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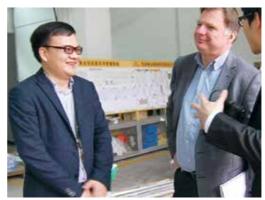
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回首,脚踏实地,

纵然已有万丈璀璨的曾经,内心依旧满含着无限憧憬。

我们,深耕细耘,梳垄平整,在这方庄园上耕耘出春华秋实的荣悦!

我们,心携理想,肩担责任,在康庄大道上演奏起雄壮激昂的赞歌!

过去,我们屡创佳绩;

而今, 我们再续传奇!

一元复始,万象更新;

高歌猛进,超越自我。

拂晓又将来临,我定开启光明!

Raising head, looking up into the starry sky,

The past pride quietly changed into the glinting stars of the sky. Looking back, being surefooted,

Even ten thousand Zhang of brilliant past have been achieved, infinite expectation still in the deep heart harbored.

We, plowing carefully and pruning smoothly,

in the garden cultivated Spring flowers and Fall fruits joyfully.

Ve, dreams in the heart and responsibilities on the shoulders,

on the broad road played the strong and heated paean of praise.

In the past, outstanding success of us witnessed;

but now, our legend will be renewed.

As the new year begins, a new start is emerging.

Advance triumphantly, go beyond ourselves.

The daybreak approaches soon, I shall herald the brightness!





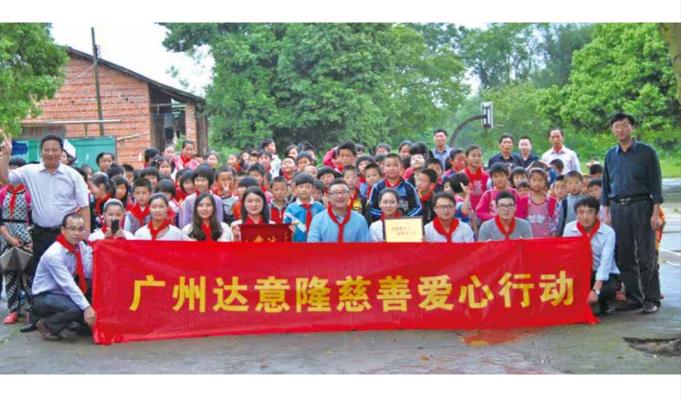


情系韶关助学子 爱心浇灌育花开 PRESENT LOVE TO THE FLOWER OF OUR MOTHERLAND, ASSIST THE STUDENTS





—2014年达意隆爱心慈善行 -Tech-Long Charity Activities In 2014



"再也不怕冬天上课路!

教室窗户有玻璃啦!"

- "终于可以在操场上踢球啦!"
- "我也有新书包啦!

还有好多新文具啊!"

"我要告诉奶奶我有新的铅笔盒!"

在广东省韶关市湖口镇的长市小学,一阵阵此起彼伏的欢呼声飘荡在校园上空,仿佛在宣告着一段新生活的开始。宽敞明亮的校舍、安全坚固的窗户、厚实质优的教室门、一箱箱全新运动器材……焕然一新的校园让孩子们告别了摇摇欲坠的门窗,告别了昔日残破的课室,告别了简陋的活动室。

和煦春风扬起公益航帆

2014年初春, 达意隆张崇明先生率公司高层亲临广

东省韶关市湖口镇实地考察,将长市小学列为捐赠对象。当行动小组走进长市小学时,都不约而同感慨着时光仿佛倒退了五十年:"无所不漏"的天花板、坑坑洼洼的操场、昏暗旧损的教室、用薄膜纸顶替玻璃的窗户、窄小斑驳的教师宿舍、摇摇欲坠的乒乓球桌……在国家高速发展的今天,他们的教学环境竟仍停留在落后的时代。孩子们天真无邪的笑脸以及现代的教学课本在这残破寒碜的环境里显得格格不入。

尽管环境恶劣,但是孩子们灿烂的笑容、渴望学习 且认真学习的劲头让寒风凛冽的教室增添了一丝暖意;快乐的嬉笑声、澄澈明亮的眼神让坑洼不平又 简陋的操场增添了一份生气,老师们孜孜不倦、爱 岗敬业的精神让"房上瓦背漏雨,床下老鼠打架" 的教师宿舍增添了一抹光亮。

考察结束后,行动小组即刻开展关爱行动,不少同事积极响应,踊跃捐款,同时在达意降的倡议号召



下,多家合作伙伴响应号召,主动加入到助学行列中来。先后得到东莞朗信机械有限公司、苏州天龙板业净化设备厂、上海依澳包装机械有限公司、深圳市源广洁净化科技有限公司、成都林奥机电设备有限公司、深圳市安格斯机械有限公司、广州一道注塑机械有限公司、昆山海为自动化有限公司多家供应商,以及广州华桓物流有限公司的袁凯华先生、广州巨航机械设备有限公司的李秋权先生等爱心人士的大力支持。达意隆行动小组迅速调动资源,将所募集到的善款用于帮助学校修缮门窗、墙壁、食堂,添置桌椅、文具、体育用品以及帮扶长市小学三名特困生。

2014年5月7日,达意隆爱心慈善行行动小组冒着阵阵雷雨,将购置的文具、学习礼包、餐具等物资送到长市小学。一早在校门口等待的孩子们迫不及待的围着行动小组,一张张纯真烂漫的笑颜动人地绽放在焕然一新的校园中。当地的师生们还用一场简单隆重的欢迎会感谢达意隆行动小组的来临,会上

达意隆美国分公司总经理张胜先生代表达意隆接受了韶关市团委及长市小学赠送的牌匾与锦旗。活动当日,行动组的成员还与孩子们一同互动玩游戏, 共度美好的爱心时光。

这是一段不设终点的美好旅程

在这个洒满阳光的初夏季节,在焕然一新的韶关长市小学,孩子们沉浸在新校舍新环境的欣喜之中。 对于达意隆而言,这是一段不设终点的美好旅程, 在公益领域还有很长的路要走。

行动始于爱心,责任铸就希望。达意隆一直关注希望 工程、新农村建设、社会教育事业,每年以各种形式 捐助两至三所贫困小学,为更多需要帮助的贫困学校 提供帮助。在不远的将来,达意隆爱心慈善行势必为 更多贫困地区的孩子们带去更好的学习环境,而达意 隆,将始终怀着"慈心为人,善举济世"的心态,积 极倡导公益意识,促进社会良好风气的形成,并用实 际行动为社会公益事业添砖加瓦。



"I'm not afraid to have class in winter any more! We have glasses for our classroom!"

"Finally, we can play the football in the playground!"

"I have my new school-bag! I have a lot of new stationery!"

"I will go to tell my grandma I have my new pencil box!" There was cheer coming out from Changshi Primary School time and time again, in Hukou Town Shaoguan City; it seemed to announce a beginning of new life. Spacious and well-lighted classroom, firmly windows, massy doors, boxes of brand new sports apparatus..., it looked like a new school for the children in Changshi Primary School, it is a farewell to the tumbledown doors and windows, to the previous broken classroom and to the simple and crude sports room.

Sail ship of the socially useful activity in spring breeze

Early spring of 2014, Mr Zhang Chongming lead the senior team of Tech-Long to visit the Hukou town in Shaoguan City. When this team walked into Changshi Primary School, time seemed back 50 years: leaking ceiling, bumpy and rough playground, dusky classroom, plastic film covered window, narrow and mottled teachers 'room, tumbledown ping-pong table... Their facilities were still far behind the development of our nation. The modern books, the innocent smile, were no truck with these broken and mottled teaching facilities. After the visit of Changshi Primary School, this team decided to make a donation to this school.

Though the facilities were worse, the radiant smile of children and willingness to learning brought a tinge of warmth to this bitterly cold; cheering and innocent eyes of the children added a breath of life to the bumpy and rough playground; the diligently and tirelessly work of



teachers took the light for the teachers' room which is so-called "rains leaking on the roof, rats fighting under the bed".



锈迹斑驳的窗户 Rusty Window



崭新闪亮的窗户 Flashy Window



潮湿阴暗的教室 Dusky & Shabby Classroom



√S 宽敞明朗的教室 Spacious & Bright Classroom

After the visit, this team carried out the donation activity. It is responded actively by the Tech-Long staff. Meanwhile, many suppliers of Tech-Long joined in this activity under the advocating of Tech-Long. Dongguan Longsun Machinery Co., Ltd., Suzhou City Tianlongbanye Purification Co., Ltd., Shanghai Yiao Packaging Machinery Co., Ltd., Yuan Guang Jie Purification Technology Co., Ltd., Chengdu Linao Equipment Co., Ltd., Shenzhen Anges Machinery Co., Ltd., Guangzhou Unique Injection Molding Systems Co., Ltd., Kunshan Haiwei Automation Co., Ltd., Mr Yuan Kaihua from Guangzhou Huahuan Logistic Co., Ltd., and Mr Li Qiuquan from Guangzhou Juhang Machinery Equipment Co., Ltd. The team of Tech-Long collected all the donation to help Changshi Primary School to maintain doors and windows, paint classrooms and dining hall, buy new desks, stationery and sports facilities. They also provided special help to three students who are very poor.

On May 7, 2014, with thundering and rain, Tech-Long charity activity team took facilities for



the school such as stationery, school bag to Changshi Primary School. In the very morning, the children were impatient to crowd with Tech-Long team. Radiant faces looked like flowers blooming in the brand new school. Students and teachers of Changshi Primary school held a simple but grave ceremony to welcome Tech-Long. During the ceremony, general manager of







破旧不堪的校舍 Shabby School House

VS 美丽明亮的校舍 Beautiful & Bright School House

Techlong Inc accepted the pennant from Youth League committee of Shaoguan and Changshi Primary School. At that day, Tech-Long team played games together with the students, enjoyed the good life.

This is a nice journey without final destination

In the early summer with warm sunshine, children in Changshi Primary school were enjoying their new classrooms and new facilities. To them, it was a terminal of old life; as for Tech-Long, this is a nice journey without final destination, Tech-Long still need go further in socially useful activities.

Action comes with our love, responsibility brings hope. Tech-Long keep focusing on the Hope Project, New Rural Construction, and Social Education. Every year, Tech-Long will donate to two or three poor schools, which will provide help for people in need. In future, Tech-Long's charity activity will provide better study environment for children in the poor area. Tech-Long will actively advocate the socially useful activities, improve the favorable atmosphere of society and commit itself to all kinds of socially useful activities with the attitude of "sharing love with others, acting beneficence to society".



因时而动,全新演绎液态包装整 线解决方案

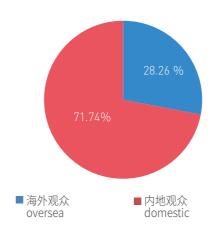
-- 达意隆联袂广州一道完美收官CHINA PLAS 2014国际橡塑展



2014年4月23-26日,亚洲第一、全球第二大的第28届中国国际塑料橡胶工业展览会(简称CHINAPLAS 2014国际橡塑展)重临上海,规模再攀新高。

据主办方统计,四天展期共吸引了130,370人参观,与CHINA PLAS 2013国际橡塑展相比,录得14.26%的可观增长,亦创下自1983年首办以来的新高。其中,海外观众跃升19.73%,达36,841人,占总人数的28.26%。他们分别来自143个国家和地区,主要来自香港、印度、印尼、伊朗、日本、韩国、马来西亚、台湾、泰国、俄罗斯等地。国内观众数字亦表现理想,达到93,529人,增长为12.24%。海外观众人数攀升反映出中国出口市场回暖的良好市场,绝大部分参展观众表示,希望从展会上一睹业界设备

2014 国际橡塑展的参观人数 CHIANPLAS 2014 Total Visitors Attendes



CORRESPONDING TO TIME AND TENDENCY, PUSHING OUT BRAND NEW LIQUID PACKAGING COMPLETE LINE SOLUTION

-TECH-LONG JOINED HANDS WITH GUANGZHOU UNIQUE SUCCEEDED IN CHINAPLAS 2014



和材料新技术的热点,寻求优秀的方案供应商。

贴近客户需求,产品生命周期的整线演绎

作为液态包装的领跑企业,达意隆始终将目光聚焦在"以客户为导向,增创客户价值"的主题上。 CHINA PLAS 2014国际橡塑展上,达意隆精心筹备,从客户端实际需求出发,联袂广州一道公司,现场向观众展示了从"注塑"到"吹瓶"的实际过程,充分体现了达意隆设备的高效率及运行稳定性,设备优良性能的展示获得国际客户及代理商的高度赞誉。同时,本次还增设了PET瓶模具产品的展示,进一步体现出达意隆产品设备生命周期中的灵活性与流畅性。

对达意隆而言,整线解决方案并不是单一的设备供 应,在产品生命周期中,达意隆将始终贴近客户需 求,通过切实可行的产品方案、卓越高端的产品技 术、完善快捷的产品项目服务,为客户带来更大的 价值。

相与为一 同谋共就

秉承"同谋共就,共推未来"的理念,本次展厅的设计,巧妙的将达意隆与广州一道融于一体。 寓意着"辉煌"的Tech-Long灰黄色系与广州一道 的黑红色系相辅相成,匠心独运的展台设计吸引 了众多参观者的驻足注目。鲜明的色彩在带给观 众强烈的视觉冲击的同时,更多的传达出达意隆 的自信豪情。

此番两大领域巨头的联袂参展,既是达意隆领跑行业的优势体现,更为二者肩负责任、传承品质的铿锵承诺,相信未来世界工程机械格局也将因此更添精彩。

新闻报导 Special Report



On April 23-26, 2014, No.1 in Asia, No. 2 in the world, the 28th International Exhibition on Plastics and Rubber Industries held in Shanghai(short name is CHINAPLAS 2014) again. In this year, the scale of CHINAPLAS went into new stage.

According to the statistics of the host, total 130,370 local and overseas visitors flocked to CHINAPLAS 2014 during 4-days show.

Comparing with 2013, this figure increased by 14.26%, which is a new record since its first period in 1983. Total visitors from domestic were 93,528, increased by 12.24%. The visitors from overseas increased by 19.73%, total 36,841, occupied 28.26% of the total visitors. They were from 143 countries and areas, such as Hong Kong, India, Indonesia, Iran, Japan,

Korea, Malaysia, Taiwan, Thailand, and Russia. The increase of the oversea visitors means the recovery of China exporting. Most of the visitors expressed their hope to see the new characters of the equipment and materials and seek for best solutions.

Close to the requirements of customers, complete line deduction the whole life of products

As the leading enterprise of liquid packaging, Tech-Long always focuses on the theme of customized and value added service. In CHINAPLAS 2014, Tech-Long prepared well, from the actual requirement of customer, together with Guangzhou Unique presented the process from injection to blow bottles. It shown the high efficiency and stable of Tech-Long











equipment, won the high praise of international customers and agents. During the show, Tech-Long also exhibited its PET molds products, which shown the flexibility and liquidity of Tech-Long products in their lifetime.

As for Tech-Long, complete line solution is not only providing equipment, but also providing service to get more value for customer through the service close to customers, feasible products solution, excellent products technology and perfect project service.

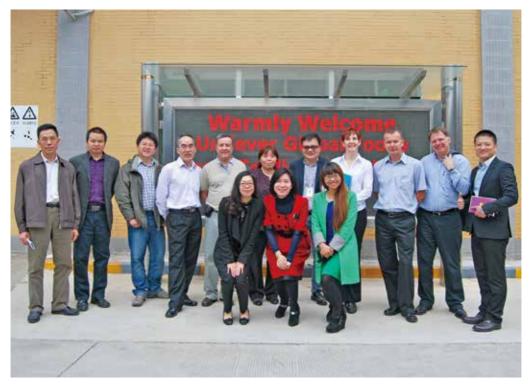
Interaction between each other, Winning success with cooperation

The design of this exhibition brought in the concept of "Interaction between each other,

Winning success with cooperation", which masterly combined Tech-Long and Guangzhou Unique. The Grey and Yellow of Tech-Long with the meaning of glory and the Black and Red of Unique supplements each other with originality of designer's own attracted lots of visitors to stop in the booth. Sharp-cut color was not only a visual impact to visitors, which was the confidence and lofty sentiments of Tech-Long.

The joint exhibition of two giants in two fields is a reflection of Tech-Long leading advantages, what is more, is a promise of these two companies to take responsibility and inherit brand. We believe the structure of worldwide packaging machinery will be more splendid in future.

联合利华全球食品团队莅临 达意隆考察参观



联合利华全球食品团队参观人员留影 Group Photo of Unilever Team

2014年3月18日,联合利华全球食品团队高层专程赶赴达意隆参观考察。

当天在达意隆高层领导的陪同下来宾参观了检测中心及生产车间,通过详备的座谈,联合利华团队对 达意隆的发展概况、生产规模、技术特征及产品应 用都有了更为清晰的认识。 考察过程中联合利华团队对达意隆赞不绝口,尤其是对达意隆的研发能力和制造水平给予很高的评价,充分肯定达意隆在中国包装机械行业的领导地位,具备全球供应商的卓越能力。

联合利华团队表示本次考察交流实现了彼此之间友好的交流互动,为今后双方合作共赢打下了良好的基础。

A DELEGATION OF UNILEVER GLOBAL FOOD TEAM VISITED TECH-LONG



On March 18, senior members of global food team from Unilever made a special visit to Tech-Long.

At that day, with the accompanying of techlong managing team, they visited Tech-Long's inspection center and manufacturing workshop. With a formal meeting, Unilever team understood the development, production scale, and technical features and products application of Tech-Long.

This team made a highly praise to Tech-Long after the presentation of Tech-Long and their visit to workshop. Through this visit, they knew the leading position of Tech-Long in China packaging industry and the excellent capability to become a global supplier.

Unilever team expressed that this visit realized the friendly interaction with each other, which laid a foundation for future cooperation.

广州市科信局马正勇局长一行 莅临达意隆考察



广州市科信局马正勇局长一行考察达意隆工厂 Commissioner Ma in Tech-Long Workshop

2014年5月5日,广州市科信局马正勇局长及高新处张序处长莅临达意隆调研。在张颂明董事长和陈钢副董事长的陪同下,马局长一行参观了达意隆检测中心、机加、吹瓶、灌装、机器人等生产现场,并深入了解了达意隆的设备研发、生产、销售情况。马局长高度赞扬了达意隆在饮料包装设备制造业所取得的成绩,并鼓励企业加强自主创新,充分发挥行业龙头的带动作用,引领行业风向。

达意隆重视科研,每年的研发投入超过销售收入 3%,有超过400人的研发团队,公司成立以来多项 拳头产品荣获省、市、区科技进步奖。目前,公司 申请核心专利近400项,主持及参与国家标准起草7 项,行业标准9项,树立行业标杆,引领行业升级。

COMMISSIONER MA ZHENGYONG WITH HIS TEAM FROM GUANGZHOU SCIENCE AND INFORMATION BUREAU VISITED TECH-LONG

May 5, 2014, Commissioner Ma Zhengyong from Guangzhou Science and Information Bureau and Director Zhang Xu from New High-Tech Department visited Tech-Long and did some research. With the guiding of Mr. Zhang Songming and Mr. Chen Gang (Chariman and vice chairman of Tech-Long), Commissioner Ma and his team visited Tech-Long inspection center, processing center, blower workshop, filler workshop, robot workshop etc. They also knew the situation of Tech-Long's R & D, manufacturing, and sales. Commissioner Ma highly praised the achievements in beverage packaging industry and encouraged to enhance enterprise self innovation and bring the leading advantage into full play.

Tech-Long thinks much of science and development. Every year over 3% of total sales amount will be used to research and develop. Tech-Long has more than 400 persons in R & D team. Since the establishment of Tech-Long, a lot of core products have been awarded outstanding prizes for scientific progress at the district, city and provincial level. Right now, Tech-Long has applied more 400 patents, conducted drafting 7 national standards, 9 industrial standards. Tech-Long has set a good role for the whole industry and it will lead the upgrading of the whole industry.

Text by: Deng Ruili



技术先锋 永不止步

--达意隆无菌灌装机以优秀表现通过染色测试



TECHNICAL PIONEER, NEVER STOP

—TECH-LONG ASEPTIC FILLING MACHINE PASSED THE DYE TEST

2013年,达意隆重磅推出了国内首条36000瓶/时新型高速无菌吹灌旋生产线,填补了国内新型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又一个崭新高度。

近日,针对该设备,达意隆举行了无菌生产线项目染色测试实验,通过实验来展现灌装机内外表面消毒(sop)和外表面清洗(cop)喷嘴装置的作用与效果。实验采用食用色素(胭脂红)制作的粘稠溶液。将溶液喷洒在机器的各个角落,尤其是不易清洗的卫生死角。开启自动SOP/COP程序后,通过观察红色溶液的清除程度来检查喷嘴安装位置的分布情况,由此来确定喷嘴是否需要调整或增加。

本次染色O测试一次通过,完美做到了溶液全部从机器上清除干净,高洁净,无残留。这意味着无菌灌装机的重要部件——SOP/CP装置,功能显著卓越、可靠有效。

目前,该设备已成功通过了72小时连续运转测试,并接受了客户的首次验收。

未来,随着技术设备的日益成熟无菌灌装技术将得 以更广泛的应用,而达意隆也必将成为引领国内无 菌灌装技术设备发展的技术先锋。

In 2013, Tech-Long launched first 36,000BPH high speed aseptic blower-filler-capper combi line in domestic. It filled the domestic gap of aseptic blower-filler-capper combi line and pushed the domestic aseptic combi line in technology, manufacturing and application.

Tech-Long recently carried out dye test for this aseptic line. By means of experimenting, it attempted to test the function and effect of nozzles when doing SOP inside the machine and COP outside the machine. This experiment applied food grade pigment (coccinellin) to make viscosity liquid and sprayed the liquid into all the ends of the machine, especially for the ends which are not easy to clean. Start SOP/COP program, watch the clean effect of the red liquid, check the position of the nozzles, then make a decision whether need to adjust the position of the nozzles or to add some new nozzles.

This dye test passed only one time, it perfectly cleans all the liquid from machine, ultra-hygienic and no residue. That means the most important parts of aseptic filing machine-SOP/COP device succeeded and reliable.

This aseptic filling machine had already continued to run 72 hours and passed the preliminary acceptance of customer.

In future, with the mature of technology and equipment, aseptic filling technology will be applied extensively; at that time Tech-Long will be the pioneer in development of aseptic filling equipment.

Text by: Xiaolin Huang

与时俱进 固本拓源

-- 达意隆成立工业自动化事业部



拓源固本夯基石

随着信息与控制技术的进步,工业自动化技术得到了空前的发展,其应用范围几乎扩展到人类活动的一切领域。工业自动化系统不断吸纳高技术成果,更新换代速度日益加快,市场需求稳定增长。产品特点是,数字化、智能化、模块化、高精度化和小型轻量化。在人力成本、环境成本、资源耗竭成本等因素的共同作用下,当前经济发展进入了一个高成本时代,而这也将促使工业自动化发展成为一种不可逆的发展趋势。

问渠哪得清如许,为有源头活水来

近日达意降成立了工业自动化事业部, 专业展开

工业自动化领域工作,进行食品等固体行业机器 人及系统集成的研发、制造、工程安装调试、销 售等工作。

工业自动化事业部的成立,能有助于达意隆更准确 把握工业自动化的趋势,更多地投入到工业自动化 的浪潮中,更好地将数字化、信息化技术与机械设 备融合,使生产效率和产品质量得到进一步提高, 引领包装机械行业朝着智能化发展。通过节能、低 耗、环保、节约生产资源等产品性能提升设备的市 场竞争力,这将为我国机械制造工业能力过剩情况 提供良好的用武之地,同时也是培养新的经济增长 点,带动市场新机遇。

KEEP PACE WITH TIMES, CONSOLIDATE TRADITIONAL FIELD AND EXPLORE IN NEW FIELD

-SET-UP OF TECH-LONG INDUSTRIAL AUTOMATION DEPARTMENT





Consolidate traditional field and Explore in new field

With the development of information and control technology, industrial automation develops in unprecedentedly; the application scope almost covers all the fields with human activities. Industrial automation system continues to apply the high-tech achievements, update in a increasing speed, and obtain a stable market. The features of products are digital, intelligent, modular, high accurate and lightweight and portable. With the effect of human cost, environment cost and resource decreasing cost, today's economy goes into a high cost age, which will push application of industrial automation irreversibly.

Why is the water in stream so clean, because there is a running water source

Recently Tech-Long set up is industrial automation department, it was a department especially for industrial automation, which would carry out robot and system research and development, manufacturing, engineering service, marketing etc in solid food packaging.

The establishment of industrial automation department will help Tech-Long to master the tendency of industrial automation, combine digital technology and IT in equipment, improve the efficiency and products quality, and lead the whole packaging machinery to automation. A way to raise the market competitiveness of products by saving energy, decreasing consumption, protecting environment and saving raw materials is standing out the excessive industrial capability in China. Meanwhile, it is also the way to raise new economic growth point and to create job opportunities.

达意隆召开2014年第一季度营销管 理会议

TECH-LONG HELD THE FIRST SEASONAL SALES MANAGEMENT MEETING 2014

2014年3月,达意隆营销总部召开2014年第一季营销管理会议,达意隆张崇明先生在会上做了达意隆新时期战略思想的阐述以及展望。

节能增效 创利共赢

达意隆锐意推出"20计划",在保证产品性能及配套服务品质高水准的前提下,进行节能增效工作。 本次工作涵盖产品研发、人员管理、资源整合等领域,贯穿产业链全方位。达意隆张崇明先生强调, "20计划"是达意隆内部管理体系的一次升级,所有工作的前提必须从客户角度出发,为客户提供高水准甚至超越原本品质的产品和配套服务。

在人力成本、环境成本、资源耗竭成本等因素的共同作用下,当前经济发展已进入一个高成本时代。针对高成本的现实环境,"20计划"将强力有效对达意隆内部价值链进行调整升级:原材料、订单生产、营销、物流、售后服务等各个环境优化管理与效率提升,有效整合资源,提高效率,降低成本,从而为客户提供更优质更高效的星级服务。

In March, 2014, 2014 first seasonal sales management meeting was held in Tech-Long headquarters. During the meeting, Mr. Zhang Chongming conveyed Tech-Long's strategic idea and expectation in new period.

Saving Energy and Increase Efficiency, Build up Win-Win

Tech-Long launched its"20 Proposal (Reducing 20% of cost)" with keen determination, which focused on energy saving and efficiency increase without decreasing the products quality and service. This proposal covered all the field of Tech-Long from products update, labor management, resources optimization etc. Mr. Zhang Chongming emphasized "20 Proposal" was an upgrade of Tech-Long internal, all the works of Tech-Long must be basing on customers' requirement and provide customers high level or over the original level products and service.

With the effect of human cost, environment cost and resource decreasing cost, today's economy goes into a high cost age. Facing the high cost, Tech-Long combined and upgraded all the value chain in "20 Proposal". Raw materials, order production, marketing, logistics, service etc were optimized, through this way, it combined all the resources, increased the efficiency, decreased the cost, so Tech-Long can provide better and high quality star grade service.

美国驻广州领事馆来访达意隆 A DELEGATION OF CONSULATE GENERAL OF UNITED STATES GUANGZHOU VISITED TECH-LONG



3月12日,美国驻广州领事馆一行7人来到达意隆参观考察。作为美国在中国较早的一个外交机构,美国驻广州总领事馆在推进中美两国关系中有不可或缺的重要性。时至今日,更是与中国有着多层次多领域的交流,并通过互访来推动公众外交。

本次美国驻广州领事馆来访旨在考察和了解达意隆 以及达意隆在北美的全资子公司,同时为达意隆工 程师申请美国签证提供更多专业指导。

在听取达意隆公司简介、参观完生产车间后,考察团们对达意隆赞不绝口,充分了解达意隆本部以及投资美国的实力与规模,对达意隆的研发能力和制造水平给予很高的评价。最后美国驻广州领事馆代表团纷纷表示继续支持与协助达意隆美国分公司更好的开拓国际市场,实现互惠双赢。

On March 12, 2014, a delegation of 7 people from Consulate General of United States Guangzhou visited Tech-Long. As an earlier diplomatic organization between China and USA, it played an important role in promoting mutual relationship. Till now, it has more communication in different fields with China and promotes diplomacy by mutual visit.

This visit was to understand Tech-Long and its wholly-owned sub-company in USA, and provided some guide in apply USA visa for the technicians of Tech-Long.

After visiting the workshop, listening to the introduction of Tech-Long, this delegation made a highly praise to Tech-Long. They understood the scale and strength of Tech-Long and its conviction to invest in USA. Also they highly praised the R & D and manufacturing capability of Tech-Long. In future, they will provide support for Techlong Inc in USA to realize win-win.

Text by: Carter Jia

把控质量管理 优化作业流程



质量管理体系是一个企业参与市场竞争的重要资源,而持续改进则是企业一个永不停歇的目标。只有通过不断完善质量管理体系文件,把控质量管理,进一步调整和优化内部组织结构,明确职责与权限、工作程序及控制要求,才能推进管理工作的规范化和标准化,从而实现预期的质量目标。

ISO9001质量管理体系是国际公认的关于质量管理和质量保证的先进管理标准。自问世以来,由于齐集各国质量管理领域的成功经验,已被众多企业单位广泛采用。自2002年以来,达意隆就把ISO9001质量管理体系标准作为公司发展实现精细化管理的工具导入,通过以标准化为助推器,进一步规范公司管理工作,增强管理的精细化和可控性,从而推动企业的持续发展,增强企业的核心竞争力。

为保持和持续改进达意隆ISO9001质量管理体系的适宜性、符合性和有效性,不断提高体系文件的可操作性和增值作用,2010年在质量管理部带领下,经

过各有关部门的共同努力,对ISO9001: 2000版程序文件、作业指导书和质量记录进行了全面升级为ISO9001: 2008版。2013年质量管理部再次针对现有作业流程与标准要求,制定文件修改计划对公司所有的文件进行重新梳理、优化,使公司的实际作业与文件要求一致。本次需修改的文件为152份,内容涉及技术项目、文件与资料控制、人员培训等与产品质量有关的过程管理和质量活动。并将这些文件按照权责责任到各部门,按要求陆续在2014年9月前完成。

达意隆多年来全面贯彻质量管理体系标准,将先进的管理理念和质量管理体系标准同履行项目建设管理职能的实践相结合,在此基础上建立新的管理平台,进而规范和优化运作管理工作。通过把控质量管理,优化作业,从而推动企业管理水平不断提升,为产品建设质量的保证夯实基础,增强企业核心竞争力。

ENHANCE QUALITY MANAGEMENT AND OPTIMIZE THE OPERATION PROCESS

Quality management system played an important role for company to take part in market competition. However, in order to run the business for long time, one of the important ways is to improve the management system continuously. Only by improving this system, a company can further adjust and optimize the internal organization structure, establish clear responsibility, and improve working process, so as to realize standardization and normalization. Then it can realize its settled quality target.

ISO9001 quality management system is an advanced internationally recognized system in quality management and quality guarantee. Since it came out, it derived successful experience from different countries for quality management. It has been accepted by a lot of companies. Since 2002, Tech-Long implemented ISO9001 quality management system as a tool to realize specific management. Through implementing standardization as roll booster to regulate company management, it will enhance management and make the management controllable, so as to promote sustainable development and improve the core competitiveness.

In order to keep and continuously upgrade suitability, compliance and effectiveness of ISO9001 quality management system, and to improve its operability and value added function,

Tech-Long quality management department conducted the upgrading ISO9001 quality management system from 2000 version to 2008 version in 2010. With cooperation of other departments, they upgraded the procedure documents, job instructions and quality records. Basing on the actual operation procedures and standard requirements, quality management department re-sorted and optimized all the documents in 2013, so the actual operation matched with documents. This time they have updated 152 copy documents, which were referred to technical items, documents and materials control, personnel training that were related to procedure management and quality activities. These documents have been forwarded to the all related departments, all the updating work will be finished before September, 2014.

For years, Tech-Long always fully implements the standards of quality management system, combines the advanced management concept and standards of quality management with the project management, and builds up a new quality management platform, so as to regulate and optimize the management of company. Tech-Long will promote its management level through controlling quality and optimizing operation, so it will guarantee our products quality and enhance Tech-Long's the core competitiveness.

Information Offered By :Lie Mingying

创新超越 硕果飘香

-- 达意隆全自动高速酱油灌装机被评为高新技术产品



2014年3月5日,达意隆研制的"高速酱油灌装机"通过广东省科技厅2013年高新技术产品认定,喜获高新技术产品殊荣。

据悉,"广东省高新技术产品"每年认定一次,认 定过程十分严苛,经过层层筛选,达意隆拥有完全 自主知识产权并经过市场检验的"全自动高速酱油 灌装机"成功脱颖而出,最终获得此项殊荣。

达意隆此次参评的产品为微负压全自动冲洗、灌 装、压盖、旋盖四合一酱油灌装机。该设备采用喷 嘴伸缩式冲瓶夹,具有三道冲洗功能;采用单个环形物料缸,灌装过程平稳,有效减少泡沫产生,无滴漏。压盖机采用压盖体取盖口与塑料内盖用过盈配合、压盖头加装定中装置的技术实现内盖压盖的全自动生产。产品广泛适用于玻璃瓶和PET 瓶装酱油的灌装。

至此,达意隆共有5项产品被评为高新技术产品,分别是高速PET瓶饮料吹灌旋一体化装备、PET瓶高速吹瓶机、PET瓶饮料高速热灌装生产线、含气灌装机和全自动高速酱油灌装机。

ENDLESS INNOVATION AND FRUITFUL ACHIEVEMENTS

—TECH-LONG FULLY AUTOMATIC HIGH SPEED SOY SAUCE FILLING MACHINE WAS AWARDED AS A NEW HIGH-TECH PRODUCT

On March 5, 2014, Tech-Long "High Speed Soy Sauce Filling Machine" passed the evaluation of Science and Technology Department of Guangzhou in 2013 and was awarded as a new High-Tech Product.

It is said that, "New High-Tech Product of Guangdong" will be evaluated one time a year. It is very strict and needs to pass a lot of procedures. "Fully Automatic High Speed Soy Sauce Filling Machine" whose patent is fully owned by Tech-Long finally stood out and got this honor.

Tech-Long took its fully automatic four in one micro negative pressure soy sauce filling monobloc -- rinse-filler-crowner-capper to take part in this evaluation. This filler applies rinsing clamp with telescopic nozzle which has the function of three rinsing cycle and single ring bowl to assure the stable of filling, less foaming and no leak. The crowner applies interference fit between the cap chuck and plastic inner cap and adds the centering device in the capping head to realize fully automatic production. This kind of filler can be used to filling soy sauce with PET or glass bottle.



Till now, there are 5 products awarded as New High-Tech Product. They are PET blow-fill-cap monobloc for beverage, PET high speed blow molding machine, PET high speed hot filling line for beverage, carbonated filling machine, and fully automatic high speed soy sauce filling machine

Text by: Wang Yannan

印象泰国 畅爽一夏

同心同步 快乐出游

达意隆自创立起,坚持用关怀、激励的管理模式对待每一位员工,积极满足员工各层次的需求,帮助员工提升生活品质,让员工感受"意"家人的温暖。每年,达意隆都会组织员工集体外出旅游,让员工们在领略自然风光的同时,缓解平时繁忙工作的压力,增进团队之间的默契与感情。精心挑选的旅游路线,贴心安排的旅程务求让每次的快乐出游都成为伙伴们心中最美好的时光。

2014年5月28日,达意隆营销总部一行无比雀跃地前往微笑之国---泰国,开始了为期5天的普吉岛之旅。普吉岛草木繁盛,在飞机上鸟瞰,宛如安达曼海上的一颗"绿色明珠"。时值雨季,初到的一场甘霖开启了这段完美度假之旅。

拥抱大海 饱餐美食

攀牙湾、割喉岛、PP岛、情人沙滩、水上乐园……在 普吉岛的几天,海岛的各色风情恣意闯入大伙的视 界,伙伴们纷纷感叹美景应接不暇。大伙儿或在洁 白的沙滩上晒个日光浴,享受一份惬意安静;或潜 入清凉的海底,和五彩鱼儿道声"你好";还有的 懒散地躺下,放松在泰式独特按摩之中。

精彩的旅行少不了美食的助兴,一道道酸爽鲜香的 佳肴和多款颜色艳丽迷人的热带水果惊艳了大家, 椰汁嫩鸡汤、炭烧蟹、芒果香饭、榴莲、莲雾、夏 威夷果……大伙们纷纷化身大胃王,只求饱餐泰国的 饕餮大餐。

黄昏一抹金色的阳光透过带点浅灰色的云层洒落在



IMPRESSIVE THAILAND COOL SUMMER

泰国机场,悠然恣意的五天海岛之旅在一片欢声笑语中画上句号。再见! 普吉岛! 难以忘怀你的美食美景,更难忘怀达意隆人集体出游的温馨愉快!

Be one mind and be one step, Happy tour

Since the establishment of Tech-Long, it applies "concern, inspiration" managing model to treat every staff. Tech-Long always activity meet staffs all different level demand, help staffs to improve life quality and make Tech-Long a home of all staffs. Every year, we will organize our

staffs to travel outside. So our staffs can enjoy the beautiful scenary, release their working pressure and also enhance the coordination and firendship. Well-chosen tour route and intimate tour service make every tour become the best time in our heart.

On May 28, 2014, the personnel of Tech-long marketing headquarters cheerfully went to the land of smiles—Thailand, and started a five-day trip on Phuket, Thailand.Getting a bird's eye view on the plane, you could find it just like a "green pearl" on the Andaman Sea. It is still in rains, and the timely rain unveiled our perfect trip there.





Embrace the sea Feast on delicacies

Phang Nga Bay, Hong Island, PP island, lover's beach, water park,... Only few days on the island of Phuket could waywardly make the insular flavor come into our sight, everybody say they don't have more time to visit all the beautiful scenary. Group members could bask on the soft beach hand in hand and enjoy a nice quiet afternoon; or could dive into the cool and refreshing seabed to embrace the seaand say hello to the colorful fish under the water; r could simply lie down at ease, engross yourself in the unique massage of the ancient Thai.

Wonderful trip will not certainly go without Thai food. The sour and tender delicacies could be a great company for you to enjoy your beautiful

time on the island. Such delicacies as coconut and tender chicken soup, roastcrab over the charcoal, mango fragrant rice, durian, wax apple, Macadamias and so on. Group members become big eaters, only wanting to feast on Thai dalicacies gluttonously.

A golden sunlight at dusk blended with light gray clouds above the sky of Thailand airport, and cheerful chatting and laughing put a full stop to our leisurely and perfect trip on the sunny beach in May. Good Bye,Phuket! Unforgettable delicious food, unforgettable joy of group travel of Tech-Long!



员工风采集锦 RECREATIONAL ACTIVITIES



1.足球比赛

约定的比赛,

聚集的队友,

纵使是暴雨也熄灭不了火一般的熊熊斗志,

就如同工作中的我们,

从来都是信守目标;

从来都是无所畏惧;

一如既往,乘风破浪,铸就辉煌!

2.拔河比赛

这是一根绳决定的楚河汉界, 这是10颗心的力量叠加与心神默契。 随着"123"的声响, 心在头尾的颤震中统一! 力在一条同心线上爆发! 坚持到底,

决不放弃,

我们终获胜利!

3.篮球比赛

球场上的我们都是 风驰电掣的蛟龙,你拼我抢,士气高涨,众志成城,

无兄弟, 不篮球,

我们坚信,

此时的青春汗水终将凝成一抹似火骄阳!



1.Football Match

A preconcerted match,

A group of teammates gathering,

Even rainstorm cannot knock down their great

tenacity as tough as fire,

Just like we treat our career,

Keep our target all the time;

Be fearless all the time;

As in the past, riding the wind and waves,

achieving our glories!

2.Tug-of-War

This is a rope separating Chu River and Han

Boundary(win or lose);

This is ten people's superposition of forces and coordination of privity.

With a whistling after 1,2,3

All the spirirt is united in the shaking of the

bodies!

All the force is united in one rope!

Keep at it,

Never give up,

The vicotry belongs to us!

3.Baseketball Match

We are swift dragons on the playground,

Tackling and offense, having high morale, uniting our strength,

Without brothers, withou baseketball

We deeply believe,

At the moment, our youth and sweat will become an scorching sun!



PRODUCT RUNNING

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STATUS 京

联合利华与达意隆 强强联手 盛世双雄奏响行业最强音

-- 达意隆与联合利华成功签订酱料独立灌装机项目



WIN-WIN COOPERATION BETWEEN UNILEVER AND TECH-LONG PLAYING THE STRONGEST SING IN THIS INDUSTRY

—UNILEVER SIGNED A CONTRACT FOR INDEPENDENT SAUCE FILLING MACHINE WITH TECH-LONG

每一天,全球有超过20亿人在使用联合利华的产品。从食品,饮料和冰激凌,到家庭和个人护理产品,联合利华的产品广受欢迎,已经成为人们每日生活中不可或缺的一部分。

1929年,英国Lever公司与荷兰Margarine Unie公司签订协议,组建Unilever (联合利华)公司。经过80年的发展,联合利华公司已经成为了一家拥有多个世界知名食品、饮料、清洁剂和个人护理产品的上市公司,世界上最大的日用消费品公司之一。2013年,联合利华 (Unilever)全球营业额为497.8亿欧元。作为全世界获利最佳的公司之一,联合利华14个品类的400个品牌畅销全球170多个国家和地区,是全球最大的冰淇淋、茶饮料、人造奶油和调味品生产商之一,也是全球最大的洗涤、洁肤和护发产品生产商之一。

19世纪90年代,William Heskith Lever,联合利华的创始人之一,便提出了"减轻家务负担,让使用者生活更美好"的理念。联合利华的全球愿景是每一天都致力于创造更美好的未来,用优质产品和服务使人心情愉悦、神采焕发,享受更加完美生活;

通过每天细微的行动,积少成多而改变世界;致力于减少对环境的不利影响,并提高积极的社会影响,引领负责任的增长方式,启发人们通过每天的小行动创造大不同。

机会与挑战并存 三年磨合彰显金牌品质

早在2010年,联合利华与达意隆就有了初步的合作意向。作为世界五百强企业之一的联合利华,对设备供应商有着极为严格的要求。要成为联合利华的战略伙伴意味着自身的企业实力、设备质量、团队沟通、人员安全、企业文化、科研创新、售后服务等诸多方面皆要表现优越,能达到甚至超越国际知名品牌的水准!从2010年双方有初步合作意向开始,到2013年底的成功合作,三年多的项目洽谈时间内,联合利华全球食品团队对达意隆进行了多次实地考察,综合评估了达意隆的各项软硬实力,定使评价了达意隆的研发能力和制造水平,充分肯定达意隆在中国包装机械行业的领导地位,具备全球供应商的卓越能力同时双方项目小组进行多次技术交流与探讨,联合利华团队给达意隆项目小组提供了大量专业的意见和建议。







创新进取是达意降的一贯作风, 为客户服务是达意 隆的一贯宗旨。2013年年初,联合利华在上海金山 设厂,需要新增灌装机处理调味品产品,要求这台 灌装机能同时处理四种不同容积的容器,并要轮流 灌装20多种高粘度酱料。收到联合利华的项目要求 后, 达意降负责高粘度调味品灌装的项目小组立刻 全力投入! 得益于之前达意隆与美国汇丰和亨氏等 国际知名品牌多年合作中积累了丰富的高粘度调味 品灌装经验, 此台设备的方案在联合利华和达意降 双方技术团队的多次沟通和交流后,于2013年下旬 基本敲定。 当达意降项目小组拟好最终合同,正欲 寄出合同的前一周,联合利华再次增加要求,需要 此台灌装机再处理一种调味品--蒸鱼汁,一种完全有 别于高粘度调味品的酱油。达意隆的技术团队顿时 陷入僵局。此前针对客户灌装多种高粘度酱料的需 求, 达意隆团队针对高粘度产品特点, 利用微正压 灌装原理设计灌装机,而这是无法同时处理高粘度 和稀释型产品。

在这紧急的关头,达意隆团队迅速调整思路,针对 联合利华的最新需求重新修改设计方案,最终技术 团队中一位在包装机械行业扎根近30年的骨干技术 人员想到了一个解决办法,即在灌装系统内另外配 置一个真空泵,在灌装蒸鱼汁的时候使用真空泵, 采用微负压原理来灌装。 全新方案的诞生让联合利华对达意隆更加刮目相看 并且获得联合利华技术团队的高度认可。随后,合 同在不到半个月的时间内迅速签订,成功拉开了双 方的合作序幕!

强强联手 奏响行业最强音

与联合日华的成功合作,是达意隆继可口可乐、宝洁、雀巢等国际知名品牌之后,再一次与国际知名品牌携手同行,我们坚信随着达意隆不断的雄壮发展,双方定能持续深入合作,创造更美好的未来,并肩走向可持续发展的企业道路,用优质产品和服务,使更多消费者心情愉悦,神采焕发,享受更加完美生活。



Every day over two billion people use Unilever products. From food, drink or ice cream to home and personal care, Unilever products are so popular that they have become an indispensable part in people's daily life.

In 1929, the British Lever Brothers and Dutch Margarine Unie signed an agreement to create Unilever. After its incorporation more than 80 years, Unilever is now a listed company and the largest consumer goods company that owns many world famous food, drink, cleaning agent and personal care products, enjoying a total global revenue of 49.78 billion euros in 2013. As one of the most profitable company, Unilever owns over 400 brands under 14 categories that sell well in more than 170 countries and regions. It's not only one of the largest producer of ice

cream, tea drinks, margarine and condiments, but also one of the largest producer of detergents, cleansers and hair care products.

In 1890s, William Hesketh Lever, founder of Unilever, proposed the idea "to lessen work for women; that life may be more enjoyable and rewarding for the people who use our products". Its global vision is to provide quality products and services to create a better future, to foster health and contribute to personal attractiveness so that its user can enjoy a better life. Its priorities now are inspiring people to take small everyday actions that can add up to a big difference for the world. It's dedicated to minimize the impact on environment and encourage positive social influence, to lead a responsible growth mode and to inspire people to make a difference through small everyday action.



Win-Win Cooperation Brings Opportunities and Challenges, Three years cooperation exhibiting its golden prize quality

Early in 2010, Unilever and Tech-Long reached an intention for cooperation. Unilever, a company of world's Top 500, is very strict with equipment supplier. Being a strategic partner with Unilever is an indication that Tech-Long is equal to and even higher than the standards of world renowned brands. It also shows the outstanding performance of Tech-Long in terms of its corporate strength, equipment quality, team building ability, personnel safety, corporate culture, R&D, after-sales service, etc. During the three years of project consultation from the preliminary intention for cooperation in 2010 to the successful cooperation by the end of 2013, the global food solution team visited Tech-Long many times. After comprehensive evaluation on all soft and hard strength of Tech-Long, the team

spoke highly of the R&D and manufacturing capability, fully believed that Tech-Long, as the leading enterprise in packaging machine industry, was excellent enough to be a global supplier. Through many technical discussions and negotiations, project team of Tech-Long learned a lot from plenty of professional advice and suggestions proposed by Unilever team. Tech-Long holds high the banner of innovation and adhere firmly to the principle of serving the customers. At the beginning of 2013, when Unilever start to set up a factory in Jinshan, Shanghai, they called for new filling machines that can process four containers of different volumes simultaneously and can fill more than 20 high-viscosity condiments. In response to this rigid demand, Tech-Long immediately built a dedicated project team for the high-viscosity condiment filling machine. Thanks to its rich experience in this regard acquired over the years from the cooperation with many other





world renowned brands, such as US Huy Fong and Heinz, Tech-Long managed to nail down the design of the required equipment in the second half of 2013 after many consultations with Unilever tech team. However, just one week before the finalized contract was to be sent, Unilever required to add the function of filling another condiment, i.e. sauce for steamed fish, a sauce totally different from high-viscosity condiments. This brought the Tech-Long team into a deadlock. Previously in light of customer demand to fill many high-viscosity condiments, Tech-Long studied the characteristics of such condiments and designed the filling machine based on the theory of micro-positive pressure to meet such demand. This machine, however, cannot process high-viscosity product and diluted product at the same time.

At this critical moment, Tech-Long adjusted its strategy to redesign a machine that can meet the Unilever demand. Finally, a senior technician who dedicated himself in this industry for over 30 years came across a solution, namely configuring a new vacuum pump into the filling system. Therefore the pump, applying the theory of micro-negative pressure, could be used to fill the sauce of steamed fish.

The new design won highly appraisal from Unilever tech team who saw Tech-Long in a new light. Later on the quick signing of contract in less than half a month kicked off the good start of successful cooperation.

Join Hands to present the Best Ever Cooperation

The successful cooperation with Unilever marks another joint of hands with internationally recognized brands after Coca-Cola, P&G, Nestle, etc. We firmly believe that the growing Tech-Long will secure sustained cooperation and create a better future. We'll stand together side by side to build successful and sustainable corporate that serve customers with quality goods and service, foster happiness and contribute to personal attractiveness so that customers can enjoy a better life.

Text by: Cherry Lu



甘甜"黎水"润泽大地 SWEET "LIWATER" MOISTENING THE COUNTRY

- 一达意隆与快活林合作成功签订2条43200BPH纯净水整线生产线
- —HAPPY WOOD SIGNED A CONTRACT WITH TECH-LONG FOR TWO 43200BPH WATER LINES

"黎水"令沙畈水流淌全国

众所周知,鱼米之乡金华有一张闻名于世的"金名片",它就是金华人的"大水缸"——沙畈水。"沙畈水库风光好,山清水秀听松涛。喝了沙畈纯净水,老汉九十不觉老。"这是金华市民对沙畈水真切的心声流露。所谓"沙畈水",取自于同一水脉上的沙畈、金兰两座水库,被誉为金华市最佳的天然饮用水,在全国同类城市水质排名位列第三。

随着金华沙畈水的名气愈发响亮,越来越多的人希望在异地也能"一尝芳泽"。浙江快活林食品有限公司敏锐察觉到饮用水的市场空缺,推出全新产品"黎水"竹炭纯净水。快活林公司充分利用金华"五水共治"的水源地优势资源,采用水质连续10年稳居I类水标准的"沙畈水"为水源,运用竹质活性炭过滤吸附技术生产优质纯净水,实现人们不在金华也能喝上沙畈水的愿望。





"黎水"的面世,成功使金华沙畈水流淌全国,上市后广受消费者好评,市场一度出现"断货"现象。

林公司的王董事长很快被达意隆优越的产品性能以 及完善的配套服务所征服,表示不再需要考察其他 的设备供应商,只认准达意隆的设备。

在明确客户的配置要求与实际情况后,达意隆人紧 锣密鼓开展筹备工作,最终将一份令人满意的方案 呈现在快活林高层人员面前。达意隆张董更是亲自 到现场进行项目洽谈。达意隆凭着高性价比、强大 的技术实力和优质服务令双方达成合作意向并最终 签订了2条43200瓶/小时纯净水整线合同,包括水处 理、吹灌旋一体机、后段输送、纸箱包装、薄膜包装、码垛等整线工程。

口碑彰显实力 品质促成合作

达意隆与快活林公司的接触可以追溯到2008年,双方的合作起源于达意隆在农夫山泉得到的极大认可和优秀口碑。原农夫山泉的姚总和原快活林的高总向快活林公司极力推荐达意隆的设备。而近年来达意隆与怡宝等OEM厂商的深入合作,更是引起快活林公司的高度关注,经过周详的考察调研后,快活

在达意隆的助力推动下,"黎水"纯净水生产线成功投产,这是浙江省金华市首条纯净水生产线,同时也使得"快活林"成为继娃哈哈、农夫山泉之后,浙江省内第三大饮用纯净水生产基地。

相信彼此的通力合作定能让"黎水"源源不绝地流淌在中华大地,越来越多的人能饱享"黎水"之甜,双方合作的道路也将越走越宽广。





■ 相关链接:

浙江快活林食品有限公司成立于2006年7月,公司座落于"三江之汇,七省通衢"的兰溪市。公司注册资本1.4亿,在兰溪经济开发区沈村工业区占地面积192亩,近年来迅速成长,已建设成年产10万吨,集生产、研发、销售于一体的快速消费品大型企业。快活林公司致力于提供符合国人体质的绿色食品,以求平衡国人膳食,强壮国人体质。切实奉行"品质第一、服务第一、顾客第一"的精神,遵循健康为本,快乐为魂,责任为天,不断研发和生产符合市场需求的创新、健康饮品,以不断满足日益增长的消费需求。目前拥有黎水、挑战系列、茶系列、新阳光系列、营养屋营养素系列5大类产品,并拥有5条饮料生产线,每条线每小时可以生产饮料3.3万瓶,5条生产线年产能可达到11亿瓶。

LiWater Flows Nationwide

Jinhua, a city in Zhejiang Province in East China, is the land of abundance famous for its Shafan water. People in this city boast their water and say that drinking the pure water from Shafan reservoir will keep you young forever. By Shafan water, it refers to the water from Shafan Reservoir and Jinlan Reservoir. They are not only the best natural drinking water in Jinhua, but also rank the third in a nationwide water quality survey.

As Shafan water gains its fame, an increasing number of people in other places yearned for it. Right at this moment, Zhejiang Happy Wood Food Co., Ltd. noticed this gap in the drinking water market and launched a new product, namely the bamboo charcoal pure water called "LiWater". It capitalized on the advantage of water source region and used the Shafan water, which had been assessed as Type I water for ten years in a row, as its water source. Together with the technology of activated carbon filter and absorption process, Happy Wood realized Jinhua people's dream for Shafan water.

Since then Shafan water has flowed to all over China. It's so well received by consumers that sometimes supply even fell short of demand.

Word of Mouth and Quality Underlies Fruitful Cooperation

Thanks to its unrivalled reputation in Nongfu Spring which is one of China's leading drink producer, Tech-Long established cooperation with Happy Wood as early as in 2008 when Mr. Yao of Nongfu Spring highly recommended Tech-Long to Mr. Gao of Happy Wood. Tech-Long's deep collaboration with other original equipment manufacturer (OEM), like C'est Bon, in recent years aroused Happy Wood's interest. After thorough survey, Happy Wood was totally caught by the impressive performance and complete supporting service of Tech-Long, saying that Tech-Long was the best ever OEM among others.

Based on full understanding of the configuration requirements and status of the customer, Tech-Long promptly embarked on the preparation and finally presented a satisfactory design to the senior managers of Happy Wood. Besides,



Mr. Zhang Songming, President of Tech-Long, joined in the project discussion in person. With its excellent performance, formidable technical strength and super service, Tech-Long managed to reach a cooperation intention and sign a contract with Happy Wood for two production lines that was capable of producing 43200 bottles of pure water per hour, including water treatment system, blow-fill-cap combi-block, full bottles and cases conveyors, case packers, shrink wrapper, and palletisier.

With the help of Tech-Long, the production line of "LiWater" was successfully put into production. This was not only the first production line of pure water in Jinhua, but it also made Happy Wood the third largest pure water production base after Wahaha and Nongfu Spring in Zhejiang Province.

We believe that the great cooperation will find a way for the "LiWater" to flow throughout the land of China so that more people can savor the sweet "LiWater". Cooperation for both sides is promising.

Relevant links:

Zhejiang Happy Wood Food Co., Ltd., incorporated in July, 2006, locates in Lanxi City where three rivers converge and several thoroughfares meet. The company, with a registered capital of 140 million, covers 192 mu (1mu=0.0667 hectares) in Shengcun Industrial Park, Lanxi Economic Development Zone. After rapid growth in recent years, the company is now a large FMCG enterprise with production, R&D and marketing arms. Happy Wood committed itself to provide green food that befits the physical condition of Chinese people so as to reach a balanced diet and contribute to the building of toned bodies. Adhering to the spirit of "Quality First, Service Utmost, Customer Supreme" and the principle of "Health oriented, Happy Goaled, Responsibility Shouldered", Happy Wood managed to meet the increasing consumer demands by developing and producing innovative and healthy drinks that fit market requirements. Currently it owns five categories of products, namely LiWater, Challenge, Tea, New Sunshine, and Nutritious House. Each of its five production lines is capable of producing 330,000 bottles of drinks per hour. Together they can produce 1.1 billion bottles every year.

Text by: Hong Feng







精诚所至 牵手潇湘

一达意隆与湖南裕丰祥合作成功签订2条48000BPH吹灌旋水线整线及1条24000BPH带果粒热灌装吹灌旋整线

浩浩潇湘水 熠熠企新星

湖南裕丰祥食品科技有限公司是湖南恒生制药有限公司的控股子公司,成立于2012年09月,坐落在国家级浏阳经济技术开发区内,占地约508亩,建筑面积超10万平方米,计划投资4亿元打造一个年产12亿支瓶装饮用水、10亿罐灌装饮料的大型企业。自成立以来,裕丰祥一直从事饮料产品的研发、生产和销售,主要包括凉茶类、果蔬类、植物蛋白类、动物蛋白类和纯净水等产品,以饮料的专业化生产和优质化服务作为公司的发展方向,将饮料的质量安全视为企业的生命,利用母公司在制药行业领域的优势,提升饮料的质量水平,推动饮料标准体系建设,积极开发针对各种饮料产品,实现产品品种规模化、产品质量标准化的目标。

精诚所至 携手共赢

达意隆早在湖南裕丰祥食品科技有限公司创立初期便建立了友好关系,得知客户启动设备供应战略伙伴征集工作这一动态后,达意隆立即展开项目筹备工作。随后湖南裕丰祥食品科技有限公司参加了2012年北京·中国饮料制造技术及设备展览会,采购消息不胫而走,全球各大饮料设备供应商纷纷前往裕丰祥洽谈该项目。

面临众多包装设备知名品牌的激烈比拼,以营销总部李经理为主导的达意隆销售团队没有轻言放弃,而是积极应对、认真筹备。在长达一年半的时间里,持续联系客户,及时准确了解客户最新状况,并果断迅速调整项目方案,期间达意隆董事长张颂明先生、达意隆张崇明先生等高层领导先后拜访湖南裕丰祥食品科技有限公司,与项目负责人就方案展开真诚详备的沟通,充分体现出我司对合作项目的高度重视。

经过一年多的努力,达意隆凭借卓越的产品性能以及为客户竭诚服务的企业精神成功打动裕丰祥公司,一举赢得"芳心",成为裕丰祥公司的战略伙伴,签订了2条48000BPH吹灌旋水线整线及1条24000BPH带果粒热灌装吹灌旋整线。

缘结潇湘,这是彼此竭诚合作的聚首,携手共赢, 这是双方灿烂未来的开启。在湖南裕丰祥食品科技 有限公司的发展规划蓝图上,我们似乎看到了未来 美好的合作前景,期待双方的下一次握手!

SINCERE SERVICE BRINGS COOPERATION



Mighty Water Nurtures Star Company

Hu'nan Yufengxiang Food Technology Co., Ltd. is a holding subsidiary of Hengsheng Pharmaceutical Co., Ltd. Established in September, 2012, this food company locates in the national Liuyang Economic and Technological Development Zone with an area of 508 mu [1mu=0.0667 hectares] and floor area of over 100,000 m2. It planned to invest 400 million yuan on a project capable of producing 1.2 billion bottles of drinking water and 1 billion tins of drinks. Since its incorporation, Yufengxiang has specialized in the research, production and sales of herbal tea, fruit and vegetable juice, plantbased protein, animal protein and pure drinking water. It aims to be a specialized drinks producer with first-rate service. Therefore, quality safety of drinks determines the life or demise of the company. Standing on the strength of its mother company in pharmaceutical industry, Yufengxiang endeavors to increase drink quality and promote the establishment of drink standard. With its efforts in developing all kinds of drink products,

it will realize the goal of large scale production of standardized quality drinks.

Sincere Cooperation Brings Win-Win Future

Tech-Long established friendly relationship with Yufengxiang as early as the incorporation of the latter and got to know that the client was looking for an equipment supplier as its partner, Tech-Long embarked on the preparation for the partnership opportunity. Later on, Yufengxiang attended the 10th International Brew & Beverage Processing Technology and Equipment Exhibition for China, 2012 in Beijing. News travelled fast. Many global OEM giants discussed this project with Yufengxiang.

Competing fiercely with many renowned OEMs, the sales team of Tech-Long headed by Sales Manager, Mr. Li, never said die, rather they prepared for the possible cooperation full-heartedly. During the following one year, Mr. Li kept contact with the client so that the

IN XIAOXIANG



team could learn client's latest requirements and adjust the design accordingly. Tech-Long attached great importance to this cooperation. Even its President, Mr. Zhang Songming, sales director like Mr. Zhang Chongming paid visits to Yufengxiang and discussed the project with the project manager.

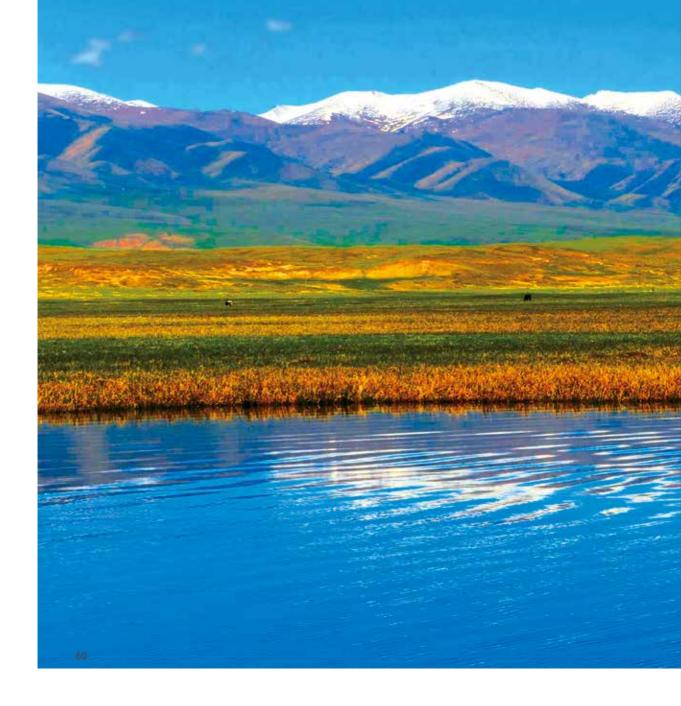
The efforts of the years was paid off. Yufengxiang was captured by Tech-Long with the impressive product performance and the corporate spirit of whole hearted service. Being a strategic partner of Tech-Long, Yufengxiang signed a contract for two 48,000BPH blow-fill-cap water combi lines and one 2,4000BPH blow-fill-cap hotfil with pulp combi line.

Cooperation with Yufengxiang in Hu'nan province inaugurates a bright future for both parties. On the development blueprint of Hu'nan Yufengxiang Food Technology Co., Ltd., we expect greater perspective for cooperation. We look forward to the next hand shake.

Text by: Li Youhua

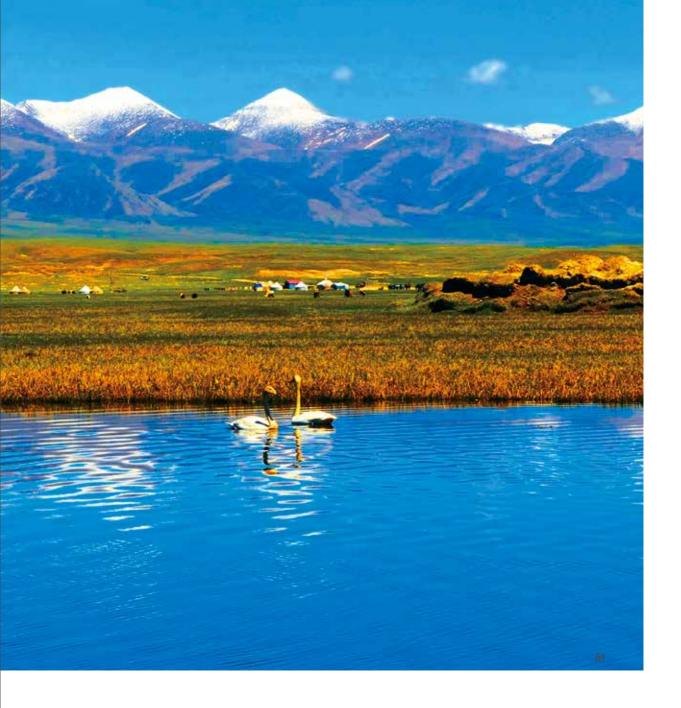
携手共进"饮"在新疆

-- 达意隆与少数民族企业布拉克商贸有限责任公司合作成功签订 1条12000BPH含气类整线生产线



DRINKING IN XINJIANG

-BULAKE(A MINORITY NATIONALITY ENTERPRISE)SIGNED A CONTRACT WITH TECH-LONG FOR A 12000BPH CARBONATED DRINKS PRODUCTION LINE

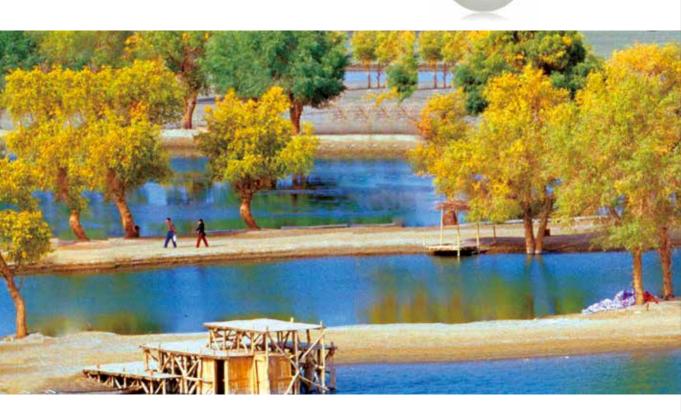


和田明珠 未来之星

随着西部大开发各项政策的落实,新疆投资环境明显改善,新疆市场的迅速崛起,一批具有时代头脑和市场意识的少数民族精英人物乘势创办了自己的企业。少数民族工商企业从无到有,逐渐发展壮大,它们在发展生产力、繁荣市场、方便人民生活、增加财政收入等方面发挥着越来越积极的作用。布拉克商贸有限责任公司便是这批迅猛崛起的少数民族企业中的一员。

众所周知,新疆是瓜果之乡。夏季炎热,冬季寒冷,四季分明,热量丰富,昼夜温差大,降水稀少,蒸发强烈,空气干燥的自然环境使含气饮料深得当地消费者喜爱,碳酸类饮料市场日益繁荣。

扎根本土市场的布拉克商贸有限责任公司深谙市场所需,在早期便开始与内地饮料类生产厂家合作生产含气类饮料产品,随着市场需求的增长,客户旗下的碳酸类饮品跃然成为新疆地区的畅销饮品,得到广大消费者的认可和赞誉,布拉克商贸有限责任公司成为了当地少数民族企业的佼佼者,与此同时,产品的畅销也令运输成本大幅上涨,这势必影响产品长期发展。布拉克商贸有限责任公司果断作出市场判断,决心以和田为生产基地,充分利用瓜果之乡的优势,以本土特产为原材料生产特色碳酸饮料,投资一条12000BPH左右的含气类产品生产线。



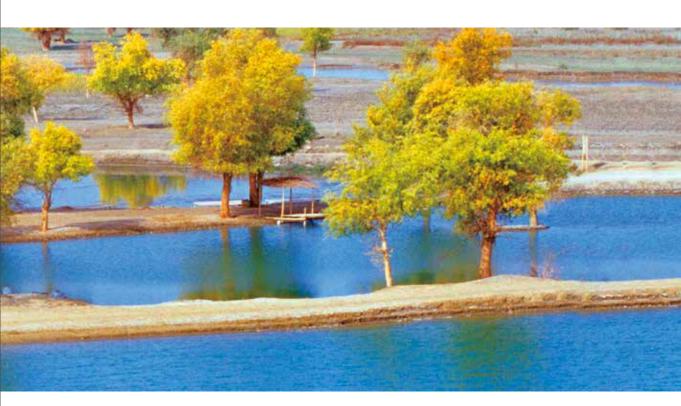


金牌品质&完善培训机制 开启合作之路

如何更好地引进先进技术设备,扩大生产与销售,继续领航市场,克服本土技术人员及生产操作人员稀缺情况成为客户急需解决的问题。作为国内液态包装行业龙头企业——达意隆一开始便引起客户的关注。经过初步的沟通后,客户决定深入工厂对

达意隆进行实地考察。在参观完达意隆整线生产设备制作流程及相关类客户的生产现场后,布拉克公司高度肯定达意隆设备的卓越水准,对达意隆的设备充满信心。而达意隆完善的培训机制与实训基地更是让客户感到非常满意,客户不仅能系统学习相关理论知识还享有在乌鲁木齐新疆宝隆现场实习两个月,通过培训与实操能令客户的技术人员充分学习生产操作技能和相关的管理经验。这有效地帮助了客户克服本土技术人员水平不佳的难题,解决了后顾之忧。最终,双方顺利合作,成功签订了一条12000BPH含气线生产线。

随着项目开展,达意隆将助力推动布拉克公司的产品畅销市场、销往全国,同时本次合作也进一步提升了达意隆在少数民族企业中的知名度与影响力,愿达意隆能携手更多民族企业共创繁荣、共享硕果。





Hetian, Future Star

With the implementation of many preferential policies regarding the development of west China, Xinjiang enjoys a better investment climate now. Seizing the opportunity of rapid market emergence, a generation of entrepreneurial ethnic elites availed themselves of the favorable conditions to set up their own businesses. Industrial and commercial enterprises run by ethnic entrepreneurs started from scratch and developed rapidly, playing active roles in developing productivity, flourishing the market, facilitating people's life and increasing fiscal revenue. Bulake Commerce and Trade Co., Ltd is one of the success story among the ethnic enterprises.

It's known that Xinjiang is home of melons and fruits. It has four distinctive seasons, hot in

summer and cold in winter. Because of its dry natural environment featured by hot weather, notable temperature difference between day and night, scare precipitation and strong evaporation, carbonated drinks are very popular among local consumers, which contributes to the prosperity of the market of carbonated beverage.

As a local company, Bulake knows well what the market needs. It collaborated with inland drink producer to make carbonated drinks very early on. Later its carbonated drinks became the best-selling drinks in the growing market of Xinjiang and were highly appreciated by consumers. Though a strong ethnic performer, Bulake Commerce and Trade Co., Ltd. was put under great pressure of rising transport cost, which would badly impact the sustainable development of best-selling products. At that moment,

Bulake made a decisive move to make Hetian its production base. A 12,000BPH production line for carbonated drink would be a smart option to capitalize on the advantage of local melons and fruits, so that the company could use the local specialties to produce featured carbonated drinks.

Quality and Training Lead to Cooperation

Bulake were confronted with practical problems, such as how to introduce advanced technology and equipment that will increase production and sales and ultimately let the company lead the market, and how to improve the situation in which capable local technicians and operators were hard to find. Tech-Long, one of the leading enterprise in liquid packing industry in China, draw attention of the client at the outset.

After preliminary consultation, the client decided to conduct field survey to know Tech-Long deeper. After visiting the manufacturing flow of production equipment and the plants of other similar clients, Bulake spoke highly

of the outstanding performance of Tech-Long equipment and was quite confident about it.

What's more, the client was more than satisfied about the complete training system, from which they could learn theoretical knowledge, and the training base, where they would have two month apprenticeship in Baolong base, Urumqi, Xinjiang Province. Through training and apprenticeship, technicians would master production procedures and gain managerial experience in this regard. This would eliminate customers concern over underqualified local technicians. Finally, both sides reached an agreement on a 12000BPH production line for carbonated drinks.

As the project proceeds, Tech-Long will contribute to the good sales of Bulake products nationwide. Meanwhile, this cooperation also win fame and influence of Tech-Long among ethnic enterprises. It's hoped that Tech-Long will join hands with more ethnic enterprises to contribute to prosperity and bear more fruits.

Text by: Li Haiping



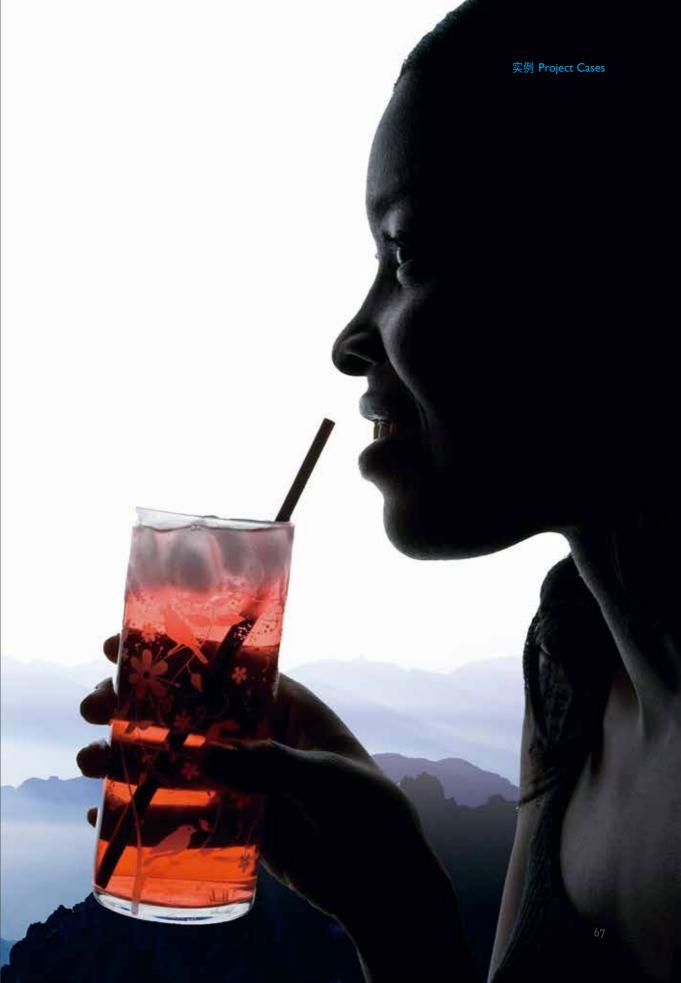
TECH-LONG EXPLORING THE BROAD MARKET IN EAST AFRICA

展翅腾飞在东非辽阔的天空

一达意隆为坦桑尼亚NBCL公司提供1条12000BPH水生产整线设备









坦桑尼亚 NBCL 公司高层与达意隆团队合影留念 Group Photo with NBCL

坦桑尼亚,位于非洲东部、赤道以南,是东非最大的国家,英联邦成员国之一。姆万扎位于坦桑尼亚西北部,是维多利亚湖边的一个主要港口城市,是该国第二大城市,也是东非地区的一个重要的经济中心。姆万扎地势微缓起伏,岛山散布其间,终年气候温暖,日照充足,忙碌的工业港口和喧闹的街道使它成为了一个繁荣、热闹的探索之地。

坦桑尼亚姆万扎可乐公司(NBCL)是姆万扎其中一个可乐代加工厂,主要生产瓶装水和玻璃瓶含气产品。2012年底,NBCL公司有意购买达意隆吹灌旋设备。得知这一信息后,达意隆第一时间前往姆万扎拜访客户,详细了解客户的需求。NBCL企业原先沿用国际灌装设备,对设备要求严格,因此对中国供应商更加谨慎、挑剔。经过初步沟通,NBCL公司决定对达意隆进行实地考察。

2013年伊始,NBCL公司的高层先后参观考察了国内广东可口可乐、深圳达意隆、位于埃塞俄比亚的达意隆非洲分公司和当地Original工厂等生产线,细致严谨的考察让客户对达意隆规模和实力有了充分了解,达意隆在部件品牌、整机精度、整线效率等方面的卓越性能更是大大打消了客户对中国创造水平的顾虑,而超高的性价比更是锦上添花。考察完毕之后,NBCL公司高度肯定了达意隆的研发能力和制造水平达到国际供应商卓越水准,设备品质媲美国际品牌。

2013年9月,NBCL公司相关负责人前往德国慕尼黑,参加世界包装业界最大规模四年一届的慕尼黑国际饮料及液体食品技术博览会(Drinktec)。当NBCL公司一行莅临达意隆展位时,达意隆展出的4000瓶/小时超洁净定量灌装吹灌旋设备采用先进





的电气、材料配置以及前沿的机械设计理念无不让人惊叹,深深震撼了NBCL公司考察团队。综合前期的考察研究,NBCL企业果断决定携手达意隆,当场就落实了12000瓶/小时水生产整线以及空压机等外配设备的订单。

达意隆人秉承一贯专业严谨的工作作风,投入专门的力量参与项目设计,最终出台并落实了让客户倍感满意的产品方案。在工程后期阶段,项目总设计关明先生更是亲自赶往客户现场,为NBCL公司合理规划资源、落实厂房布置,达意隆人的高效与负责获得了客户高度赞赏。目前该项目已经成功运行。

达意隆与NBCL企业的合作,是达意隆在非洲市场上提交的又一份骄人成绩。迄今为止,达意隆为坦桑尼亚客户提供多达六条整线设备并且均成功运转,为客户带来可观稳定收益。本次项目是达意隆继赞比亚可乐、刚果可乐、索马里可乐之后在非洲可口可乐系统内的第四条整线。与NBCL企业的携手合作,有效推动达意隆的品牌传响非洲大地,让更多的非洲客户了解达意隆,信赖达意隆,携手达意隆! 达意隆雄霸非洲,翘楚市场,指日可待!



Guided by the consistent principle of professional and precise, specific experts were assigned to the project design and a satisfying product program was finally confirmed.





Tanzania, as the biggest country in East Africa and the member countries of the British Commonwealth, is located in the east of Africa and the south of equator. Mwanza is a major port city beside the Lake Victoria in northwest Tanzania. It is not only the second largest city in this country, but also an important economic center of East Africa. The terrain is gently wavy with islands and mountains scattered here and there. Weather here is warm with sufficient sunlight all over the year. The busy industrial port and bustling streets make Mwanza to be a flourishing and invigorating city.

Tanzania Mwanza Cola Company (hereinafter referred to as NBCL) is one of the cola subcontractor in Mwanza that mainly products bottled water and glass bottled aerated water. In the end of 2012, learned that NBCL was an intending purchaser for the BFC Combiblock (Blow-Fill-Cap Combiblock), Tech-Long immediately arranged the client visit to Mwanza for their specific requirements. NBCL used to use the international filling equipment; therefore they had strict requirements for equipment, which made them to be cautious and meticulous with Chinese suppliers. After preliminary communication, NBCL planned for a field visit to Tech-Long.

At the beginning of 2013, the senior managements of NBCL visited Guangzhou Coca-Cola, Shenzhen Tech-Long, Tech-Long Africa Branch in Ethiopian and production lines like the local Original Factory. Owing to the comprehensive and precise investigation, the client gained adequate understanding to the business scale and strength of Tech-Long. Moreover, the outstanding performance of component brand, complete machine accuracy, line efficiency and so on dispelled the misgivings of client for China Creation, let alone we had superior cost performance. After the visit, NBCL spoke highly of the research and development ability and manufacture level of Tech-Long, which was equal to the excellent international suppliers with reliable equipment quality.

In September 2013, related principal of NBCL went to Munich of German for the quadrennial Munich International Beverage and Liquid Food Technology Exposition (Drinktec), which is the most large-scale one in world package industry. When they came to the stand of Techlong, the exhibited 40,000 bottles/hour ultra hygienic volumetric BFC Combi-block shocked the NBCL investigation team by its advanced electrical and material configuration as well as the mechanical design philosophy. Combined with the former investigation and study, NBCL decided to cooperate with Tech-Long on the spot and signed the contract of 12,000 bottles/hour

water production line and out sourced equipment like air compressor.

Guided by the consistent principle of professional and precise, specific experts were assigned to the project design and a satisfying product program was finally confirmed. In the late stages of the project, the project general design Guan Ming even went to Mwanza to support the reasonable material planning and plants layout. The client highly appreciated the efficiency and sense of responsibility of Tech-Long. This project is running successfully at present.

The cooperation with NBCL is another achievement made by Tech-Long in the market of Africa. So far, six complete lines are operating successfully and bringing remarkable stable income for client in Tanzania. This is the fourth complete line provided by Tech-Long in Africa Coca-Cola system after Zambia, Congo and Somalia. The brand effect of Tech-Long is expected to be promoted by joining hands with NBCL. Increasingly numbers of Africa clients would know, trust and cooperate with Tech-Long and Tech-Long would accomplish a bright future in Africa market

Text by: Paul Yin

CHINA CREATED WIND BLOWING NORTH AMERICA



"中国创造旋风"劲吹北美大地

将中华品牌的魅力散播到世界,让世界惊艳中国创造的实力是达意隆进军国际市场的动力与目标。随着美国子公司成立以及达意隆北美市场的深入开拓,达意隆的国际梦想已喜见雏形。

事者,生于虑,成于务

此前达意隆的设备主要卖给在美华人工厂,但碍于时差、配件服务、工程服务的问题,导致难以更好地维护客户关系,而且北美地区环绕着众多历史悠久、实力俱佳的设备制造商,市场竞争激烈,当地客户也惯以严谨的高标准高要求著称。考虑到这一发展瓶颈,公司从战略意义出发,在美国设立分公司,负责美洲区的市场开发,售后服务,配件服务等。事实证明达意隆美国分公司以达意隆母公司为强大后盾,凭借卓越出色的产品设备、专业便捷的售后服务,在短短两年间已捷报频传,获得不少美国本土企业的青睐与肯定。

砥砺奋进,行以致远

Ultra Pure Bottled Water公司位于美国佛罗里达坦帕港,是一家本土知名的区域性代工厂。有别于批量代工厂的模式,该客户主要给美国东南部地区的连锁酒店、高尔夫球馆、餐馆、咖啡馆、汽车经销商、舞会、健身俱乐部、银行、律师事务所等企业组织提供专门标签的饮用水。

美国本土分布着数百家类似Ultra Pure Bottled Water Inc这类型的区域性代工厂,市场规模成熟。此类客

户多采用传统设备,目前已陆续进入设备更新时期, 他们不仅关注设备效能与性价比,而且注重设备供应 商的售后服务及价值增创。通过周详的市场考察, Ultra Pure Bottled Water Inc了解到达意隆不仅专注 产品质量与技术创新,而且关注客户的实际应用感 受,能帮助客户提升生产效率和创造最大利润;而达 意隆在北美开设的子公司有效解决了地域时差带来的 配件服务和工程服务的延迟问题,能更加灵活便捷 为客户提供可靠有效的售后支持与价值增创。针对 Ultra Pure Bottled Water Inc的实际所需,达意隆提 供了一套兼具高性价比与卓越性能的设备方案,匹配 完善系统的客户培训以及售后支持。客制化的服务成 功打动了客户,不久Ultra Pure Bottled Water 公司便 与达意隆签订了一条18,000BPH吹灌旋整线项目并在 设备发货前支付全额款项。目前,该设备已经安装调 试完毕,顺利投产。

伴随达意隆美国子公司的成立、本土化服务进程的有效推动,达意隆在美国市场中的"明星效应"日见功效,随后同一地区的客户Azure Water公司也与达意隆签订了一条14400BPH吹灌旋整线项目。越来越多的国际客户肯定达意隆所具备全球供应商的卓越能力,达意隆在北美市场的影响力日趋见长。

目前达意隆已为北美客户成功提供3条水线,5台吹瓶机,9台辣椒酱灌装机,1台含气灌装机,1台贴标机,1条5加仑灌装生产线,愿未来有更多达意隆的设备在这片机遇与挑战并存的沃土上不歇运转,实现中国创造领跑国际市场的宏愿!

The motivation and target of Tech-Long's exploration of the international market is to spread the charm of Chinese brands and prove the amazing strength of China Creation. Along with the establishment of America Subsidiary Corporation and the in-depth exploration of North America market, the international dream of Tech-Long is generally taking shape.

The career is achieved by foresight and efforts

The machines of Tech-Long are mainly sold to the ethnic Chinese factories before, which makes it difficult to maintain the client relationship due to problems caused by time difference, spare parts service, engineering service and so on. Besides, plenty equipment manufacturers with long history and powerful strength turn this place into an intensely competitive market. Also, the local clients are known for their high standards and strict requirements. Considering this development bottleneck, the America Subsidiary Corporation is established for the market development, after-sale service, spare parts service and so forth of America based on the company strategic importance. With the strong support of the parent company of Tech-long, the America Subsidiary Corporation has gained some favor and affirmation of America local corporations in two years by excellent equipment quality and professional and convenient aftersale service

The diligence and efforts of Tech-Long

Ultra Pure Bottled Water Inc., located in the port of Tampa of Florida, America, is a local well-known regional contract manufacturer. Different with other batch pattern of contract manufacturers, this client is engaged in the supply of drinking water with specific label for business organizations like chain hotels, golf gyms, restaurants, cafés, automobile dealers, balls, health clubs, banks and law firms, etc. in southeast America.

The large scale market is mature with hundreds of regional contract manufacturers like Ultra Pure Bottled Water Inc. in America These clients generally begin to replace the traditional equipment. What they value during this process are not only the effectiveness and cost performance of the equipment, but also the after-sales service and added value provided by the equipment supplier. After comprehensive market investigation, Ultra Pure Bottled Water Inc. is impressed by the product quality, technical innovation of Tech-Long. The client believe that Tech-Long pays close attention to the client practical application experience, which could be able to improve the production efficiency and create maximum profit for them. More importantly, the America Subsidiary Corporation of Tech-Long solved the delay in accessories service and engineering service caused by time difference, which makes the efficient after-sales



support and added value to be more flexible and convenient. Aiming at the actual demand of Ultra Pure Bottled Water Inc., Tech-Long provides a set of equipment plan that combine the high cost performance and excellent performance together with complete systematic client train and aftersales support. Impressed by the customized service, Ultra Pure Bottled Water Inc. signed the contract of an 18,000BPH BFC Combi-block Line project with Tech-Long, and made full payment before the equipment delivery before long. At present, the equipment is about to operate after installation and trail run.

Along with the establishment of Tech-Long America Subsidiary Corporation and the effective promotion in localization service process, the "star effect" of Tech-Long in the American market becomes increasingly successful. Later on, the client Azure Water Inc. from the same region signed the contract of a 14400BPH BFC Combi-block Line project with Tech-Long. The outstanding capacity as a global supplier of Tech-Long is confirmed by more and more international clients and the influence in North America market is also expanding.

Tech-Long has contracted 3 water lines, 5 blowing machines, 9 chili sauce filling machines, a CSD filling machine and a 5 gallon filling line with clients of North America. In order to realize the dream of China Creation, increasing number of Tech-Long equipment is expected to operate in this country of both opportunity and challenge.

Text by: Carter Jia

实例 Project Cases

THE BLOSSOMING MARKET OF SAUDI ARABIA



沙特阿拉伯市场势如破竹





翱翔在"幸福大漠"中的雄鹰

沙特阿拉伯位于亚洲西南部,东边是波斯湾,西边是红海,它的邻国有约旦、伊拉克、科威特、阿联酋、阿曼、也门。那里的沙漠面积占沙特阿拉伯全国面积的一半,"沙特"取自于沙特阿拉伯王国的创始人伊本·沙特之名。而在阿拉伯语中,沙特是"幸福"的意思,"阿拉伯"则指"沙漠",意为"幸福的沙漠"。美国《新闻周刊》曾用这样的笔调描绘这个沙特王国发迹的历程:"从一只骆驼鞍囊装下整个国库的财富,到富甲天下的石油王国,沙特用50年成就了一个财富的奇迹。"

早在2002年达意隆就已启动中东市场的开拓,在沙特阿拉伯地区更是收获了Hana、Fayha等一系列当地知名品牌客户的肯定与青睐,市场份额与日俱增,获得越来越多客户的信任与支持,逐渐成为飞翔在"幸福大漠"的傲然雄鹰。

信任源于专业 合作带来共赢

沙特阿拉伯独特的地理环境和气候情况带动了一个庞大而繁荣的饮用水产业。Tania水厂是沙特阿拉伯五加仑桶装水行业发展最快、规模最大的公司之一。Tania水厂是Dossari家族管理的一家企业,2004年在沙特阿拉伯Alkharj市投资建产,奉行"质量第一"原则,致力于为消费者提供优质服务和符合国际标准的瓶装饮用水,满足消费者的需求。

2007年Tania公司第一次选用中国供应商时便与达意隆展开了愉快的合作之旅: 1个14000BPH的PET瓶灌装整线交钥匙项目揭开了双方合作的序幕。随后客户陆续与达意隆购买了1条24000BPH吹灌旋整线、1条36000BPH吹灌旋整线。Tania公司坦言2012年与达意隆签订的36000BPH吹灌旋不加氮轻量瓶水线的卓越性能让他们相当信服达意隆"中国创造"的拔尖实力。当时的项目整线效率达89%以

上,并在轻量化领域实现了有效推广及成功应用, 从而让Tania公司真正节省了生产成本、提高了效益 和市场竞争力。

多次成功合作的经验让Tania公司在2013年设立新项目选择设备供应商时毫不犹豫地再次选择了达意隆!从项目设立到双方拍板合作仅用了短短两个多月,在此期间Tania公司的高层也表示无需再度来达意隆的工厂实地考察,因为达意隆的卓越品质已经从过往多次高标准、高强度的合作中展露得淋漓尽致。虽然项目敲定时间很短暂,但顺利合作的背后则是Tania公司对达意隆专业与品质的深刻认同,客户浓厚的信赖是源于达意隆一贯的卓越与专业。

这个项目刚签订不久,2013年年底,沙特阿拉伯市场又传来捷报。达意隆与沙特阿拉伯Dome公司成功签订一条24000BPH吹灌旋整线。

沙特阿拉伯Dome公司是当地一家享负盛名的饮用水品牌,该客户之前购买的是一条欧洲生产线,价

格高昂,整个项目历时近两年才勉强安装完毕,平均效率仅为50%左右。2013年Dome公司着手筹备一条新生产线,基于以往的设备采购经验,本次的采购越发严格谨慎。经过周全的市场调研,Dome公司最终锁定了达意隆与一家欧洲知名品牌作为考察对象。获知Dome公司的采购意向之后,达意隆立即展开行动,认真筹划方案。经过初步的沟通后,客户决定深入工厂对达意隆进行实地考察。在参观完达意隆整线生产设备制作流程以及可乐,怡宝等知名项目的生产现场后,Dome公司深深被达意隆的实力折服,高度肯定达意隆设备的卓越水准,表示无需再考察其它厂家,决定携手达意隆展开合作之旅,在2013年底与达意隆签订一条24000BPH吹灌旋整线合同。

与Tania公司、Dome公司的紧密合作是达意隆纵横驰骋在沙特阿拉伯市场的又一个成功印记,进一步提升了达意隆在沙特阿拉伯市场乃至中东地区的品牌影响力,随着合作的深入,达意隆品牌的卓越口碑定将响彻这片"幸福大漠"。





Soaring in the "Happiness Desert"

Saudi Arabia is in the southwest Asia, with the Persian Gulf on the east and the Red Sea on the west. Neighboring countries are Jordan, Iraq, Kuwait, United Arab Emirates, Oman and Yemen. "Saudi" comes from the name of Ibn Saud, the founder of the Kingdom of Saudi Arabia. In Arabic, "Saudi" is "happiness" and "Arabia" refers to the "desert", so "Saudi Arabia" means "happy desert". American's News Week once described the history of Saudi Arabia like this: "Saudi Arabia used 50 years to create a wealth miracle from holding the treasury in a camel saddlebag to the richest petroleum kingdom in the world."

Tech-Long started the exploration of Middle East market in early 2002 and is accepted by a numbers of local famous brand clients like Hana, Fayha and so on. With constant growth in market shares as well as trust and support from clients, the business of Tech-Long is gradually soaring in the "happiness desert".

Trust comes from professional and cooperation leads to win-win

The unique geographical environment and climatic conditions of Saudi Arabic facilitate a huge and prosperous industry: the barreled water industry. Tania Water Works is one of the largest and fastest growing companies in the five gallon barreled water industry of Saudi Arabic. Managed by Dossari family, Tania Water Works is established in Alkharj in 2004, which commits itself to offer high-quality service and bottled water in international standard for customers based on the principle of "quality comes first".

In 2007, Tech-Long was chosen for the first cooperation between Tania and Chinese supplier: a 14000BPH PET Filling turnkey line project opened up the pleasant cooperation between both sides. Afterwards, the client purchased a 24000BPH BEC Combi Line and a 36000BPH BFC Combi Line in succession. Tania said that it was the excellent performance of 36000BPH BFC Combi-block without nitrogen light weight bottle line contracted with Tech-Long in 2012 that convinced them for the outstanding "China Creation" strength of Tech-Long. The efficiency of the project integrated line reached 89% and achieved the effective promotion and successful application in light weight field, which saved cost, improved the benefit and market competitiveness for Tania

Attributing to the successful cooperation experiences, Tania chose Tech-Long again as the equipment supplier for its new project in





2013. It took only two months from initiation to cooperation. Senior managers of Tania even showed that there is no need for a field visit to Tech-Long's factory, since the outstanding quality has been proved by the previous high standard and high strength cooperation. Although the time of settlement for the project is short, it was guaranteed by the client's trust in Tech-Long's professional and quality, which came from the consistent excellent performance.

Dome Water is a local drinking water brand with great reputation in Sandi. The former production line is bought in Europe at a high price; however the average efficiency is only 50% after nearly two years of installation. In 2013, Dome Company planned for a new production line. Because of the previous purchase experience, this time Dome was cautious and strict towards suppliers. Through comprehensive market investigation, Tech-Long and another famous European brand were selected as the potential partner. As soon as receiving the purchase intention of Dome Company, Tech-Long began the planning and

preparation immediately. After preliminary communication, the client went for field visit of Tech-Long's factories. Dome Company was deeply impressed by the strength of Tech-Long after visiting the manufacturing flow of Integrated Line and the production field of famous project as Coca-Cola and C'est Bon. The outstanding performance of Tech-Long's equipment was highly appreciated so that Dome Company established the cooperative relationship with Tech-Long without other investigation. In the end of 2013, the contract of a 24000BPH BFC Combi Line was signed.

The close cooperation with Tania and Dome is another successful achievement in the exploration of Saudi Arabic market, which could further promote the brand influence of Tech-Long in Saudi Arabic and even the whole Middle East. With in-depth advancing business cooperation, the excellent reputation of Tech-Long is expected to soaring in the "happiness desert".

Text by: Calvin Liao



乘风破浪在印度古域 SAILING IN THE INDIA MARKET

—达意隆与Jayanti公司成功签订1条24000BPH含气吹灌旋整线 合同

—TECH-LONG SIGNED A CONTRACT OF 24000BPH CSD BFC COMBILLINE WITH JAYANTI COLD STORAGE LTD. INDIA



Jayanti 公司与达意隆双方项目团队的亲密合影 Tech-Long Group Photo with Senior Management Team of Jayanti

印度位于亚洲南部,是南亚次大陆最大的国家,世界上发展最快的国家之一,工业形成较为完整的体系,服务业发展迅速,是全球软件、金融等服务业重要出口国,但通货膨胀压力仍旧较大。印度全境炎热,大部分属于热带季风气候,造就了印度人在饮水方面没有喝热饮的习惯,喜欢饮用冰汽水、冰咖啡等饮品。继2013年达意隆与印度南部Megha公司成功携手启动18000含气吹灌旋整线项目后,印度本土许多品牌客户开始将目光注视在达意隆身上,Jayanti则是当地其中一间优质客户。

达意隆早在2011年便拜访Jayanti公司,至今双方友好交往已有三年。Jayanti公司坐落于德里周边的卫星城Alwar市,是本地中端品牌的代表者。该公司拥有4条饮料生产线,更是暨可口可乐、百事可乐之后第一个本土品牌拥有24000玻璃瓶灌装线的生产商。Jayanti公司所出产的多款含气产品、果汁产品和纯净水畅销周边州市,赢得广大消费者认同,年营业额超2亿人民币,是印度领先的饮料

品牌之一。Jayanti公司产业涉猎广泛,除了主营饮料生产外,还有膨化食品和印刷厂的业务,家族式产业根基深厚。

为更好开展新线筹备工作,Jayanti公司的高层相当重视调研考察工作,在2013年先后两次到访达意隆。在参观完达意隆各事业部车间生产情况和增城信联客户示范性工厂后,Jayanti公司的CEO对达意隆饮料包装设备的技术与丰富的整线经验给予了高度评价,为双方日后的合作奠定了坚实基础。印度市场饮料生产旺季(3月至7月)刚结束,Jayanti公司的CEO便率领顾问与技术团队一行5人再次造访达意隆,正式展开24000含气整线项目谈判。达意隆凭着迪拜、孟买分公司全面专业的本土化服务体系,方便快捷的本土工程服务和备件销售条件等优势,一举击败欧洲设备与国内品牌的竞争,成功与Jayanti公司签订24000含气整线项目。

市场风云变幻莫测,2013年5月初,迫于外资撤离与印度国内经济增长不景气大环境的影响,印度卢比兑美元汇率持续走低。在合同签订后的第一周,印度金融市场经历一场外汇风暴,印度卢比一度贬值超过15%。贬值风波直接导致客户需比原合同总金额多支付15%的款项,这无疑给正准备启动的项目一记重击:客户不得不暂停项目,采取观望态度。

面对突如其来的难题,达意隆的项目小组积极应对,多次拜访客户,主动商讨解决方案,并在备件、工程和付款多方面给予了客户最实际的支持,合力度过贬值风暴。得益于印度政府采取积极救市措施扭转卢比贬值颓势,在9月中旬,调控终获成效,卢比贬值得到控制。Jayanti公司有感于双方合作的真挚诚意和互惠互利共赢精神,虽然相比签订合同时卢比贬值程度还有7%,但依然决定按照合同原金额不变的情况下执行合同。

相信经过此次汇率风波的袭击,Jayanti公司与达意隆将缔结出更为坚固的友谊,在双方的共同努力下,项目定能取得完满成功,印度饮料市场将迎来风雨后的灿烂骄阳!

India is in the South Asia and is the biggest country in the South Asia Sub-Continent as well as one of the fastest developing countries in the world. As an important exporter of software and services like finance, India has relatively complete industry system and fast developing service industry, but it also has high inflationary pressures. The tropical monsoon climate makes India to be a burning hot country, and this is why people there are fond of drinks like ice soda water and ice coffee rather than hot drinks. After the project of 18000 CSD BFC Combi Line with



Jayanti 公司当场交付项目诚意金 Group Photo with Jayanti for the hand shake payment

Megha Company of south India, more India local brands turn their attention to Tech-Long, and Jayanti is one of them.

The friendly exchanges between Tech-Long and Jayanti Company have lasted for three years since Tech-long's visit in 2011. Jayanti Company is in the satellite city Alwar near Delhi. As the representative of local middle market brand, this company owns 4 beverage production lines and it is the first local brand that has 24000 glass bottled filling line besides Coca-Cola and Pepsi. Its aerated water, fruit juice and purified water are in active demand among the neighboring states and cities with widespread customer acceptance and bring in annual sales volume of more than 200 billion RMB for Jayanti and makes it to be one of the leading beverage brands in India. Jayanti is a family-owned industry with deep root and extensive businesses as puffed food and printing house except the main business of beverage production.

In order to plan for the preparatory works for the new line, senior managers of Jayanti Company



attached much importance to investigation and visited Tech-Long for twice in 2013. After visited the production status of Tech-Long's division workshops and the demonstrative factory of our client Xinlian, the CEO of Jayanti spoke highly of Tech-Long's technology of beverage packaging equipment and rich integrated line experiences, which lied a solid foundation for the future cooperation. Right after the peak period of India beverage production (March to July), the CEO of Jayanti along with a technical team of 5 person came to Tech-Long for the negotiation of 24,000 BPH CSD Line project. Supported by comprehensive and professional localization service system in Dubai and Bombay Subsidiary Corporations and the strength in convenient local engineering service and spare part sales, Tech-Long successfully defeated the rivals of European and domestic brand and signed the contract of 24,000 BPH CSD Line project with Jayanti.

Unfortunately, the market is in a state of constant change. In early May of 2013, influenced by the foreign investment withdrawal and the long depression of India domestic economy, the Indian rupee continued to decline against the US dollar. A week after the contract was signed, a foreign currency crisis swept over the India financial market and the Indian rupee once devalued more than 15%. Due to this devaluation crisis, the client had to pay 15% more than the original contract amount, which became a big shock for the initiating project and the client was forced to suspend the project with wait-and-see attitude.

Confronted with this sudden change, the project team of Tech-Long adopted affirmative measures to get through this crisis, including



visiting clients many times, discussion solutions actively, offering the most practical support on spare parts, engineering and payment and so on. Benefited from the active recovery measures of stopping the depreciation by India government, the crisis was under control in the middle of September. Impressed by the sincerity and mutual benefit of both parties, Jayanti Company decided to carry out the contract in the original amount, though Indian rupee still devalued for 7%.

After this experience of exchange rate crisis, it is clear that the friendship between Jayanti and Tech-Long would become stronger. No doubt that this project would achieve great success under the joint effort of both sides, and the beverage market of India would recovery and develop after the storm.

Text by: Wayne Liu



技术与加工 PROCESSING

高速贴标机双螺杆机构的设计与应用

摘要: 高速贴标机进瓶螺杆设计成三段式,引进特殊的三次函数保证容器在螺杆上的稳定运动,并让容器在螺杆上平移的同时产生自转(申请专利),对方形,矩形及椭圆等异形容器高速有效分瓶。本文以48,000BPH机型对方瓶贴标应用,给出用ProE绘制的螺杆螺旋线及推导过程,并结合ProE三维造型给出双排螺杆的3D造型。

关键词: 高速贴标机; 进瓶螺杆; 异形容器; 双排螺杆; ProE

0 引言

高速回转式贴标机是当前灌装生产线上的重要组成之一。目前为止,国产贴标机仍然无法替代进口机,其中主要原因是目前国内贴标机关键零部件的设计不能彻底解决当前高速贴标的需求。进瓶分瓶机构是贴标机关键部件之一,直接影响生产线的生产效率,研究其关键零部件的设计与应用具有重要的意义。

1分瓶螺杆的应用

贴标机(以盘带标标站为例)的工艺过程一般分为:送标、切标、取标、上胶、贴标、刷服标签,这样就完成了盘带标标站的贴标动作。为了保证容器定时定距的传到包装工位,这里就用到了进瓶分瓶装置,主要包括进瓶螺杆、止瓶星轮、拨瓶星轮、中心导板等部件,如图1所示。

进瓶螺杆把传送链道送来的容器导入螺杆槽里,容器在螺杆的作用下被隔开并按照固定的距离传送到拨瓶星轮与中心导板构成的导轨上,这样就可以实现依次定距的供送容器。进瓶螺杆每转一圈便会

导出一个(单线螺旋)容器并送入拨瓶星轮中,所以在整个过程中螺杆为定距分瓶起到了至关重要的作用。为了达到定时定距供给螺杆必须满足一下几个条件:

- (1)、瓶子连续的导入螺杆槽;
- (2) 、容器在螺杆上运动需平稳;
- (3) 、与星轮平稳衔接;
- (4) 、容器在螺杆槽中能顺利的隔开。

2 传统螺杆应用状况

目前包装行业常用的分瓶螺杆如图2所示;该类型螺杆螺距是按照三次函数的变化规律进行设计,保证容器在螺杆的作用下获得连续的速度及加速度,但这类螺杆存在以下不足:

传统的螺旋分瓶机构仅靠一条螺旋分瓶,稳定性差, 易倒瓶卡瓶;

进瓶时容器对螺杆的摩擦力全部加载到螺杆上致 使螺杆头部磨损严重,影响分瓶性能,缩短使用 周期; 方形、矩形、椭圆等异形容器在传输过程中之间 紧靠,且大面积挤压,使传统螺杆不能有效的分 瓶,导致螺杆挤瓶(损坏容器)、卡瓶,大大降低 了生产效率。

3 双排螺杆的设计分析

假设贴标机的额定贴标速度,拨瓶星轮齿数,求得 星轮转速为:

$$n_b = \frac{n}{z_b} = \frac{48,000}{12 \times 3,600} = 1.111 r/s$$

拨 瓶 星 轮 直 径 为 480 m m , 其 节 距 为 P_b =125.66mm; 为满足贴标机的工况,将进瓶螺杆分三段式变螺距螺杆[2],取容器截面的长度为e。

3.1 进瓶螺杆初始段

螺杆起始段,为了防止瓶子倾倒挤瓶,应选用较大的螺杆内径和较小的螺旋角。螺杆起始段的螺距取 $S_{n1}=e+\Delta$

式中∆: 两相邻容器间的平均间隙(与容器的加工精度 有关,一般取2mm)

为了让瓶子从链板上平稳的过渡到螺杆中,起始端的螺旋线的圈数 i_{01} (一般取1.5);

该段的螺杆长度

 $H_{01}=1.5S_{01}$

3.2 螺杆变加速段

螺杆变加速段引进一个特殊三次函数驱动,且保证 该三次函数一阶连续并可导,二阶连续并可导,其 基本形式如下

 $S_{02}=h_0+a^*\Delta^2(3-2\Delta) (x_0< x< x_1)$

h₀—螺杆初始段螺距;

h₁-螺杆末段的螺距;

x —螺杆圈数。

图1 灌装工艺流程图

■1不干胶标站

■2 预切标标站

■3盘带标标站

■4冷胶标站

■5 拔瓶星轮

6进瓶螺旋

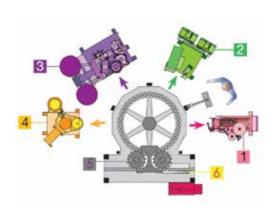
图2 常规螺杆

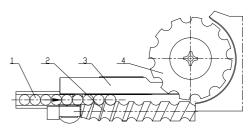
1.容器

2.分屏螺杆

3.止瓶星轮

4.拔瓶星轮





对该段函数积分有

$$\int_{X_0}^{X_1} h_0 + (h_1 - h_0) \left(\frac{x - x_0}{x_1 - x_0} \right)^2 (3 - 2 \frac{x - x_0}{x_1 - x_0}) dx$$

求得变加速段的螺杆长度为

$$H_{02} = \frac{(h_1 - h_0)(x - x_0)}{2}$$

3.3 进瓶螺杆末段

对现有的单线螺杆,螺杆每转一圈需为拨瓶星轮提供一个瓶子,为了保证瓶子与星轮平稳衔接,螺杆最后一个螺距 S_{03} = P_{b} ,为避免制造误差带来的不稳定性,设计时一般保证最后1.1个螺距时螺距开始等速,故该段螺杆长度为 H_{03} =1.1 S_{03}

故三段式变螺距螺杆的总长为L=H₀₁+H₀₂+H₀₃

3.4 瓶子在螺杆上的自转

方形、矩形、椭圆等异形容器在传输过程中是之间紧靠,为了保证有效分瓶,螺杆须提供动力使瓶子在螺杆上平移的同时并自转(最佳推进角度为25°<Θ≤45°,取30°)让出分瓶间隙使瓶子分开,为了平稳自转,驱动瓶子的自转加速度按正弦函数变化,其基本形式为a=bsinωt+n

上式对时间积分得到瓶子自转速度

$$V = \int abt = -\frac{b}{w} coswt + nt + c$$

上式对时间积分得到瓶子自转角度有

$$a = \int v dt = -\frac{b}{w^2} \sin w t + \frac{1}{2} nt^2 + ct + d$$

根据初始条件有

n=0, d=0, c=
$$\frac{\pi}{18}$$
, b= $\frac{\pi^2}{27}$

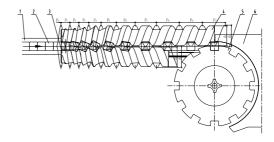
得到瓶子自转角度函数有

$$a = \frac{\pi}{18}t - \frac{1}{12}sin - \frac{2}{3}\pi t(0 \le t \le 3)$$

从而满足瓶子在螺旋传送过程中开始前3个螺距以顺时针从0逐渐旋转至30°,接下来3个螺距以逆时针逐渐转回至0,如图3所示。

图3 双排螺杆

- 1. 链板
- 2. 瓶子
- 3. 短螺杆
- 4. 长螺杆
- 5. 拔瓶星轮
- 6. 导板



4 双排螺杆的造型

双排螺杆通过3D软件仿真计算螺旋槽上的点,绘制螺旋线,然后利用ProE按螺旋线做尺寸阵列[3],根据实体仿真得到瓶子的运动曲线入图4、图5所示。

图4 容器位移曲线

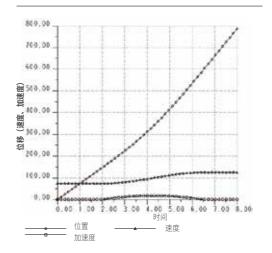
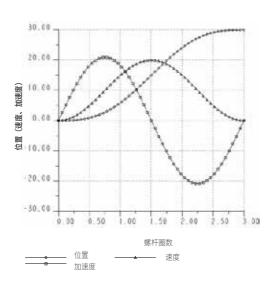


图5 容器自转曲线



按照上述仿真结果绘制螺旋模型如图6所示[4],实物模型如图7所示:

图6螺杆三维模型

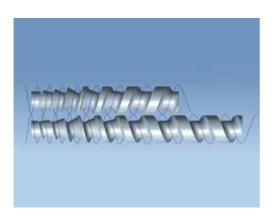
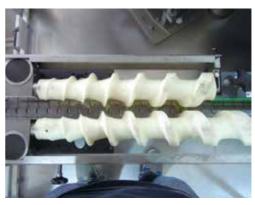


图7螺杆实物截



5 结论

贴标机的关键部件一直没有合理的设计理论和机构参数,因而严重影响到整个高速贴标机的开发。本文针对以48,000 BPH的高速回转式贴标机在非圆形容器的核心机构进瓶螺杆进行了设计和计算,并采用ProE对机构仿真,根据螺杆的实际应用得到高精度的螺旋线,保证了应用的可行性,这对开发设计更高产量和更多该系列的高精度贴标机机构具有意义。

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THE DESIGN AND APPLICATION OF DOUBLE SCREW MECHANISM

ABSTRACT: THE INFEEDING (BOTTLES) SCREW ROD OF HIGH SPEED LABELING MACHINE IS DESIGNED TO HAVE THREE PARTS, AND THE SPECIAL THREE FUNCTIONS ARE INTRODUCED TO ENSURE THE STEADY MOVEMENT OF CONTAINERS ON THE SCREW AND TRANSLATION MOVEMENT OF CONTAINERS ON THE SCREW AND AUTO-ROTATION (PATENT). IT CAN SEPARATE SUCH IRREGULAR BOTTLES AS SQUARE ONES, RECTANGLE ONES AND OVAL ONES IN HIGH SPEED. TECH-LONG USES 48000 BPH MODEL TO HAVE THE LABELING APPLICATION TO THE SQUARE BOTTLES, GIVES OUT THE HELIX OF CYLINDRICAL WORM AND DEDUCING PROCESS DRAWN FROM PROE AND 3D MODELLING OF THE DOUBLE ROW SCREW BY PROE 3D MODELING.

KEY WORDS: HIGH SPEED LABELING MACHINE; INFEEDING SCREW; THE DOUBLE ROW SCREW; PROE



0 Introduction

The high speed rotary labeling machine is one of the important components of the current filling production line. Up to date, labeling machines made in China still cannot replace the ones introduced from other countries, and the outstanding reason is that the design of key parts in current domestic labeling machines cannot completely solve the current high-speed labeling requirements. The function of bottle infeeding and bottle separating is one of the key components of labeling machines, which directly affected the efficiency of production line. Therefore, a study of the design and application of key parts is of great importance.

1 The application of bottle separating screw

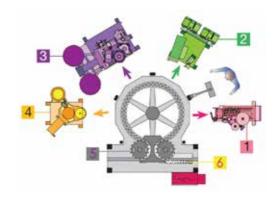
The usual work of labeling machines (here take the tape labeling machines as an example) is divided into: conveying labels, cutting labels, picking up labels, gluing, labeling and tagging. This is the labeling process of labeling machine with tape. In order to ensure that the containers are conveyed to the packing station at a specific time and space, the device of bottle infeeding and bottle separating is used, such main components as the bottle feeding screw, the bottle stop star wheel, the bottle dispersing star wheel, the central guiding plate. See it in figure 1.

The bottle infeeding screw transfers containers into the screw slot with the aid of conveyor chain, and containers are separated with specific

space by the screw and then sent to the guiding rail made from the bottle dispersing star wheel and the central guiding plate. By doing this, containers can be conveyed at a specific time and space. Each rotation of the bottle feeding screw will let out one (single-wire helix) container and convey it to the bottle dispersing star wheel. Therefore, the screw plays a vital role in conveying containers at a specific time and space. The following conditions shall be satisfied before containers can be conveyed at a specific time and space: (1) containers shall be conveyed to the screw slot continuously; (2), containers shall be conveyed stably on the screw1; (3) containers shall come to the star wheels smoothly; (4) containers can be well separated in the screw slot

Figure 1 The structure of Labeler





2 The application status of traditional screws

The bottle separating screw used by the current packaging industry is shown in figure 2; The pitch of this type of screws are designed in accordance with the change rule of three functions, which ensures that containers can received continuous speed and acceleration under the influence of the screw. However, this type of screws has the following deficiencies:

The traditional mechanism of the bottle separating screw only relies on one screw to separate bottles, which is not stable and prone to topple or lock bottles;

The friction from the bottle infeeding all goes to the screw rod which made the head of the screw worn down badly, impacted the bottle separating and shorten the life cycle of the machine;
The too much closeness of such irregular containers as square, rectangle and oval bottles during the conveyance and large-scale extrusion decreased the efficiency of screws in bottle separating, led the screw to squeeze bottles (damaging containers) and lock containers, which greatly reduced the production efficiency.

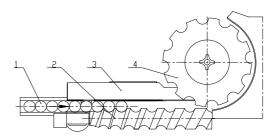
Figure 2 standard screw

1. Vessel

2. Bottle Dividing Screw

3. Bottle Stop Star-Wheel

4.Bottle Sorting Star-Wheel



3 The design analysis of the double row screw

Set the rated speed of the labeling machine is , the gear number of the bottle dispersing star wheel is , then the speed of the wheel is obtained as follows:

$$n_b = \frac{n}{z_b} = \frac{48,000}{12 \times 3,600} = 1.111 r/s$$

The diameter of the bottle dispersing star wheel is 480 mm, and its pitch is P_b =125.66mm To satisfy the operation condition of the labeling machine, the bottle infeeding screw is changed into the variable pitch screw in three parts^[2], and the section length of containers is .

3.1 The first part of the bottle infeeding screw

In order to prevent toppling and squeezing bottles, the first part of the bottle infeeding screw should adopt the larger inside diameter of screws and the smaller helical angle. The pitch of the first part of the screw is S_{01} = $e+\Delta$

In which, means the average interval between the two adjacent containers (related to the machining precision of containers, average 2 mm)

To enable bottles on the conveyor coming into the screw stably, the coil number of helix at the starting part is i_{01} (average 1.5); The length of the screw in the part H_{01} =1.5S₀₁

3.2 The accelerating part of the screw

The accelerating part of the screw is driven by the introduction of a special three function driver, and the three functions are ensured to have the first order continuous and differentiable and the second order continuous and differentiable. Its basic form is as follows:

$$S_{02} = h_0 + a^* \Delta^2 (3-2\Delta) \ (x_0 < x < x_1)$$
In which $a = h_1 - h_0$, $\Delta = \frac{x - x_0}{x_1 - x_0}$

 h_0 is the screw pitch at the first part; $h_1 \ \text{is the screw pitch at the last part;} \\ x \ \text{is the coil number of the screw} \ .$ The integration of the function at this part is

$$\int_{X_0}^{X_1} h_0 + (h1 - h_0) \left(\frac{x - x_0}{x_1 - x_0} \right)^2 (3 - 2 \frac{x - x_0}{x_1 - x_0}) dx$$

The screw length at the accelerating part is

$$H_{02} = \frac{(h_1 - h_0)(x - x_0)}{2}$$

3.3 The last part of the bottle infeeding screw

For single flighted screw, each rotation of the screw needs to provide one bottle for the bottle dispersing star wheel. To ensure the smooth join of bottle with this wheel, the screw length of the last part is S_{03} = P_b . To avoid the instability caused by manufacturing errors, the last 1.1 screw length at the last part of the screw come to have the constant pitch, so the screw length of this part is H_{03} =1.1 S_{03}

So the total length of the variable pitch screw L is $L=H_{01}+H_{02}+H_{03}$

3.4 The auto-rotation of bottles on the screw

Such irregular contains as square, rectangle and oval shaped bottles are close to each other during the transfer. To ensure effective bottle separating, the screw shall provide pressure which made bottles not only move stably on the screw but rotate automatically (the best moving angle is $25^{\circ} < \Theta \le 45^{\circ}$, take 30°) to make room for separating bottles. To ensure the stable autorotation, the acceleration for the auto-rotation changes with the sinusoidal function, and its basic form is a=bsin ω t+n

The time integration of the above form can get the auto-rotation speed of bottles

$$V = \int abt = -\frac{b}{w} \cos wt + nt + c$$

The time integration of the above form can get the auto-rotation angle of bottles

$$a = \int vdt = -\frac{b}{w^2} sinwt + \frac{1}{2} nt^2 + ct + d$$

According to the initial conditions

n=0, d=0, c=
$$\frac{\pi}{18}$$
, b= $\frac{\pi^2}{27}$

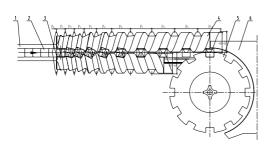
Get the function of the rotation angle of bottles

$$a = \frac{\pi}{18}t - \frac{1}{12}sin - \frac{2}{3}\pi t(0 \le t \le 3)$$

Accordingly conditions for conveying bottles by the screw are satisfied and the first three screw pitch rotate clockwise from 0 to 30 ° before the conveyance, and then the next three screw pitch gradually rotate counterclockwise to zero. As shown in Figure 3.

Figure 3 double row screw

- 1. Chain 2. Bottle
- 3. Short Screw 4. Long Screw
- 5. Bottle Sorting Star-Wheel 6. Guide Plate



4 The modeling of double row screw

3D software can emulate and calculate points in the screw slot of the double row screw, draw the

spiral, then use ProE to make the size array in line with the helix[3]. The motion curve of bottles can be obtained with the simulation, as shown in Figure 4 and in Figure 5.

Figure 4 The translation curve of containers

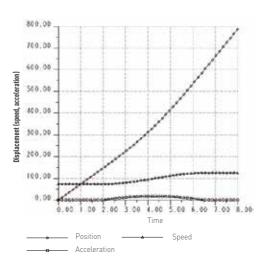
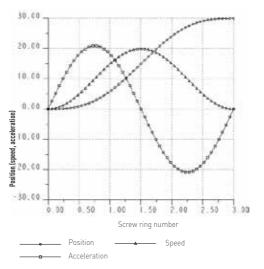


Figure 5 The auto-rotation curve of containers



The model of the screw can be drawn according to the abovementioned simulation, as shown in Figure 6[4], and the mock-up is shown is Figure 7:

Figure 6 3D model of the screw

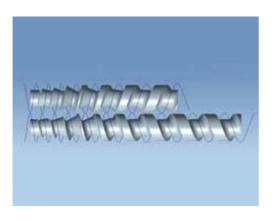
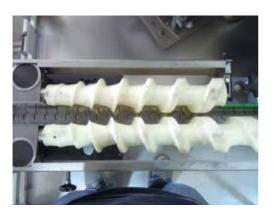


Figure 7 The sectional drawing of the real screw



5 Conclusion

There has been no reasonable design theory and system parameter for key components of the labeling machine, so the development of the high-speed labeling machine is gravely hindered. Tech-long designs and calculates the bottle infeeding screw used for the irregular containers of the 48000 BPH high-speed rotary labeling machine, adopts ProE to simulate the system and obtains highly precise helix out from the actual application of screws, which ensures the feasibility of this design and bear great significance to the development and design of more productive labeling machines of high precision.

Text by: Xiang Wang

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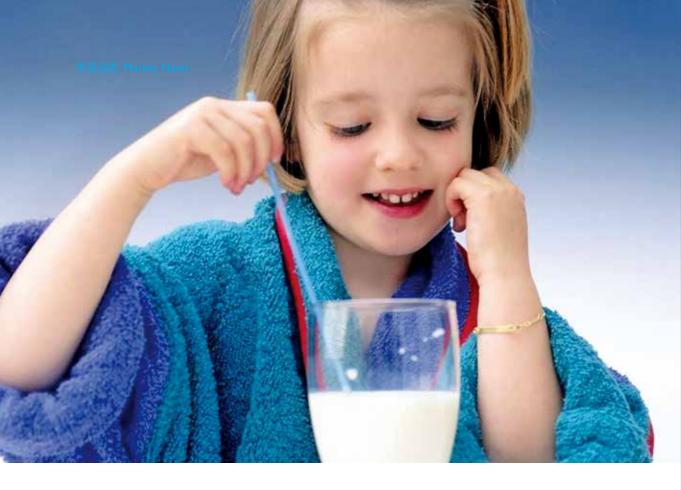
K 3



BEVERAGE CONSUMPTION SITUATION OF AUSTRALIA

NEW ZEALAND

澳大利亚和新西兰饮品形势



编者按:

大洋洲远离欧亚大陆,人口较 少。澳大利亚和新西兰是大洋洲 两个最主要的国家,占有该洲绝 大部分国土和人口。了解两个国 家的业界形势将有助于我们更加 全面认识全球的业界形势。

一、澳大利亚

澳大利亚国土是一个发达的资本主义国家,领土面 积近800万平方公里,位居全球第六。澳大利亚不 仅国土辽阔,且物产丰富,是南半球经济最发达的 国家,全球第十二大经济体,全球第四大农产品出 口国,也是多种矿产出口量全球第一的国家。澳大 利亚大陆总面积为 769 万平方公里, 是世界上最大 的岛屿, 也是最小的大陆, 东部山地,中部平原, 西 部高原。全国最高峰科修斯科山海拨2230米,在靠 海处是狭窄的海滩缓坡,缓斜向西,渐成平原。沿 海地区到处是宽阔的沙滩和葱翠的草木,那里的地 形千姿百态: 在悉尼市西面有蓝山山脉的悬崖峭壁, 在布里斯本北面有葛拉思豪斯山脉高大、优美而历 经侵蚀的火山颈,而在阿德雷德市西面的南海岸则 是一片平坦的原野。澳大利亚拥有人口大约2300万, 大多是近两个世纪从200多个国家来到这里的移民的 后裔, 其中超过80%的居民居住在离海岸线100公 里。表:澳大利亚饮品消费量

葡萄酒在澳大利亚的生产可追溯到18世纪,起初,仅限于当地消费。后来设拉子(Shiraz)、墨尔乐(Merlot)、格连纳什(Grenache)、黑皮诺(Pinot noir)、赤霞珠(Cabernet Sauvignon)等越来越好的葡萄品种引入,确保了澳大利亚葡萄酒被欧洲市场认可。而今,澳大利亚拥有超过60个指定葡萄酒产地,凭借其屡获殊荣的葡萄酒在全球享有盛誉。其中南澳大利亚的芭萝莎谷和麦克拉伦谷拥有世上最古老的设拉子葡萄园,西澳大利亚的玛格丽特河地区拥有屡次获奖的长相思。每年,人们可以参加在悉尼附近的猎人谷(Hunter Valley)举办的美酒活动,或在墨尔本旁边的亚拉河谷尽情品尝最有代表性的霞多丽、黑比诺和气泡酒。

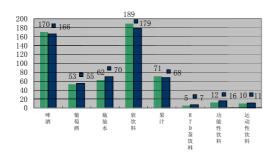
澳大利亚人喜欢任何形式的聚会,最大的当属庆祝 澳大利亚1月26日国庆。这一天,各年龄段的人白眼 饮酒,其起源于乡村的海滩、公园和花园的聚会。 在圣诞节,他们聚焦在悉尼的邦迪海滩,穿着泳 衣,戴着圣诞老人的帽子。"啤酒罐赛舟会"值得 一提,每年北部城市达尔文的居民会用啤酒和软饮 料易拉罐制成船只,有的船体长达12米,他们驾船 在海面上以"面粉炸弹"和玩具水枪互攻。

澳大利亚人爱喝啤酒,人均年消费80升,估计未来一段时间每年将降低大约2%。降幅较大的还有软饮料和果汁。不过软饮料在饮料消费者中仍然保持着绝对的领先地位。相比之下,包装水的消费呈明显增长,但其起点较低。普泰就相对来说或多或少能保持较高的消费水平。RTD茶饮料(瓶装茶饮料)、功能性饮料和运动性饮料做的很好,这是因为澳大利亚气候相对来说全年气温较高,而澳大利亚人酷爱运动,需求市场比例不小。

澳大利亚饮品消费量

2012 **2**016

单位: 万千升



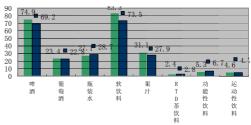
2012年~2016年平均增长率

啤酒-0.6%, 葡萄酒0.7%, 瓶装水3.2%, 软饮料-1.4%, 果汁-1.0%, RTD茶饮料6.1%, 功能性饮料7.6%, 运动性饮料2.6%

澳大利亚饮品人均消费量

2012 **2**016

单位:升



2012年~2016年平均增长率

啤酒-2.0%,葡萄酒-0.6%,瓶装水1.4%,软饮料-3.1%,果汁-2.7%,RTD茶饮料3.9%,功能性饮料6.0%,运动性饮料0.5%

二、新西兰

新西兰,位于澳大利亚东部越2000公里,是太平洋 西南部的岛屿国家。两大岛屿以库克海峡分隔,南 岛邻近南极洲,北岛与斐济及汤加相望。首都惠灵 顿,最大的城市是奥克兰。

新西兰经济蓬勃,是一个现代、繁荣的发达国家。 二十年来,新西兰经济成功地从农业为主,转型为 具有国际竞争力的工业化自由市场经济。新西兰环 境优美、气候宜人,森林资源丰富,地表景观富变 化,国民素质极高,生活水平也相当高。

新西兰的主要葡萄栽种地是在干燥、阳光普照的东在这里,下降趋势是可以感受舒助地区,其中包括吉斯伯恩(Gisbolne)、霍克湾桃饮料、RTD饮料比澳大利亚(Hawke'sBay)和马尔堡(Mal'lbolough)三个酒、瓶装水和果汁饮料的数字(主要地区。其它主要地区还有奥克兰(Auckland)、饮料人均消费量高于澳大利亚。

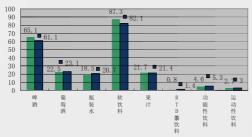
马丁堡(Martinbolough)、尼尔森(Nelson)和中奥塔哥(CentralOtago)。这些地区位于纬度36至45度之间,纵长1600公里。类似于北半球从波尔多(纬度在44至46度之间)到南边的西班牙。在这样一个气候与土质都十分合适的地区栽种葡萄,结果就发展出种种不同的风格。新西兰的品酒观光越来越受重视,业者常鼓励游客沿着"经典新西兰美酒公路"(KlassicNewZealandWineTlail)探访酒庄,参与活动。几个主要产酒区每年都会举办美酒与美食节,而且大多数酒庄开放游客品酒。不少大型酒庄还兼经营餐厅与咖啡馆,并提供零售和网上销售。

但,新西兰的人均啤酒消费量比澳大利亚低10%,在这里,下降趋势是可以感受到的。整体上,泥猴桃饮料、RTD饮料比澳大利亚少,这可以通过葡萄酒、瓶装水和果汁饮料的数字体现,新西兰仅有软饮料人均消费量高于澳大利亚。

新西兰饮品人均消费量

■2012 **■**2016

单位: 升



2012年~2016年平均增长率

啤酒-1.6%,葡萄酒0.7%,瓶装水2.8%,软饮料-1.5%,果汁-3.0%,RTD茶饮料15.0%,功能性饮料3.6%,运动性饮料2.7%





I. Australia

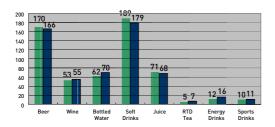
Australia is an advanced capitalist country with the territory of 8 million square kilometers, which ranks the sixth in the world. Enjoying the large territory and abundant natural resources, Australia is the most developed country in the Southern Hemisphere, the twelfth largest economic entity, the forth agricultural products exporter and the biggest mineral exporter in the world. The Australia continent is 7.96 million square kilometers that makes it to be the biggest island in the world and the smallest continent as well. Generally speaking, mountain land is on its east side, plain is in the middle and plateau is on the west. The highest peak of the country is Mount Kosciuszko with an elevation of 2230 meters. Near the coast lies the narrow beach and the gentle slope turns into flat lands to the west. Wide sandy beaches and luxuriantly greenery are frequently seen in the coastal region. The terrain varies fantasticality, such as the cliff of the Blue Mountain on the west of Sydney, tall and graceful crater of the Glass House Mountain on the north of Brisbane and the flat open country on the south coast of west Adelaide. The population of Australia is about 23 million and most of them are the descendants of the immigrants from over 200 countries during the last two centuries, among which 80% are living 100 miles away from the coast line.

The production of wine in Australia could trace back to the 18th century. Originally the wine are sold locally, then are gradually accepted by the European market after the more and more better grape varieties are introduced to Australia such as Shiraz, Merlot, Grenache, Pinot Noir, Cabernet

Beverage Consumption of Australia

■2012 **■**2016

Unit:10 Million Liters



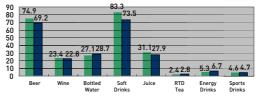
Average Increase rate from 2012-2016

Beer-0.6% Wine 0.7% Bottled Water3.2% Soft Drink-1.4% Fruit Juice -1.0% RTD Tea Drink 6.1% Energy Drink 7.6% Sports Drink 2.6%

Beverage Consumption per Capita of Australia

■2012 **■**2016

Unit: Liter



Average Increase rate from 2012-2016

Beer-2.0% Wine -0.6% Bottled Water1.4% Soft Drink-3.1% Fruit Juice -2.7% RTD Tea Drink 3.9% Energy Drink 6.0% Sports Drink 0.5%



Sauvignon and so forth. At present, Australia has more than 60 appointed wine production areas and enjoys a great reputation for a lot of awardwinning wines. The oldest Shiraz vineyard is in the Barossa Valley and McLaren Vale of south central Australia and the repeated awarded Sauvignon Blanc is in the Margaret River or west Australia. Every year, people have the opportunity to attend the wine event hosted in Hunter Valley near Sydney, or enjoy the most representative Chardonnay, Pinot Noir and sparkling wine in the Yarra Valley near Melbourne.

Australians are fond of all kinds of parties, among which the biggest one is the Australia National Day on the January 26, when people of all ages would gather together drinking wines and having parties on the beaches, in the parks and gardens. In Christmas, they would celebrate on the Bondi Beach of Sydney, wearing swimsuits and Santa hats. What worth mentioning is the "Beer Can Regatta" that

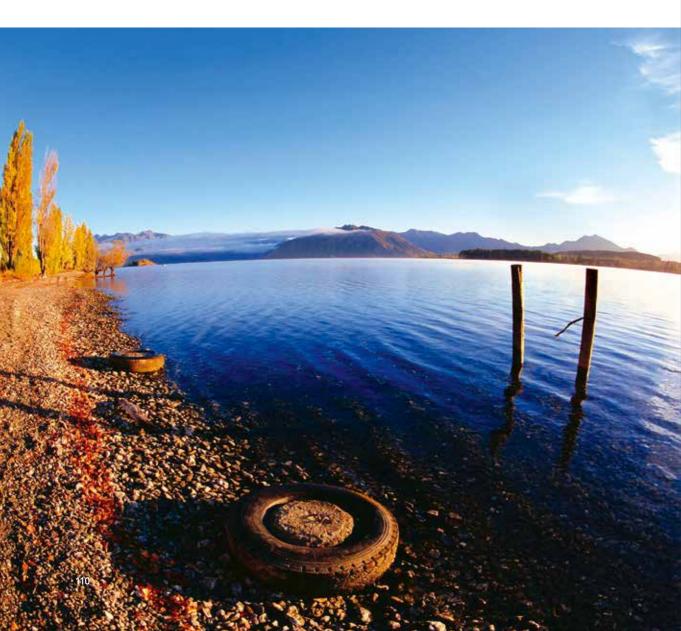
hosted in the north city Darwin annually, when people would build a boat by beer bottles and soft drink cans (some of them are as long as 12 meters), sail it to the sea and attack each other with "flour bombs" and water guns.

Australians are keen on beer and the annual consumption per capita is 80 liters, which is estimated to decline by about 2% a year for a period of time in the future. In addition, other beverages with bigger drop are soft drink and fruit juice, but the leading position of soft drink in beverage consumption remains unchanged. Comparatively speaking, the consumption of bottled water is increasing obviously since it has low beginning and relatively high consumption level. The favorable sales performance of RTD tea drink (bottled tea drink), functional beverage and sport drink comes from the big market demand, since temperature of Australia is relatively high and Australians love sports.

II. New Zealand

New Zealand, 2000 kilometers away from east Australia, is an island country in the southwest Pacific Ocean. The two islands of New Zealand are separated by Cook Strait with the south island near Antarctica and the north island near Fiji and Tonga. The capital is Wellington and the biggest city is Auckland.

New Zealand is a modern and developed country with economic prosperity. It successfully transformed from agricultural oriented economy to an industrial freed oriented market with international competitiveness in recent twenty years. This country has beautiful environment, pleasant climate, rich forest resources as well as





would host wine and gourmet festival every year to welcome tourists to the chateaus to taste the wine. Plenty chateaus also operate restaurants and cafés and provide retail and on-line purchase.

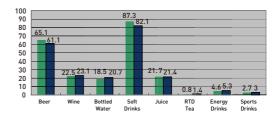
However, the beer consumption per capita is 10% less than Australia and the downtrend is noticeable. Overall, the consumption of kiwi fruit juice and RTD drink are less than Australia, which could be proved by the figures of wine, bottled water and fruit juice. Only soft drink consumption per capita in New Zealand is higher than Australia.

various landscapes. Moreover, the New Zealand citizens are well-educated and enjoy high living standards.

The vineyards of New Zealand are mainly in the east area with dry land and sufficient sunlight, including three main areas as Gisborne, Hawke Bay and Marlborough and other areas like Auckland, Martin borough, Nelson and Central Otago. Similar with Bordeaux (latitude 44 to 46 degree) to Spain in the Northern Hemisphere, the latitude of these areas are 36 to 45 degree and covering 1600 square kilometers. Various styles of wines are produced because of the suitable climate and soil. The wine tourism is increasingly valued in in New Zealand and tourists are encouraged to participate in activities like visiting the chateaus along the Classic New Zealand Wine Trail. The main wine-producing areas

Beverage Consumption per Capita of New Zealand

■2012 ■2016 Unit: Liter



Average Increase rate from 2012-2016

Beer-1.6% Wine 0.7% Bottled Water2.8% Soft Drink-1.5% Fruit Juice -3.0% RTD Tea Drink 15% Energy Drink 3.6% Sports Drink 2.7%



悠游青海 大美无疆 (摄影者: 江少远 达意隆营销总部)

Travelling in Qinghai idly, Enjoying infinite beauty (Photographer: Shaoyuan Jiang Sales And Marketing Headquarters)



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