate microorganisms which may grow up		

▶Japanese Manufacturing Standards (Food Hygiene Law, Ministry of Health and Welfare Announcement No. 213, from 1986)



#### 2. Market shares of main manufacturers

Sales Volumes by Manufacturer (2010)



#### 3. Classification of tea

	INon-termented tea lareen teal	Steaming (Japanese style) Fried tea, baked tea, etc.
		Stir-frying (Chinese style)—Chinese green tea, etc.
Tea	Semi-fermented tea (oolong tea)	
	Fermented tea (red tea)	Add the sweet taste and milk into soft drinks
	Microbial fermented tea (black tea)	Pu'er tea, etc.
Others	cereal tea such as barley tea, etc.	

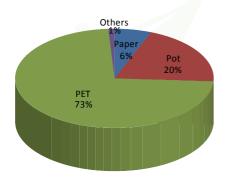
In Japan, almost each kind of tea is sugarless except red tea

# 4. Introduction to tea beverage market and products

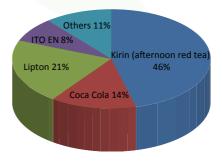
In Japan, tea accounts for about 1/4 among beverages. Japanese tea is classified into non-fermented tea, semi-fermented tea, fermented tea and microbial fermented tea, etc. Among

fermented tea, basically, it is red tea. Generally, in the market, tea is sugarless except red tea. Thus, in the classification of Japanese tea, red tea is separated as a kind of favorite beverage. In Japanese tea, green tea accounts for over 40%; red tea ranks the second; a kind of mixed

#### Market Shares by Container



# Market Share of Each Manufacturer (2011)



▶ PET containers are prevailing

▶ The top four brands account for about 90%

tea sold not much in Chinese markets accounts for about 15% of the market shares. In Japan, about 3/4 containers for tea beverage are plastic bottles. Red tea is different from other tea. Among red tea, there is red tea with the original taste, tea with milk, lemon red tea and other sugarless red tea. According to the tendency in recent three or four years, the market shares of milky tea and sugarless red tea have an increasing tendency to some extent. Consumers of red tea are mainly female while men prefer to coffee. Thus, red tea is classified separately to attract male consumers. As for women, health is the foremost, for instance, snacks. This is similar in China. Red tea is generally made with sugar. In recent two years, some sugarless red tea appears and some is added with some fragrance to make people feel refreshed or added with some fruit, etc.

In the entire market of sugarless tea and green tea, what is the key point? Each manufacturer increases the value of tea with diversified tastes and has different methods to reflect such diversity. Some seek for added values, which mean that common oolong tea can be made directly at home so that they seek for some values that cannot be reached when it is made at home, for instance, matcha; some add carbonic acid or fruit or vegetable juice into tea; some concern about tea volume. Besides, some products are made turbidly or suitable for drunk in certain occasions, for instance, at meals. Some have requirements for health awareness, for instance, fat and cholesterol, or have the function of reducing the blood pressure, etc. For example, the addition of tea polyphenol can reduce fat. Some are added with such ingredients as cereals, etc. In 2011, there are plenty of tea products. Take matcha for an example, a lot of products with the key word, matcha, appear in the market, such as matcha latte, matcha coffee, etc.





some health awareness, there are a series of lowsugar or sugarless products. To meet consumer requirements, there are products in a large package. There is latte for women, packed with PET, suitable for different occasions and times. Another feature is the change from common tastes to low sugar. Manufacturers have good performance in low-sugar micro-sugar products. Zero-sugar series products are also well received in Japan.

Japan is a mature market, which cannot do without exploring new consumer requirements.

Thus, manufacturers must dig out these different consuming requirements to develop more

products. Although we have seen that there are over 1,000 new products in Japan markets, after the elimination, some remain to exist. In other words, by developing different products to meet different consumer requirements, there will be good products which can meet the requirements of different consumers and can survive. Although probably they are 1% or 2%, they are absolutely good products. With regard to eliminated products, manufacturers will communicate to find new requirements. In this way, the market develops in a cyclic and repeated way and become mature.

From China Beverage

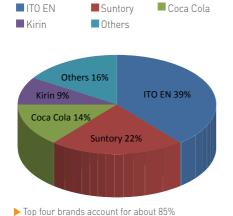
Unit: 0.1 billion yen

Paper and plastic cup

#### **Market Share**

#### Sugarless tea beverage (red tea excluded)

From 2008 to 2011, among sugarless tea series such as green tea, oolong tea, mixed tea, tea in other tastes, etc., green tea makes up over a half. Unit: 0.1 billion yen



# Market Size Changes By Category Paper And Plastic Cup





美丽的茶卡盐湖 (摄影者: 江少远 达意隆营销总部)

Beautiful Chaka Salt Lake [Photographer: Shaoyuan Jiang Sales And Marketing Headquarters]



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