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疫与情

2020年初,全民抗疫拉开序幕。 举国上下,众志成城, 万众一心,共抗疫情, 肩负起中华儿女的神圣使命, 彰显着自强不息的中国力量。

从恐慌到焦虑,从焦虑到平和, 这世上除了健康,还有什么称得上是万难。 一个健康的企业,可以淬炼更加坚毅的品格; 一个健康的国家,可以容纳更多纯善的灵魂。

企业的发展,细数皆是艰辛。 即便没有遭遇这场疫情, 每个企业都时刻面临着危机; 每个企业都是在荆棘丛生中探寻出路; 每个企业都是在迈过了一道道坎坷后砥砺成长。

阔别三年,《聚焦达意隆》重磅回归, 为达意隆集团续写动情故事和辉煌篇章。

Epidemic and Love

At the beginning of 2020, the whole people began to fight the epidemic. The whole country is united, Unite as one to fight the epidemic, Shoulder the sacred mission of the Chinese people, It shows the Chinese power of self-improvement.

From panic to anxiety, from anxiety to peace, Nothing in this world is more difficult than health. A healthy enterprise can temper a more resolute character;

A healthy country can accommodate more pure and good souls.

The development of enterprises is hard. Even without this epidemic, Every enterprise is always facing crisis; Every enterprise is seeking a way out in thorns; Every enterprise is honing its growth after going through ups and downs.

After three years of absence, Focus Tech-Long returned heavily, Write a brilliant story for Tech-Long Group.



SPECIAL特殊报导 REPORT

6

病毒无国界 同心抗疫情



VIRUSES HAVE NO BORDERS FIGHT THE EPIDEMIC TOGETHER

自2020年1月湖北武汉爆发新冠肺炎疫情以来,这 场没有硝烟的战争始终牵动着亿万人的心。由于需 求缺口大、春节假期加工进度慢,运输难度大,口 罩成为最紧缺的物资之一。2月3日,工信部相关负 责人在国新办发布会上表示:目前N95口罩和医用 外科口罩,仍然是一个"紧平衡"的状态,要按需、 按功能使用,一般防护不要挤占医用资源。

在防疫医用物资紧缺的危急时刻,董事长张颂明与 常务副总经理张崇明年前便紧急调动各方资源应对 疫情,并得到各界朋友和各地客户的大力支持。

疫情发生后,达意隆印度分公司总经理Jinesh带 头从印度采购25000个N95口罩支援总部同事。同 时,印度Dailee Fresh、印度Podaran客户老板Issac, Suresh及其团队联合捐助10000个N95口罩。此外, 达意隆在泰国清迈的客户以及马来西亚F&N客户, 得知我国急需大量N95口罩后,联系上当地经营3M 口罩代理商的朋友,提供8000箱共计16万个口罩。 春节期间,我们的员工代理及客户努力奔走,用尽 各种方法尝试将物资送入国内,甚至有些员工表示



愿意去当地人肉运输。这些举动,让我们看见希望 与奉献的大爱。我们坚信,大破大立之后定会否极 泰来。

此外,塞内加尔客户在生产车间录下视频,鼓励武 汉,鼓励中国。印尼客户Jayamas传来视频,为武 汉加油,为中国加油,希望中国能尽早战胜新冠肺 炎疫情……诸如此类,不胜枚举。大爱无疆,世界 同心,他们与达意隆一同发力、心系中国!

"山川异域,风月同天。"疫情发生后,邻邦日本 给予我国诸多帮助。病毒无国界之分,达意隆也时 刻关心着国内外客户,得知日本新冠肺炎形势紧张 情况后,立刻联系当地客户,为他们捐赠防疫物资。

中国和非洲虽远隔千山万水,但中非友谊历久弥坚,关 系紧密。考虑到非洲的防疫物资购买困难,我司迅 速行动,捐赠防疫物资给埃塞俄比亚驻广州领事馆。 2020年的春节,注定是不平凡的。但我们相信,冬 天总会过去,春天必将来到。当下,我们能做的就 是心怀希望之火,奉献绵薄之力。战"疫"当前, 无人停歇,达意隆与中国同在,世界与中国同在! 武汉加油! 湖北加油!!中国必胜!!!

Since the outbreak of COVID-19 in Wuhan, Hubei Province in January 2020, this war without gunsmoke has always affected the hearts of hundreds of millions of people.Due to the large demand gap, slow processing progress during the Spring Festival holiday and difficult transportation, masks have become one of the most scarce materials.On February 3, the relevant person in charge of the Ministry of industry and information technology said at the press conference of the state information office: at present, N95 masks and medical surgical masks are still in a "tight balance" state. They should be used according to needs and functions. General protection should not occupy medical resources.

At the critical moment of the shortage of epidemic prevention medical materials, Zhang Songming, chairman of Guangzhou Tech-Long Packaging Machinery Co.,Ltd., urgently mobilized resources from all parties to deal with the epidemic before the new year, and received the strong support of friends from all walks of life and customers from all over the world.

After the outbreak, jinesh, general manager of Tech-Long India branch, took the lead in purchasing 25000 N95 masks from India to support colleagues in the headquarters. Meanwhile, India dailee fresh, India podaran customer boss Issac, Suresh and their team jointly donated 10000 N95 masks.In addition, after learning that China was in urgent need of a large number of N95 masks, Tech-Long's customers in Chiang Mai, Thailand and F & n customers in Malaysia contacted friends who were local 3M mask agents and provided 8000 cases of 160000 masks in total.During the Spring Festival, our staff agents and customers worked hard and tried every means to send materials to China. Some employees even expressed their willingness to transport materials locally. These actions let us see the great love of hope and dedication. We firmly believe that after a big break and a big stand, the situation will turn for the better.

In addition, Senegalese customers recorded videos in the production workshop to encourage Wuhan and China. Jayamas, an Indonesian customer, sent a video to cheer for Wuhan and China, hoping that China can overcome the COVID-19 epidemic as soon as possible... And so on. Great love is boundless and the world is united. They work together with Tech-Long and care about China!

"Mountains and rivers are exotic, and the wind and moon are the same day." After the outbreak of the epidemic, neighboring Japan has given China a lot of help. The virus knows no borders. Tech-Long also cares about customers at home and abroad all the time. After learning about the tense situation of COVID-19 in Japan, we immediately contacted local customers and donated epidemic prevention materials for them.

Although China and Africa are separated by thousands of mountains and rivers, China Africa friendship has been strong and close. Considering the difficulties in purchasing epidemic prevention materials in Africa, Tech-Long acted quickly and donated epidemic prevention materials to the Ethiopian consulate in Guangzhou.

The Spring Festival in 2020 is destined to be extraordinary. But we believe that winter will pass and spring will come. At present, what we can do is to cherish the fire of hope and contribute our modest efforts. At present, no one stops fighting the "epidemic". Tech-Long is with China and the world is with China! Wuhan come on! Hubei come on!! China will win!!!



心系员工 关爱社会 -达意隆捐赠防疫物资助力复产复工



2020年伊始,一场突如其来的疫情冲散了新年的喜 悦。人们纷纷戴上口罩,拉开距离,全国各地的口罩, 消毒液等防疫用品紧缺,各行各业的复工日期一推再 推。广州达意隆包装机械股份有限公司作为行业内的 龙头企业,积极响应复工复产号召,在公司的带领下, 认真部署,制定应急预案,实现有序复工。

1月23日,公司发布紧急通知,号召湖北同事安心休 假,切勿匆忙、盲目返岗,同时加紧口罩、体温测试仪 器等防疫物资的采购。

1月26日,集团董事长张颂明发表对全体湖北籍同 事的公开信,向分布在湖北各地的达意隆人示以新 春问候,并表示公司是所有湖北达意降人的坚强后盾。 同日,副总经理张崇明组建"点亮湖北"微信群,随

时与湖北同事保持联络,分享防疫信息。

1月27日,公司第一时间响应国家政策,向全体同事 发出延迟返工通知。

1月30日,考虑到疫区防控资源紧张,大部分湖北同 事买不到口罩,公司支援的口罩从广州紧急发出,以 最快的速度寄到湖北同事家中。春节期间,公司总部 开始执行消毒措施,所有进出公司人员均需接受体温 检测。

2月份,我司组织了一场爱心捐赠活动,将大批 N95 型口罩、医用口罩、抗菌免洗洗手液及酒精喷雾等 物资有计划地安全送达至各学校、供应商、合作伙伴、 医院和公共事业单位。

CARING FOR EMPLOYEES AND THE SOCIETY

-Tech-Long Donated Epidemic Prevention Materials to Help Restore Production and Work



疫情当前,常务副总经理张崇明亲身参与到每个环 节中, 了解各学校和医院的需求后, 积极筹集防疫 物资,严格按照广东省卫健委的疫情防护标准安排 运送工作。

此次捐赠活动,我们联系了9所学校(广州市玉鸣小学、 广州市东荟城小学、广州市沧联小学、广州市东晖小 增城香江中学、广东外语外贸大学增城实验学校、广 州增城凤凰城小学),助力学校复工复学。

在这场战"疫"中,我们看到了中国医生的才能与担 当,他们是当之无愧的超级英雄。广州市第八人民医 院是广州市新冠肺炎定点收治医院之一,也是收治确 诊患者最多的医院。了解情况后,我们迅速联系该院,企业,用实际行动传递正能量。

填补防疫物资缺口,保障医务人员安全。

除了心系学校师生、医护人员,达意隆还为有防护用 品需求的供应商提供免费支持,并给国内的二三十家 客户赠送了物资,共渡难关。

我们在复工的第一时间,为行政机关、事业单位送上 学、广州华南师大附属小学、广州番禺华南碧桂园小学、 口罩、消毒液等物资,感谢国家机关始终站在抗"疫" 最前线,为企业的发展和人民的健康保驾护航。

> 从达意隆发出的每一份"礼物",都是发自内心的真 挚祝福。达意降饮水思源,感谢客户与合作伙伴的支 持与信任。病毒无情人有情。我司在努力发展经济的 同时,也致力于做一个有良心、有社会责任感的阳光



At the beginning of 2020, a sudden epidemic dispersed the joy of the new year. People put on masks one after another to keep a distance. There is a shortage of masks, disinfectants and other epidemic prevention supplies all over the country, and the resumption date of all walks of life is pushed again and again. As a leading enterprise in the industry, Guangzhou Tech-Long Packaging Machinery Co., Ltd. actively responded to the call for resumption of work and production. Under the leadership of the company, it carefully deployed and formulated emergency plans to realize orderly resumption of work.

On January 23, the company issued an emergency notice calling on colleagues in Hubei to take a rest assured vacation, not to return to their posts in a hurry and blindly, and to step up the procurement of epidemic prevention materials such as masks and temperature measuring instruments.

On January 26, Zhang Songming, chairman of the group, issued an open letter to all Hubei colleagues, expressing Spring Festival greetings to the people of Tech-Long in Hubei, and saying that the company is the strong backing of all the people of Tech-Long in Hubei. On the same day, Zhang Chongming, deputy general manager, set up a wechat group "lighting up Hubei" to keep in touch with colleagues in Hubei at any time and share epidemic prevention information.

On January 27, the company responded to the national policy for the first time and issued a notice of delayed rework to all colleagues.

On January 30, considering the shortage of prevention and control resources in the epidemic area, most colleagues in Hubei couldn't buy masks. The masks supported by the company were urgently sent from Guangzhou and sent to the homes of colleagues in Hubei as soon as possible. During the Spring Festival, the headquarters of the company began to implement disinfection measures, and all personnel entering and leaving the company were required to undergo temperature testing.

In February, our company organized a love donation activity to deliver a large number of N95 masks, medical masks, antibacterial hand sanitizer, alcohol spray and other materials to schools, suppliers, partners, hospitals and public utilities in a planned and safe manner.

At present, Zhang Chongming, executive deputy





general manager, personally participated in each link. After understanding the needs of schools and hospitals, he actively raised epidemic prevention materials and arranged transportation in strict accordance with the epidemic prevention standards of Guangdong Provincial Health Commission.

In this donation activity, we contacted 9 schools (Guangzhou Yuming primary school, Guangzhou donghuicheng primary school, Guangzhou canglian primary school, Guangzhou Donghui primary school, Guangzhou South China Normal University Affiliated Primary School, Guangzhou Panyu South China Country Garden Primary School, Zengcheng Xiangjiang middle school, Zengcheng Experimental School of Guangdong University of Foreign Studies and trade and Guangzhou Zengcheng Phoenix primary school) to help the school return to work and school.

In this war, we have seen the talents and responsibilities of Chinese doctors. They are well deserved superheroes. The Eighth People's Hospital of Guangzhou is one of the designated hospitals of COVID-19 in Guangzhou, and it is also the hospital with the largest number of confirmed patients. After understanding the situation, we quickly contacted the hospital to fill the gap of epidemic prevention materials and ensure the safety of medical personnel.

In addition to caring for school teachers and students and medical staff, Tech-Long also provided free support to suppliers with protective equipment needs, and presented materials to 20 or 30 customers in China to tide over the difficulties.

As soon as we resumed work, we sent masks, disinfectants and other materials to administrative organs and institutions, and thanked the state organs for always standing at the forefront of the fight against the "epidemic" and escorting the development of enterprises and the health of the people.

Every "gift" from Tech-Long is a sincere blessing from the heart. Tech-Long thinks of the source after drinking water, and thanks customers and partners for their support and trust. Virus has no lover. While striving to develop the economy, our company is also committed to being a sunshine enterprise with conscience and social responsibility, and transmitting positive energy with practical actions.

命运与共 战胜疫情 达意隆捐赠制氧机驰援印度



在全球抗争新冠疫情形势迎来曙光之际,印度疫 情却不容乐观。几万,十几万,二十几万,每一次报道, 每一个数字,都牵动着亿万人的心。最让人感到担 忧的,是数字背后千百万病人的治疗问题。印度正 面临医疗系统崩溃、医疗用品严重不足的困境,而 氧气紧缺是印度需要解决的头等大事。

达意隆深深牵挂着印度疫情的发展。在如此庞大 的新冠病人基数之下,印度现有的制氧机和呼吸机 远不能满足需求。达意隆一直密切关注着全球疫 情态势,特别是海外员工和合作伙伴的生命安全。 为缓解制氧机不足的情况,印度子公司当即决定 采购制氧机运往印度,这是继去年全球医用口罩 捐赠行动后,我们发起的新一场国际抗疫救援行 动。达意隆印度子公司联合印度客户 Dailee fresh、 Podaran, 通过印度慈善组织和 Podaran 集团控 股的种子基金对印度当地的 10 家医院进行了分批

目前,所捐赠的制氧机已全部投入到新冠病人的治 疗中,为印度缓解了医用氧气缺乏的燃眉之急,也 为等待救治的新冠病人们带来了希望。

在这场新冠肺炎疫情的严峻斗争中,中国为世界防 疫树立了典范。我们深知疫情传播速度之快、感染 范围之广、防控难度之大。达意隆愿尽己所能,与 印度人民一起,携手并进,共克时艰。这是一场没 有硝烟的战争,但却是一场有温度的"战疫"。

As the global fight against COVID-19 looms, the outbreak in India is not optimistic. Tens of thousands, hundreds of thousands, more than two hundred thousand, every report, every number, all affect the hearts of hundreds of millions of people. The most worrying problem is the treatment of the millions of patients 捐赠,共计 40 台越神 YSOCS-5G 5L 医用制氧机。 behind the numbers. India is facing a collapse

SHARING DESTINY AND OVERCOMING THE **EPIDEMIC**

-Tech-Long Donated Oxygen Generator to India

of its health system and a serious shortage of medical supplies, and the oxygen shortage is a top priority to address.

Tech-Long is deeply concerned about the development of the epidemic in India. With such a large COVID-19 patient base, India's existing oxygen generators and ventilators are far from meeting the demand. Tech-Long has been closely monitoring the global epidemic situation, especially for the lives of overseas employees and partners. In order to alleviate the shortage of oxygen machines, the Indian subsidiary immediately decided to purchase oxygen machines to India, which is a new international rescue operation launched after the global medical mask donation operation last year. Tech-Long India subsidiary, in conjunction with Indian clients Dailee fresh, Podaran, donated in batches to 10 local hospitals in India, totaling 40 YSOCS-5G 5L medical oxygen machines, through Indian Charity and a seed fund controlled by Podaran Group.

At present, all the donated oxygen machines have been put into the treatment of COVID-19 patients, alleviating the urgent need of medical oxygen shortage in India and bringing hope to the COVID-19 patients waiting for treatment. In the grim fight against COVID-19, China has set an example for the world in epidemic



prevention. We are well aware of the rapid spread of the epidemic, the wide scope of infection and the difficulty of prevention and control. He is willing to do his best to work with the people of India to overcome the difficulties. This is a war without smoke of gunpowder, but it is a "war epidemic" with temperature.

Li Jiasheng / International Department

阳光爱心捐赠

SUNSHINE LOVE DONATION WARM RURAL CAMPUS





记达意隆2020年云南弥勒助学行

on Tech-Long's 2020 Maitreya student trip in Yunnan





2020年11月3日,达意隆爱心团成员在常务副总 洛那小学开展爱心捐赠活动。

我们给两所学校捐赠了被套、饭盒、牛奶、洗衣液等 生活和学习用品,为大栗小学改善淋浴环境,给洛 那小学搭建食堂,让孩子们感受到冬日的温暖。

大栗小学的学生几乎都住在学校宿舍。因学校地理 地就餐。 位置较高,没有装自来水,生活用水主要靠收集雨水, 生只能烧水洗澡。在了解学校的情况后,达意隆组 烧水洗澡已成为过去式。

洛那小学身处大山、山路崎岖、信息闭塞,条件比较 经理张崇明的带领下,历经近7小时的路程抵达云南。 落后。学校没有食堂,学生只能在操场上就餐,晴天 次日,爱心团前往云南弥勒市东山镇的大栗小学和 顶着太阳吃饭,雨天只能呆在教室吃饭,给学生的 生活和学习带来诸多不便,也给学校的教学秩序带 来一定麻烦。特别是在酷暑天,操场受到烈日的炙 烤温度剧增,对学生健康也存在潜在威胁。

> 得知学校困境后,我们安排人员分工合作,为洛那 小学搭建钢棚架,建造饭堂,让学生们能安心舒适

共有三个水窖储水供给。校内没有沐浴热水器,师 达意隆送去的这份暖心馈赠,好似冬日里的一缕暖 阳,照亮孩子们的追梦之路。多年来,我司爱心助学 织人员建造淋浴间,改善师生的淋浴环境。今年冬天,团队先后走进乡村、走入学校,为学生带去求学和 成长的希望。

On November 3,2020, members of Tech-Long Love Group arrived in Yunnan after nearly seven hours, led by Zhang Chongming, executive deputy general manager. The next day, the charity group went to Dali Primary School and Luonan Primary School in Dongshan Town, Maitreya City, Yunnan Province to carry out charity donation activities.

We donated living and school supplies like quilt covers, lunch boxes, milk and laundry detergent to the two schools to improve the shower environment for Dali Primary School and set up a canteen for Luonan Primary School, so that the children could feel the warmth of winter.





Almost all of the students at Dali Primary School live in the school dormitories. Due to the high geographical location of the school, there is no tap water, domestic water mainly depends on rainwater collection, there are three water cellar storage supply. There is no bath water heater in the school, so teachers and students can only boil water to take a bath.After learning about the situation of the school, Dallas organized staff to build shower rooms to improve the shower environment for teachers and students. This winter, boiling water and bathing is a thing of the past.

under the sun, rainy days can only stay in the classroom to eat, which brings a lot of The warm gift sent by Tech-Long is like a ray inconvenience to students' life and study, but also brings some trouble to the teaching order the playground is heated by the scorching sun, which is also a potential threat to the health of students.

Primary School, so that students could have a

of warm sun in winter, illuminating the way for children to pursue their dreams. Over the of the school. Especially in the hot summer day, years, our loving student team has entered the countryside and schools, bringing students the hope of study and growth.

喜迎建党百年 公益助学再出发

WELCOME THE CENTENARY OF THE FOUNDING OF THE PARTY AND START AGAIN WITH PUBLIC WELFARE EDUCATION



2021年6月7日,在建党100周年之际,我们再次 来到云南,为弥勒市东山镇补坎小学、龙细小学捐 献物资。到达目的地后,爱心团将每一套课桌椅、每 一份学习和生活用品稳妥地交到孩子们手中。

本次捐助的两所小学,共计有267名贫困学生,在 爱心团的帮助下,每位学生都换上了新的床单被套 和课桌椅,孩子们能够在焕然一新的环境下认真学 习、愉快生活。从孩子们欣喜的眼神里,我们读出了 感激。

用关爱点亮学子的希望,以善心向党百年诞辰献礼。 达意隆集团作为液态包装行业的领先企业,肩负着 重大的社会责任。多年来,达意隆公益团队远赴各 地捐资助学,以实际行动践行公益初心。

在未来,我司将继续进行公益活动,凝聚更多社会 力量,将爱心长久传递,用爱点亮希望,做到心系学子, 情系社会,用实际行动履行企业使命。

On June 7,2021, on the occasion of the 100th anniversary of the founding of the Party, we came to Yunnan province again to donate materials to Bukan Primary School and Longxi Primary School in Dongshan Town, Maitreya City. After arriving at the destination, the love



group will hand each set of desks and chairs, every study and daily necessities to the children.

There are 267 students with a total of poor students. With the help of the love group, each student has put into new sheets and desks and chairs, so that the children can study hard and live a happy life in a new environment. From the children's delighted eyes, we read out the gratitude.

Light up the hope of students with care, with kindness to the party's centennial birthday gift. As a leading enterprise in the liquid packaging industry, Tech-Long Group shoulders a significant social responsibility. Over the years, the Tech-Long public welfare team has gone to various places to donate money to help students, and practice the original aspiration of public welfare with practical actions.

In the future, our company will continue to carry out public welfare activities, gather more social forces, pass on love for a long time, light up hope with love, love the students, the society, and fulfill the enterprise mission with practical actions.



优化网站扩展渠道 ——达意隆开启全网营销时代



2020年,新冠肺炎爆发,全球经济发展受到巨大影响,传统的线下营销逐渐向互联网营销模式转移。 展望2020年,为适应液态包装行业持续扩大发展之势,达意隆聚合互联网经济的优势资源,推广全新 互联网+营销策略,为液态包装行业提供全面解决 方案。

目前,短视频以其短、平、快的特点,覆盖着数以亿 计的网络用户,获得了各大媒体平台的青睐。我们 根据市场变化,积极调整营销模式,开通国内主流 短视频平台抖音、微视的官方账号,在新的平台实 现更广的传播,让客户群体和各界朋友全面认识达 意隆。

为更好地服务全球客户,我司将对英文网站进行全

面改版升级。全新的英文网站将更加优化外商的 浏览体验,为国际合作伙伴建立与达意隆互联互 通的良好平台。此外,我们开通了国外知名社交网 站Facebook, YouTube, Twitter等官方账号,以进 一步拓展国际传播渠道,让更多客户了解我们的产 品,将公司推向更广的平台,加快资源共享和融合 发展。

达意隆致力于产品创新和服务提升,积攒了多年的 项目经验,能够帮助客户实现高效率,高柔性的液 态包装工业的生产。现在,我司正式开启全网营销 时代,希望与更多国内外主流社交媒体平台合作, 开展更加多样化的宣传活动和涉及相关专业知识的 科普活动。日后,我们将进一步为全球客户提升服 务体验,做精做优市场服务。

OPTIMIZE THE WEBSITE TO EXPAND CHANNELS

- Tech-Long opened the whole Internet marketing era

In 2020, The outbreak of COVID-19 has greatly affected global economic development, which makes the traditional offline marketing is gradually shifting to the Internet marketing model. Looking forward to 2020, in order to adapt to the trend of continuous expansion and development of liquid packaging industry, Tech-Long integrates the advantage resources of Internet economy, promotes the new Internet + marketing strategy, to provide the comprehensive solutions for liquid packaging industry.

At present, short video with its characteristics of 'short', 'acceptant', 'fast', covering hundreds of millions of network users, has won the favor of major media platforms. According to the market changes, we have actively adjusted the marketing model, opened the official accounts of the mainstream short video platforms in China, such as Tik Tok and Weishi, etc, and achieved wider dissemination on the new platform, to make customers and friends from all walks of life have a comprehensive understanding of Tech-Long.

In order to better serve global customers, our English website will be completely improved and upgraded. The new English website will optimize the browsing experience for foreign investors and establish a good platform for international partners to connect with Tech-Long. In addition, we have opened official accounts on well-



known foreign social networking sites such as Facebook, YouTube and Twitter to further expand international communication channels, and let more customers know about our products, promote our company to a wider platform, and speed up resource sharing and integrating to achieve long-term development.

Through committing to product innovation and service improvement, Tech-Long has accumulated many years of project experience to help customers achieve the liquid packaging industry production with high efficiency and high flexibility. Now, our company officially opens the whole Internet marketing era, and hopes to cooperate with more mainstream social media platforms at home and abroad to carry out more diversified publicity activities and popular science activities involving relevant professional knowledge. In the future, we will further improve the service quality for global customers, and provide better market services.

达意隆与广州联通签署5G+智能制 造战略合作协议



2020年8月21日下午,达意隆与广州联通就"5G+智能制造工业互联网实验基地"正式签署战略合作协议。广东联通副总经理孔祥斌、广东联通企业战略客户部总经理邢燕、广州联通副总经理周剑明、广州达意隆董事长张颂明、副董事长陈钢等领导出席签约仪式。

仪式开始前,董事长张颂明首先对孔总一行的到来 表示热烈欢迎。参观车间时,孔总一行驻足观看了 在正在装配的吹灌旋一体机和其他生产线的运行过 程,对以达意隆为代表的行业龙头企业专注装备制 造的做法以及取得的成果给予了高度评价。 参观后,双方进行了充分的交流。董事长张颂明简 要介绍了达意隆以及整个行业的发展概况。他表 示,近年来,工业、互联网、信息技术的深度融合正 在为行业带来巨大的机遇和挑战,达意隆作为一 家老牌的装备制造企业,也在进行数字化转型的探 索。

通过自动化和信息化的深度融合,为客户建立数字 化车间和智能工厂成为未来装备行业的发展趋势。 今年,新冠疫情在全球蔓延,国际形势复杂多变,对 中国企业的发展造成强烈冲击。对以达意隆为代表 的中国装备企业来讲,无论是国际市场的开拓,还

TECH-LONG AND GUANGZHOU UNICOM SIGNED A STRATEGIC COOPERATION AGREEMENT ON 5G+ INTELLIGENT MANUFACTURING

是客户现场技术支持,各方面都面临着前所未有的 互联网等新技术的 挑战。在此情况下,5G+工业互联网技术突显出巨大 做出应有的贡献。 优势。

互联网等新技术的深度融合,为我国5G产业的发展 做出应有的贡献。

孔总表示,5G技术作为新一代信息技术的典型代 表,给社会带来将是巨大的革命。中国联通是首家 拥有5G商业牌照企业之一,广州联通是中国联通 集团最大的本地网公司,与达意隆的合作是强强联 合。双方将共同打造以5G内网改造、覆盖上下游产 业的新生态,共同推进5G、物联网、大数据、工业

随后,双方进行了战略签约及揭牌。对达意隆来讲, 与中国联通携手,首先是要建立5G内网改造与创新 应用验证及孵化基地,探索一些基于5G技术的创 新应用,例如:通过VR/AR技术,实现客户现场和装 备企业技术支持的远程同步、培训和诊断;通过虚 拟仿真技术,实现远程生产线云展示,为客户带来 亲临现场般的售前技术展示;通过虚拟调试技术,





降低装备企业的设计成本, 缩短客户现场的调试周 期、实现快速交付等。

未来,双方将在5G+智能制造领域进行更加深入的 合作。

On the afternoon of August 21st, 2020, Tech-Long and Guangzhou Unicom officially signed a strategic cooperation agreement on "Industrial Internet Experimental Base of 5G+ Intelligent Manufacturing ". Xiangbin Kong, Deputy General Manager of Guangdong Unicom, Yan Xing, General manager of Guangdong Unicom Enterprise Strategic Customer Department, Jianming Zhou, deputy general manager of Guangzhou Unicom, Songming Zhang, chairman of Guangzhou Tech-Long, Gang Chen, deputy chairman of Guangzhou Tech-Long and other leaders attended the signing ceremony.

Before the ceremony, chairman Songming Zhang, warmly welcomed the arrival of Mr. Kong and his delegation. When visiting the workshop, Mr. Kong and his delegation watched the operation process of Blower-Filler-Capper Combi and other equipments of the beverage production line, and spoke highly of the practice and achievements of the leading enterprises focusing on equipment manufacturing in the industry like Tech-Long .

After the visit, the two sides had full exchanges. Chairman Songming Zhang, briefly introduced the development of Tech-Long and the whole industry. He said that in recent years, the deep integration of industry, Internet and information technology is bringing great opportunities and challenges to the industry. As an established equipment manufacturing enterprise, Tech-Long is also exploring digital transformation.

Through the deep integration of automation and informatization, the establishment of digital workshop and intelligent factory for customers has become the development trend of the future equipment manufacturing industry. This year, the COVID-19 pandemic is spreading around the world and the international situation is complex and volatile, which had a strong impact on the development of Chinese enterprises. For The Chinese equipment manufacturing enterprises represented by Tech-Long, both the development of international market and the on-site technical support of customers are facing unprecedented challenges in all aspects. In this context, 5G+



industrial Internet technology stands out as a huge advantage.

Mr.Kong said, as a typical representative of the new generation of information technology, 5G technology will bring a huge revolution to society. While China Unicom is one of the first enterprises with 5G commercial license, Guangzhou Unicom is the largest local network company of China Unicom Group, it will be the alliance between giants. The two sides will work together to remould the 5G internal network and build a new ecology covering upstream and downstream industries, and jointly promote the deep integration of 5G, Internet of Things, big data, industrial Internet and other new technologies, so as to make due contributions to the development of China's 5G industry.

Subsequently, the two sides undertook strategic signing and unveiling.

For Tech-Long, to join hands with China Unicom, the first is to establish 5G internal network transformation, and Verification & Incubation Base for the the innovative application, to explore some innovative applications based on 5G technology. For example: through VR/AR technology, to achieve remote synchronization, training and diagnosis between the customer site and equipment enterprise technical support. Through virtual simulation technology, we can show the production line remotely, to bring customers on-site pre-sales technology display. Through the virtual debugging technology, the design cost of equipment manufacturing enterprises can be reduced, the customer site debugging cycle can be shortened, and fast delivery can be realized.

In the future, the two sides will conduct more in-depth cooperation in 5G+ intelligent manufacturing.

"5G+工业互联网" 高质量网络暨 公共服务平台项目启动大会正式举行



2020年11月12日,达意隆联合中国联合网络通信有限公司广东省分公司、工业和信息化部电子第五研究所等单位共同承担的2020年工业互联网创新发展工程——"5G+工业互联网"高质量网络和公共服务平台项目启动大会在达意隆隆重举行。

广东省工业和信息化厅巡视员神志雄、广东省通信 管理局科长陈柱铭、广州市工业和信息化局调研员 韩国旭、黄埔区工信局数字产业处处长袁蝶影等领 导参加本次会议。

会议由达意隆副总李竞明主持,他首先介绍了与会 嘉宾和项目情况。联合体单位先后致辞发言,简要 介绍了单位概况、5G应用基础以及希望利用5G技术 真正为企业解决的痛点问题。省工信厅巡视员神志 雄、调研员韩国旭先后致辞,介绍了广东省和广州

市的5G应用情况及政策,并对项目的实施与管理提 出了要求。

随后,项目联合单位举行了战略签约仪式,将以项目 为契机,在5G+工业互联网与智能制造展开全面的 合作。

工业和信息化部2020年工业互联网创新发展工 程——"5G+工业互联网"高质量网络和公共服务平 台项目,全国仅有三家联合体中标。基于达意隆、广 东联通、电子五所、赛意、惠程、省标院各家联合体 的优势成立的联合体,成为其中之一。

本项目的核心内容是利用5G技术低时延、大带宽、 超高连接数据的特点,对公司现有网络进行改造, 并搭建公共技术服务平台,基于此平台向中小企业

THE LAUNCH CONFERENCE OF "5G+ INDUSTRIAL INTERNET" HIGH-QUALITY NETWORK AND PUBLIC SERVICE PLATFORM WAS HELD



提供技术咨询与培训等服务。

对达意隆而言,利用5G的特性与公司内网改造相结 合,能够有效解决厂区光纤及带宽资源不足、传统 有线管道成本高、后期维护困难的难题,网络安全 性得到了大幅提升。

达意隆致力于液态包装装备的智能制造与智能运 维,本项目的实施,将推动建设达意隆数字化透明 化工厂的建设。以ERP为基础,包括了研发PDM、生 产制造MES(智能排产APS)、仓储物流WMS、供应 链SRM、工程化管理软件、智能补货等软件实现集 成与数据互通,大大提升达意隆企业的整体数字化 管理能力水平,降低经营成本,实现企业知识财富 的积累与传承。

同时,达意隆与联通、惠程、赛意等企业的深度交流 与合作,将积极推动达意隆装备与新一代信息技术 的深度融合,提升了综合解决方案等基础与服务能 力;借助公共服务平台,提升达意隆在整个离散型 机械制造领域、上下游产业的影响力,有利于未来 的产业布局与转型。

对下游产业客户来说,本项目提供了一个5G+工业互 联网应用可复制可推广的模板,有利于形成示范效 应,带动机械制造、食品、日化等行业探索5G+工业 互联网的应用,提升信息化数字化能力水平;项目搭 建的公共技术服务平台,前期技术咨询等服务基本 免费,降低相关产业的5G+工业互联网接入成本。

On November 12th, 2020, the 2020 industrial Internet innovation and development project -"5G+ Industrial Internet" high quality network and public service platform project launch conference was held in Tech-Long jointly with China United Network Communication Co., LTD. Guangdong Branch, the Ministry of Industry and Information Technology Electronic Fifth Research Institute and other units.



Zhixiong Shen, inspector of Department of Industry and Informatization Technology of Guangdong Province, Zhuming Chen, section chief of Communications Administration of Guangdong Province, Guoxu Han, researcher of Guangzhou Industry and Informatization Technology Bureau, Dieying Yuan, Director of Digital Industry Department of Huangpu District Industry and Information Technology Bureau and other leaders attended the conference.

The meeting was presided over by Jingming Li, deputy director of Tech-Long, who introduced the guests and the project at first. The consortium has made a speech, briefly introduced the general situation of the unit, 5G application basis and the pain points which the enterprises hope to use 5G technology to really solve. Zhixiong Shen, inspector of the Provincial Department of Industry and Information Technology, and researcher Guoxu Han, delivered speeches successively, introducing the 5G application situation and policies of Guangdong Province and Guangzhou city, and putting forward requirements for the implementation and management of the project. Subsequently, the joint unit of the project held a strategic signing ceremony, and will take the project as an opportunity to carry out comprehensive cooperation in 5G+ industrial Internet and intelligent manufacturing.

In the 2020 Industrial Internet Innovation and Development Project of the Ministry of Industry and Information Technology -- "5G+ Industrial Internet" high-quality network and public service platform project, only three consortiums won the bid. Based on the advantages of the consortium of Tech-Long, Guangdong Unicom, Five electronic institute, Sie, Huicheng and provincial Standards Institute, the consortium has become one of them.

The core content of this project is to transform the company's existing network and build a public technical service platform based on the characteristics of 5G technology, such as low delay, large bandwidth and ultra-high connection data, to provide technical consulting and training services to small and mediumsized enterprises.

For Tech-Long, the combination of the



characteristics of 5G and the transformation of the company's initernal Intranet can effectively solve the problems of insufficient fiber and bandwidth resources in the factory area, high cost of traditional cable and pipeline, and difficult maintenance in the later period, and the network security has been greatly improved.

Tech-Long is committed to intelligent manufacturing and intelligent operation and maintenance of liquid packaging equipment. The implementation of this project will promote the construction of Tech-Long digital and hyalinization plant. Based on ERP, including the PDM for R&D, MES for manufacturing (APS for intelligent production scheduling), WMS for warehouse logistics, SRM for supply chain, engineering management software, intelligent replenishment and other softwares can integrate and exchange data, then will greatly enhance the level of whole digital management of the enterprise with the ability to reduce operating costs, and achieve the enterprise knowledge wealth accumulation and inheritance.

At the same time, the in-depth exchanges and cooperation between Tech-Long and China Unicom, Huicheng, Sie and other enterprises

will actively promote the deep integration of Tech-Long equipment and the new generation of information technology, and enhance the comprehensive solutions and other basic and service capabilities; With the help of public service platform, the influence of Tech-Long is enhanced in the whole discrete machinery manufacturing field and upstream and downstream industries, and which will facilitate the industrial layout and transformation in the future.

For downstream industrial customers, this project provides a 5G+ industrial Internet application template which can be copied and promoted. It is beneficial to the formation of demonstration effect, which can drive the machinery manufacturing, food, daily chemicals and other industries to explore the application of 5G+ industrial Internet, and improve the level of information and digital capacity. The public technical service platform built by the project is almost free of charge for technical consultation and other services in the early stage, thus reducing the cost of 5G+ industrial Internet access for related industries.



达意隆顺利通过企业知识产权 管理体系贯标认证

2019年12月,广州达意隆包装机械股份有限公司顺利通过《企业知识产权管理规范》的认证评 审,获得《知识产权管理体系认证证书》,成为液态产品包装装备领域率先获得此项荣誉的企业 之一。

这标志着我司在知识产权获取、维护、运用和保护方面实现了高质量运行。长期以来,我司重视自 主创新,拥有规范的知识产权管理制度和明确的知识产权管理方针与目标。

TECH-LONG SUCCESSFULLY PASSED THE ENTERPRISE INTELLECTUAL PROPERTY MANAGEMENT SYSTEM STANDARD CERTIFICATION

未来,达意隆将以此次贯标认证为契机,深化对国 家标准体系文件对学习和推广,进一步规范知识产 权管理工作,实现对知识产权的科学管理和战略运 用,持续提升达意隆的核心竞争力,推动企业的可 持续发展。

In December 2019, Guangzhou Tech-long Packaging Machinery Co.,Ltd. successfully passed the certification review of "Enterprise Intellectual Property Management Standards" and was awarded the "Intellectual Property Management System Certification", becoming one of the first enterprises in the field of liquid product Packaging equipment to receive this honor. This marks our high quality performance in the acquisition, maintenance, application and protection of intellectual property. For a long time, our company attaches importance to independent innovation, and has standardized intellectual property management system and clear intellectual property management policies and objectives.

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达意隆荣获国家级"绿色工厂" 与"绿色供应链管理企业"

TECH-LONG WON THE NATIONAL "GREEN FACTORY" AND "GREEN SUPPLY CHAIN MANAGEMENT ENTERPRISE"





2020年10月29日,工业和信息化部(简称工信部)办 公厅发布《工业和信息化部办公厅关于公布第五批 绿色制造名单的通知》。达意隆荣获国家级"绿色 工厂"、"绿色供应链管理企业"。

此次名单的公布,是工信部促进制造业高质量发 展,持续打造绿色制造先进典型,加快推动绿色制 造体系建设的重要举措。

"绿色工厂"是制造业的生产单元,是绿色制造的 实施主体,属于绿色制造体系的核心支撑单元。绿 色工厂是指工厂的设计及运行实现用地集约化、生 产洁净化、废物资源化、能源低碳化等特点的制造 工厂。

绿色、节能、低碳,一直是公司坚持的发展战略。在 产品的研发、装配、生产制造等融入绿色技能技术, 不断促进绿色制造、低碳制造、智能制造水平的提 升。

"绿色供应链"是指绿色发展理念,以核心企业为 支点,形成的供应链绿色化管理体系。长期以来,达 意隆以高度的社会责任感,倡导供应链共同发展, 将公司绿色制造的理念延伸至上游产业链,加强了 对供应商对环保、节能、绿色制造方面的约束,实施 了供应商分级管理,根据供应商等级实施相应的奖 惩措施,促进合作伙伴绿色化发展。 本次入围第五批国家级"绿色工厂"、"绿色供应链 管理企业",对公司来说是一份肯定与激励。达意隆 将积极推进绿色环保发展,开创环保科技创新,加 快新技术、新技能、新设备的应用,努力建设资源节 约型、环境友好型企业。

On October 29th, 2020, the General Office of the Ministry of Industry and Information Technology (MIIT) issued the "Notice of the General Office of the Ministry of Industry and Information Technology on The Fifth Batch of Green Manufacturing List". Tech-Long won the national "Green Factory" and "Green Supply chain Management Enterprise".

The announcement of the list is an important measure of the Ministry of Industry and Information Technology to promote high-quality development of the manufacturing industry, continue to build advanced models of green manufacturing, and accelerate the construction of green manufacturing system.

"Green factory" is the production unit of manufacturing industry, the implementation subject of green manufacturing, and the core



supporting unit of green manufacturing system. Green factory refers to the design and operation of the factory to achieve land intensive, clean production, waste resources, low carbon energy and other characteristics of the manufacturing plant.

Green, energy saving and low carbon have always been the development strategy of the company. Integrate green skills and technologies into product research and development, assembly, production and manufacturing, and constantly promote the improvement of green manufacturing, low-carbon manufacturing and intelligent manufacturing.

"Green supply chain" refers to the concept of green development, with core enterprises as the fulcrum, forming a green supply chain management system. For a long time, Tech-Long with a highly social sense of responsibility, advocates the common development of the supply chain, to extend the concept of green manufacturing to the upstream industry chain, which has strengthened the constraints of suppliers on the environmental protection, energy saving and green manufacturing. Tech-Long has implemented the supplier classification management, according to the level of supplier to implement the corresponding measures of rewards and punishments to promote partners' green development.

This is the fifth batch of national "Green Factory" and "Green Supply chain Management Enterprise", which is an affirmation and incentive for Tech-Long. We will actively promote the development of green environmental protection, create environmental science and technology innovation, speed up the application of new technology, new skills, new equipment, and strive to build a resource-saving and environmentfriendly enterprise.

实力见真章 STRENGTH SHOWS TRUE CHAPTER

— 达意隆入选首批广州市民营领军企业

- Tech-Long was selected as one of the first batch of private leading enterprises in Guangzhou

2021年10月,广州市工业和信息化局发布首批广州 市民营领军企业名单,本次共有142家企业入选。达 意隆凭借品牌影响力、技术创新能力及市场占有率 入选首批广州市民营领军企业。

广州市民营领军企业,是广州市工业和信息化局为 了贯彻落实中共广州市委办公厅、广州市人民政府 办公厅印发的《关于营造更好发展环境支持民营企 业改革发展的若干措施》文件精神、加强民营中小 企业梯度培育,而认定的一批具有明显行业优势和 国际竞争力的民营领军企业。

In October 2021, Guangzhou Bureau of Industry and Information Technology issued the first batch of Private leading enterprises in Guangzhou, and a total of 142 enterprises were selected. With the brand influence, technological innovation ability and market share, Tech-Long was selected as one of the first batch of private leading enterprises in Guangzhou.

Guangzhou private leading enterprise is a group of leading private enterprises with



obvious industrial advantages and international competitiveness identified by the Guangzhou bureau of industry and information technology for the implementation of the "About the measures of creating a better development environment and supporting the private enterprises on the reform and development" file spirit issued by the general office of the CPC Guangzhou municipal party committee, general office of Guangzhou city people's government and also for strengthening the cultivation of small and medium-sized private enterprises as gradient.

达意隆获评工信部第三批国家级服 务型制造示范企业



2021年11月16日,工业和信息化部办公厅公布第三 批服务型制造示范名单。本次评选经过申报推荐、 专家评审、现场考察、网上公示等工作,最终确定第 三批服务型制造示范名单。

达意隆凭借在液态包装智能装备领域出色的服务型 制造模式,入选第三批国家级服务型制造示范企业 荣誉。

服务型制造是制造与服务融合发展的新型制造模式 和产业形态,是先进制造业和现代服务业深度融合 的重要方向。达意隆始终以客户为中心,以液态包 装生产线为基础,积极与工业互联网、人工智能、大 数据、5G等新一代信息技术深度融合,开展从研发 设计到生产制造、安装调试、交付使用、故障诊断、 故障预警分析等全链条服务,创新拓展了远程运 维、数字化改造等新服务模式,加快制造服务化转 型,构建全生命周期服务产业链条。 自1998年以来,达意隆在全球范围内,已完成了超 过500个大型交钥匙工程项目,拥有丰富的液态包 装机械整线解决方案、工业自动化方案及完整的售 后服务体系。

本次入选第三批国家级服务型制造示范企业,表明 了达意隆在"生产制造+服务"模式融合的道路上取 得了阶段性成果。

今后,达意隆将依托自身完整的产品线及售后服务 和数字化水平,持续打造包装装备全生命周期服务 平台—"包装装备工业互联网服务平台",以包装 装备研发、生产制造、销售服务为基础,在融合工业 软件集成和售后服务的基础上,开展融资租赁、经 营性租赁、装备保险、远程运维服务等一系列增值 服务业务,加速转型成为个性化定制包装装备全生 命周期解决方案服务商。

TECH-LONG WAS AWARDED THE THIRD BATCH OF NATIONAL SERVICE MANUFACTURING DEMONSTRATION ENTERPRISES BY THE MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY

On November 16th, 2021, the General Office of the Ministry of Industry and Information Technology announced the third batch of service manufacturing demonstration list. In this selection, after application recommendation, expert review, on-site investigation, online publicity and other work, finally determine the third batch of service manufacturing demonstration list.

With the outstanding service-oriented manufacturing model in the field of liquid packaging intelligent equipment, Tech-Long was selected as the third batch of national service-oriented manufacturing demonstration enterprises.

Service-oriented manufacturing is a new mode and industrial form with the integration of manufacturing and service. It is an important direction for the deep integration of advanced manufacturing and modern service industry. Tech-long always takes the customer as the center, on the basis of liquid packaging production line, actively integrates with the industrial Internet, artificial intelligence, big data, 5G and other new-generation information technologies to carry out the whole chain services from the research and development design to production and manufacturing , installing and commissioning, delivery and use, fault diagnosis and fault early warning analysis, innovatively expand the new service mode such as remote operations and digitization etc. We will accelerate the transformation of manufacturing industry service, and build the industry chain of full life-cycle service.

Since 1998, Tech-Long has completed more than 500 large turnkey projects worldwide, and has a rich solutions of whole production line of liquid packaging machine, industrial automation solutions and a complete after-sales service system.

Being selected as the third batch of national service-oriented manufacturing demonstration enterprises indicates that Tech-Long has achieved phased results on the road of the mode of integrating "manufacturing + service".

In the future, Tech-Long will rely on our own complete product line and after-sales service and the digitization level, continue to build the service platform in whole life cycle of packaging equipment- "Packaging machine industry Internet service platform", through the euipment research and development, the manufacturing, sales and service as the foundation, on the basis of the fusion of industrial software integration and after-sales service, to develop a series of value-added services such as financial leasing, operational leasing, equipment insurance, remote operation and maintenance services, accelerate the transformation into a supplier of full-life cycle solution for personalized customized packaging equipments.

ON EXHIBITION 展会 风采

以专业设备 展实力锋芒

——达意隆携机亮相CBB2020

TO SHOW THE STRENGTH WITH PROFESSIONAL EQUIPMENT

- Tech-Long showed up on CBB2020 with new machine



2020年10月13日,第十四届中国国际酒、饮料技术 及设备展览会于在上海新国际博览中心隆重举行, 为期三天。在疫情防控常态化的背景下,仍有数百 家优质企业品牌借展会东风聚集于此。

此次,达意隆携五代plus高速单模2650bph底模 /封口联动吹瓶机走进大众视野,在展会中大放光 彩。展会期间,达意隆展台的往来者络绎不绝。高 品质的商务会谈区,提升了服务体验,展现了我们 一切服务于客户的人文关怀。

借此机会,达意隆巩固了与已有客户的良好关系, 与新的商界朋友建立了联系。行业人士齐聚我司展 位,共谋发展,充分体现了达意隆向更广阔舞台迈 进的从容和魄力。

此次展会的成功举办,是达意隆的一个新起点,也 是创新之路上的一个新节点。我们将理性面对市场 需求,创造更加精益的产品服务于广大客户群体!

October 13th, 2020, The 14th International Brew & Beverage Processing Technology And Equipment Exhibition For China was held ceremoniously in Shanghai New International Expo Centre. This time Tech-Long brought the 5th Generation plus: High-Speed Single Cavity Blower for 2650bph into the view of people and made a great splash at the exhibition. Tech-Long 's booth was visited continually during the exposition. The high-quality business meeting area enhanced the service experience and showed our humanistic care of serving customers.

Tech-Long took this opportunity to solidify the relationship with existing customers and

established contact with new business friends .The industry players gathered at our booth to seek common development, which fully reflecting Tech-Long 's calmness and vigor to move forward to a broader stage.

The success of this exhibition was a new starting point for Tech-Long and a new point on the road of innovation. We will face the market demand rationally and create more fine products to serve the majority of customer groups!

精心筹备 大放异彩 ELABORATE PREPARATION AND BRILLIANCE

达意隆携高速旋转吹瓶设备闪耀Chinaplas2021

Tech-Long shines with high-speed rotary blowing machine at Chinaplas 2021







受新冠疫情影响,"第三十四届CHINAPLAS"延期 至2021年4月13日举行。本次展会阵容强大,面积达 350000㎡,展会为期4天。这既是CHINAPLAS在深圳 国际会展中心的首秀,也是达意隆在2021年的第一个 展会。"CHINAPLAS国际橡塑展"伴随着中国塑料及 橡胶行业成长逾30年,已发展成为亚洲最具规模的橡 塑业展会。

本次达意隆展出的高速旋转吹瓶设备成为一大亮点, 该设备具有匠心独运的智能化设计,结构简易、生产 效率高等特点,广泛用于饮料、牛奶及乳制品、食用油、 化妆品、洗涤剂、医药等PET瓶的生产。PET 瓶有着良 好的透明度、重量轻、成本低、可塑性强,材料可回收、 处理、再利用,与其他包装材料相比具有明显的综合 优势,成为食品饮料领域发展速度最快的包装材料。

性能与优点

- 能耗少,降低高压气体消耗量40%-55%,无需配低 压气源。
- •加温系统完善,降低加温能量消耗10%-15%。
- •机器性能稳定可靠,更高的吹瓶稳定性和可靠性。
- •运行噪音减少,从92dB降到83dB。
- •采用伺服拉伸和机械封口,卫生度高、无中间污染。

2021CHINAPLAS国际橡塑展已落下帷幕,短短4天, 达意隆展台迎来了众多新老客户和合作伙伴,现场十 分火爆。面对客流高峰,我们的展台设置了复式休闲 区,为商客们提供饮品与甜点,销售同事们耐心为前 来宾客讲解演示,尽显我们的专业精神。

多年来,达意隆始终秉承并践行"为你而转"的理念, 专心致力于液态产品包装设备的开发和制造,为生产 企业提供一站式服务和技术解决方案。今后,我司将 继续优化管理体系,加速品牌打造进程,为广大用户 朋友提供更多精品服务和优质设备。

The "34th CHINAPLAS" had been postponed to Aril 13th 2021 due to the situation of Covid-19. This time the exhibition had a strong lineup with an area of 350,000 m² and a 4-day exhibition. This is not only the debut of CHINAPLAS in Shenzhen World Exhibition & Convention Center, but also the first exhibition of Tech-Long in 2021. "CHINAPLAS" has grown with China's plastics and rubber industry for more than 30 years and has become the largest plastics and rubber industry exhibition in Asia.





The high-speed rotary blowing equipment exhibited by Tech-Long has become a highlight, it has a unique intelligent design, simple structure and high production efficiency, the machine is widely used in the production of PET bottles for beverages, milk and dairy products, edible oil, cosmetics, detergents, pharmaceuticals, etc. PET bottles have good transparency, light weight, low cost, high plasticity, and the material can be recycled, treated and reused. Compared with other packaging materials, it has obvious comprehensive advantages and has become the fastest growing packaging material in the food and beverage field.

Performance and Advantage

- Less energy consumption, reduce high-pressure gas consumption by 40%-55%, no need for the low-pressure gas source.
- Perfect heating system reduces heating energy consumption by 10%-15%.
- Stable and reliable machine performance, higher blowing stability and reliability.
- Less operation noise, from 92dB to 83dB.

• Servo stretching and mechanical sealing, high sanitation and no intermediate pollution.

CHINAPLAS 2021 had come to an end. Tech-Long 's booth welcomed many new and old customers and partners in just 4 days, and the site was very hot. Facing the peak of customer flow, we set up a duplex leisure area in our booth to provide drinks and desserts for business customers, and our sales colleagues patiently explained and demonstrated to them, which showed our professional spirit.

Over the years, Tech-Long has been adhering to and practicing the concept of "RUNS FOR YOU", concentrating on the development and manufacture of liquid product packaging equipment, providing one-stop service and technical solutions for customers. In the future, we will continue to improve the management system, accelerate the brand building process, and provide more high-quality services and equipment for our customers.

直击FBIF ──达意隆风采一睹为快



FBIF食品饮料创新论坛是亚太地区极具行业影响力 的食品行业盛会之一, FBIF 致力于通过分享全球 范围内成功的商业案例及具有创新价值的理念与技 术,帮助行业决策者洞察未来趋势并推动整个食品 饮料行业的发展。

2021年6月30日,FBIF食品饮料创新论坛在杭州国 际博览中心拉开帷幕,展馆占地20000㎡,展会为期 3天。达意隆在众多参展企业中再次惊艳亮相,聚焦 观众目光,成为展会上颇具人气、备受瞩目的焦点。 后疫情时代,消费者的健康意识增强,对健康卫生 的要求越来越高。在购买食品及饮料时,开始更多 地关注食品的成分配料、营养信息、加工安全性等 细节问题。

本次盛会,达意隆展出了超洁净冷链干法灌装系 统、新一代PET瓶无菌冷灌装生产线的宣传资料。 超洁净冷链干法灌装系统采用过氧化氢干法杀菌工艺,新一代PET瓶无菌冷灌装生产线采用过氧乙酸湿法杀菌工艺。

达意隆明确发展目标,为全球客户提供液态产品包 装全面解决方案。在未来,我们将继续前行,满足市 场多样化需求,研发更多精良设备!

FBIF: Food & Beverage Innovation Forum is one of the most influential food industry events in the Asia & Pacific region. FBIF is dedicated to helping industry decision makers observe future trends and drive the development of the entire food and beverage industry by sharing successful business cases and innovative ideas and technologies from the world.

LIVE REPORT OF FBIF

- to see Tech-Long' s performance



On June 30th, 2021, FBIF was kicked off in Hangzhou International Expo Center, the exhibition hall covers an area of 20,000 m² and the exhibition lasted for 3 days. Tech-Long once again made a stunning appearance among many exhibitors, which became a popular and attention-grabbing focus of the exhibition.

In the post-epidemic era, consumers have become more health-conscious and have increasingly higher requirements for health and hygiene. When they purchase food and beverages, they are beginning to pay more attention to the details of food ingredients, nutritional information, processing safety and other issues. In this event, Tech-Long exhibited the promotional materials of Ultra Hygienic Cold Chain Dry Filling System and New Generation PET Bottle Aseptic Cold Filling Production line. The former adopts hydrogen peroxide dry sterilization process, and the latter adopts wet sterilization process of peroxyacetic acid.

Tech-Long has a clear development goal to provide global customers with comprehensive solutions for liquid product packaging. In the future, we will continue to move forward to meet the diversified needs of the market and develop more sophisticated equipment!

PRODUCT



全面配合助力生产 FULL COOPERATION TO HELP PRODUCTION

达意隆为今麦郎提供整线解决方案 Tech-Long provides the whole line solution for Jinmailang

高度配合

今麦郎项目开始于2020年1月,商务沟通与技术交流持续了长达半年时间。达意隆业务人员每个月都 会实地拜访客户,实时采集真实的项目情况。尽管 技术交流十分繁琐,项目团队一直高度配合,及时 跟进,主动地与客户沟通。

同时,项目人员向客户提供相关建议与技术支持,配 合调试、测试,协助客户解决应用障碍或系统使用 问题,以满足客户的需求。达意隆将持续与客户沟 通,提供卓越的解决方案,不断提升品牌知名度和 行业影响力,更好地服务于全球企业。

In March 1994, a wheat-based enterprise, Jinmailang, was born and quickly grew into a national key leading enterprise of agricultural industrialization and a national leader in the integration of primary sector, secondary sector and tertiary industry in rural areas. With its strong accumulation, diligence and pragmatism, Jinmailang has achieved the expansion of Chinese enterprises from small to large, from rural to urban, from domestic to international, from a single factory to international diversification, and has experienced the arduous and proud development course of a large enterprise group.

Cooperation Together

Jinmailang pure water is selected from safe and high-quality water sources, and the water quality standards fully comply with 106 national safety standards. With 9 levels of deep filtration, good water is not hard to nourish people, it can



1994年3月,一个以麦为业的企业——今麦郎诞生, 并迅速成长为农业产业化国家重点龙头企业、全国 农村一二三产业融合领军企业。今麦郎厚积薄发, 勤恳务实,实现了中国企业由小到大、由农村到城 市、由国内到国际、由单一工厂到国际性多元化的 实力扩张,经历了大企业集团艰辛又自豪的发展历 程。

坚定携手

实例 Project Cases

今麦郎纯净水选取安全、优质水源,水质标准完全 符合106项国家安全标准。好水不硬才养人,9级深 度过滤,彻底去除水中金属离子,软化至极,喝着舒 服。水质轻软,饮用后人体内脏器官负担小,能够更 好地在体内循环,快速地将营养物质和氧分输送到 人体各个组织。为了保证生产过程安全、稳定、高效 运行,今麦郎开始寻找合适的合作伙伴。

达意隆作为全球领先的液态包装技术及解决方案

供应商,吸引了今麦郎集团的关注。与此同时,达意 隆历来的项目生产线运行状况优良,在行业内口碑 甚佳,是企业信赖的合作伙伴,也得到了今麦郎的认 可,最终决定与我司合作。

项目详情

今麦郎与达意隆一次性签订了3条5L吹灌旋整线, 其中两条为4000BPH吹灌旋纯净水生产线,已在遂 平工厂安装及调试中;一条为6000BPH吹灌旋山泉 水生产线,已在北京工厂安装及调试中。

自2009年达意隆成功推出中国第一台吹灌旋一体 机后,不断加强技术研发,适用产品范围逐渐丰富, 是全球少数几家同时掌握PET吹瓶机和灌装机两大 关键技术的供应商,更是一体机概念的先行者。多 年来,达意隆与全球企业携手合作,达成战略合作 关系,整线生产效率不低于90%,成品收获率不低 干99.5%。





complete remove the metal ions. The water is softened so extreme that makes it comfortable to drink. And the burden on human internal organs is small after drinking this light and soft water, it can better circulate in the body and quickly transport nutrients and oxygen to all tissues of the body. In order to ensure the safe, stable and efficient operation of the production process, Jinmailang started to look for a suitable partner.

As a global leading supplier of liquid packaging technology and solutions, Tech-Long attracted the attention of Jinmailang Group. At the same time, Tech-Long 's project production line has been running well and has a good reputation in the industry, which makes it a reliable partner

for Jinmailang Group who decided finally to cooperate with us.

Details of the project

Jinmailang had signed contract with Tech-Long for three 5L blow-fill-spin lines, two of which are 4000BPH blowing-filling-capping pure water production lines, which have been installed and commissioned in Suiping factory, and one is 6000BPH blowing-filling-capping mountain spring production line, which has been installed and commissioned in Beijing factory.

Since the successful launch of China's first blowing-filling-capping combi-block machine in 2009, Tech-Long has continuously strengthened

its technology research and development and gradually enriched the range of applicable the world who have mastered the two key technologies of PET blowing machine and filling machine at the same time, and it is the pioneer of the concept of combi-block machine. Over the years, Tech-Long has worked hand in hand with global enterprises to reach strategic At the same time, Tech-Long provided partnerships, with the production efficiency of the whole line not lower than 90% and the harvest rate of finished products not less than and testing, and assisted customers in solving 99.5%.

Close Cooperation

The Jinmailang project started in January 2020, and the business communication and

technical exchange lasted for half a year. Tech-Long 's collegue visited the client on site every products. It is one of the few suppliers in month to know the real project situation in real time. Despite the complicated technical communication, the project team had been highly cooperative who followed up in time and communicated with the client proactively.

> customers with relevant suggestions and technical support, cooperated with debugging application barriers or system usage problems to meet their needs. Tech-Long will continue to communicate with customers, provide excellent solutions, continuously improve brand awareness and industry influence, and better serve global enterprises.

强强联手 实现共赢 PARTNERSHIP FOR WIN-WIN COOPERATION

达意隆协助挂面巨擘金沙河开拓瓶装水市场 Tech-Long Assists Noodle Giant Jinshahe to Develop Bottled Water Market



2019年1月初,河北金沙河面业集团敏锐洞察到瓶 装水行业的发展前景广阔,在正式挥师饮料领域 前,金沙河走访了全国多家设备制造企业,对设备、 工厂等进行了实地考察与深入调研,综合各项优势 和多渠道对比后,最终选择与达意隆合作。

金沙河结合自身的产品定位与市场情况,考虑到双 方的实力条件,最终定购了一条36000BPH纯净水 吹灌旋生产线,在河北总部投入使用。经过3个月的 生产,设备顺利发往金沙河工厂并进行安装调试。

项目安装调试时,正处于当地的酷暑时节,达意隆 工程部项目经理陶建华等人与金沙河员工不分昼 夜,奋战在施工一线,克服施工中遇到的重重困难, 精心组织现场施工,合理安排施工进度,确保整线 调试进度如期推进,最终顺利投产。

在达意隆团队与金沙河团队的紧密配合下,项目安 装速度极快,仅用了20天时间。持续运行一周后,以 95%的整线效率验收。这同时也为企业减少了人力 成本,整线运行仅需3到4个人进行操作,相比同行 节省约45-50%的电能,达到了节能省耗的目的。设 备高效、耗电量低的优势,再次获得了客户的认可和 赞誉。

基于第一条生产线高效运转的良好基础,金沙河集 团先后定制了多条生产线,遍布陕西咸阳、安徽亳 州、山东济南等地。目前,各地的每条生产线日常效 率均达95%,强强联手,方能共创未来。

金沙河在感谢信中提到:我司之所以一直和达意隆 保持友好的合作关系,和贵司的优质服务团队以及 合作共赢的企业精神密不可分。诚然,这亦是达意

隆始终以优质的产品服务于客户, 坚持"为你而 转"理念的体现。

络绎不绝的订单,是客户对达意隆最大的认可!稳 定高效的生产,是达意隆对客户最好的诚意!

In early January 2019, Hebei Jinshahe Group keenly perceived the promising development of the bottled water industry. Before formally developing in the beverage field, Jinshahe visited a number of equipment manufacturers across China, and in-depth researched on It was canicule season in the region during the equipment and factories, etc. Jinshahe finally chose to cooperate with Tech-Long after recognizing its various advantages and multi-

channel comparison.

Jinshahe considered the conditions of both sides combining its own product positioning and market situation, finally ordered a 36000BPH blowing-filling-capping pure water production line, which was put into use in Hebei headquarters. After 3 months of production, the equipment was smoothly shipped to Jinshahe factory and installed and commissioned.

installation and commissioning of the project. Tao Jianhua, the project manager of Tech-Long Engineering Department, and other staffs of



Jinshahe worked day and night on the production line, they overcame the difficulties encountered in the installation and commissioning, carefully organized the site construction, and reasonably arranged the schedule to ensure that the commissioning of the whole line progressed in time and finally it went into function smoothly.

With the close cooperation between the Tech-Long team and the Jinshahe team, the project was installed extremely fast by only 20 days. After a week of continuous running, it was accepted with 95% efficiency of the whole line. This also reduces the labor cost for the enterprise, only 3 to 4 people are needed to operate the whole line, which saves about 45-50% of electricity compared with the peers, and achieves the purpose of energy saving and consumption. The advantages of high efficiency and low power consumption of the equipment have once again won the recognition and praise of customers. Based on the good foundation of the efficient operation of the first production line, Jinshahe Group has customized several production lines throughout Xianyang in Shaanxi province, Bozhou in Anhui province, Jinan in Shandong province and other places. At present, the daily efficiency of each production line everywhere reaches 95%. The teamwork is the only way to create a future together.

It said in the letter of Jinshahe Group: Because of the high-quality service team and the spirit of win-win cooperation, we choose to maintain a friendly relationship with Tech-Long, this is also a reflection of the fact that Tech-Long always serves customers with high quality products and insists on the concept of "RUNS FOR YOU".

The endless orders are the biggest recognition from our customers! And the stable and efficient production is the best sincerity to our customers!

双方合作项目

1 河北沙河工厂 36000BPH饮用水吹灌旋整线

2 *陕西咸阳工厂* 36000BPH饮用水吹灌旋整线

3 安徽亳州工厂 36000BPH饮用水吹灌旋整线

4 山东济南工厂 36000BPH饮用水吹灌旋整线

5 *河北邢台工厂* 4000BPH大瓶饮用水吹灌旋整线

Cooperation Projects

1 Shahe factory in Hebei Province: 36000BPH blowing-filling-capping water production line

Z Xianyang factory in Shaanxi Province: 36000BPH blowing-filling-capping water production line

Bozhou factory in Anhui Province: 36000BPH blowing-filling-capping water production line

4 Jinan factory in Shandong Province 36000BPH blowing-filling-capping water production line

Xingtai factory in Hebei Province: 4000BPH blowing-filling-capping water production line









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锐意进取 提升效率 FORGE AHEAD AND/ IMPROVE EFFICIENCY

达意隆携手纳爱斯 打造国内日化行业首条吹灌联线

Tech-Long and NICE build the first blowing filling connection line in the domestic daily chemical industry

荒斯県の.


纳爱斯前身是成立于1968年的地方国营丽水五七化 工厂,2001年组建集团。总部所在地丽水,是总书记 "两山"理念的重要萌发地。纳爱斯发挥独特的区 域优势和雄厚的行业领军实力,致力于打造全球化 的全链生态产业体系, 荣获日化行业首家通过中国 绿色产品认证的企业,成为国家工信部作为日化行 业唯一专题宣传的生态设计示范企业。

基于传统工艺和装备,传统的日化产品包装容器大 部分使用HDPE材料和一步法生产制瓶。在与纳爱 斯的合作过程中,达意隆发现HDPE制瓶存在着一 些问题: 设备种类多, 产量低, 能耗较高; 吹瓶模具 昂贵,瓶型变化困难;吹瓶后瓶子需要一段时间进 行定型固化,因此需占据大量的存储场地,浪费包 材;在储存过程中还存在着一定的卫生风险。

作为深耕液态包装行业多年的龙头企业,达意降持 续关注市场导向和客户需求,针对上述情况,向纳

爱斯推荐了成本更低、效率更高、节能降耗显著的 PET瓶整线生产,并提供了详细的数据分析和调研 资料,最终赢得了纳爱斯的认可,采用了达意隆效率 吹瓶机CPXF6/2-2.5L/7800-9000BPH的PET整线 方案来生产洗洁精,并在浙江丽水投入使用。

丽水纳爱斯3号线项目是国内日化行业首条吹灌联 线项目,开创了日化行业PET瓶先河,是行业发展的 一个崭新里程碑!项目于2021年7月份启动,在2022 年2月21日验收。项目在实施过程中,面对的挑战颇 多:瓶胚厚、无防盗环、颜色多、无加强筋、冷却时 间短、车间场地小,整线效率要求高,整线设备要 求换产时间短。公司各部门对这些难点均各个击破, 生产线的运行以及工程服务得到客户的认可与赞赏, 向达意隆赠送了锦旗表示肯定。

日化产品与饮料包装在生产过程中有着不同之处。 此次项目为方瓶设计, 瓶子较重, 瓶身与瓶盖往往

多样而不规则,相比于饮料行业的圆瓶型,对吹瓶 工艺提出了更高的要求;在模具更换方面,饮料模 具小、模架轻,日化产品的模具体积大,更换不方 便。为此,达意隆采用了模具快换技术,加快了模具 更换速度,减少了人工的劳动强度;在产品特性方 面,日化产品属于高粘度、易起泡产品,灌装时存在 起泡、拉丝、滴落等现象,针对这些灌装技术难点,上更好地配合客户,为客户创造更大的价值! 达意降团队积极攻关,研发了多项专利技术,有效解 决了这些难题,并且设备的智能化程度极高,设有卡 瓶保护、缺瓶报警、缺盖报警、过载停机等自动控制 技术。此外, EMS系统通过信息化系统与生产自动 化的结合,可以实现产线透明生产。

达意隆与纳爱斯的首次合作始于2000年初。经过 20余年的发展,双方在各自领域内取得了显著成果, 几乎每年都有技术交流和商务往来。此次纳爱斯选 择订购PET整线生产洗洁精,充分证明了客户对达 意隆的高度信赖与认可,也印证了达意隆历经数十

载发展,始终关注客户需求,以客户利益为重的不 变初心。

两家同样有着创新和进取精神的企业,将锻造更为 密切的合作关系,共谋发展蓝图。在未来,达意降将 不断提升自身实力和服务质量,在已有的合作基础

The predecessor of NICE is the local stateowned Lishui Wuqi chemical plant established in 1968, and the group was established in 2001. Lishui, where the headquarters is located, is an important birthplace of the general secretary's "two mountains" concept. By giving full play to its unique regional advantages and strong industry leading strength, NICE is committed to building a global whole chain ecological industry system. It has won the first enterprise in the daily



chemical industry to pass China's green product certification, and has become the only ecological design demonstration enterprise promoted by the Ministry of industry and information technology of the people's Republic of China as the only special topic in the daily chemical industry.

Based on the traditional technology and equipment, most of the traditional packaging containers of daily chemical products use HDPE materials and one-step production and bottle making. In the process of cooperation with NICE, Tech-Long found some problems in HDPE bottle making: many types of equipment, low output and high energy consumption; The bottle blowing mould is expensive and it is difficult to change the bottle shape; After bottle blowing, the bottle needs a period of time for setting and curing, so it needs to occupy a lot of storage space and waste packaging materials; There are also certain health risks during storage.

As a leading enterprise in the liquid packaging industry for many years, Tech-Long continued to pay attention to the market orientation and customer demand. In view of the above situation, Tech-Long recommended the whole PET bottle production line with lower cost, higher efficiency



and significant energy saving and consumption reduction to NICE, and provided detailed data analysis and research materials, which finally won the recognition of NICE, The pet whole line scheme of Tech-Long efficiency bottle blowing machine cpxf6 / 2-2.5l/7800-9000bph is adopted to produce detergent, which has been put into use in Lishui, Zhejiang Province.

Lishui NICE line 3 project is the first blowing irrigation line project in the domestic daily chemical industry, creating a precedent for PET bottles in the daily chemical industry and a new milestone in the development of the industry! The project was started in July 2021 and accepted on February 21, 2022. During the implementation of the project, many challenges are faced: thick bottle embryo, no anti-theft ring, many colors, no stiffeners, short cooling time, small workshop space, high efficiency of the whole line, and short production change time of the whole line equipment. All departments of the company have broken through these difficulties one by one. The operation of the production line and engineering services have been recognized and appreciated by customers, and a golden flag has been presented to Tech-Long.



There are differences between daily chemical products and beverage packaging in the production process. The project is designed for square bottles, which are heavy, and the bottle body and cap are often diverse and irregular. Compared with the round bottle type in the beverage industry, it puts forward higher requirements for bottle blowing technology; In terms of mold replacement, the beverage mold is small, the mold base is light, and the mold volume of daily chemical products is large, which is inconvenient to replace. To this end, Tech-Long has adopted the rapid die replacement technology, which speeds up the die replacement speed and reduces the labor intensity of labor; In terms of product characteristics, daily chemical products are products with high viscosity and easy foaming, and there are phenomena such as foaming, wire drawing and dripping during filling. In view of these filling technical difficulties, Tech-Long team has actively tackled them, developed a number of patented technologies, effectively solved these problems, and the equipment is highly intelligent. It is equipped with automatic control technologies such as bottle jam protection, bottle shortage alarm, cover shortage alarm and overload shutdown. In addition, EMS system can realize transparent production of



production line through the combination of information system and production automation.

The first cooperation between Tech-Long and NICE began in early 2000. After more than 20 years of development, the two sides have made remarkable achievements in their respective fields, and there are technical exchanges and business exchanges almost every year. This time, NICE chose to order the whole pet line to produce detergent, which fully proves the high trust and recognition of customers to Tech-Long, and also confirms Tech-Long's unchanged original intention of always paying attention to customers' needs and focusing on customers' interests after decades of development.

The two enterprises with the same innovative and enterprising spirit will forge closer cooperative relations and jointly seek a blueprint for development. In the future, Tech-Long will continue to improve its strength and service quality, better cooperate with customers on the basis of existing cooperation, and create greater value for customers!

技 术 与 加 工 TECHNOLOGY C、PROCESSING

新一代超洁净无臭氧添加矿泉水机型



在新冠疫情的大背景下,食品和饮料行业正面临着 大量的专业挑战,企业需要严格把控生产过程中的 每一个细节,重重把关、层层甄选,确保食品生产环 境的安全卫生,旨在为大众提供优质且健康的产品。 况下,水中不含溴酸盐,但普遍含有溴化物。当用臭

目前,矿泉水行业在生产过程中面临着溴酸盐这一 难题。达意降作为液态包装行业的龙头企业,对此 提出了相应的解决方案。

矿泉水行业存在的食品安全性

在瓶装矿泉水的生产中,若臭氧杀菌方法使用不当, 易导致溴酸盐的产生。因为控制菌落总数与控制溴 酸盐之间在工艺上产生了明显的矛盾,并且会增大 企业的成本压力,所以使溴酸盐成为了目前行业颇 为头痛的问题。

溴酸盐 (通常是溴酸钾) 被毒理学国际癌症研究所 (IARC) 归为2B组致癌物质(可能使人致癌的物 质),许多发达国家已对其限量做出了规定。正常情 氧对水消毒时,溴化物与臭氧反应,氧化后会生成 溴酸盐。国际癌症研究中心(IARC)认为溴酸钾对实 验动物有致癌作用,但溴酸盐对人的致癌作用还不 能肯定,为此将溴酸盐列为对人可能致癌的物质。

国家质检总局开展了有关瓶装水中溴酸盐的国家监 督专项抽查工作,在已经进行了检测的104种瓶装 水中,有13种产品溴酸盐含量超过《生活饮用水卫 生标准》的限量要求。各地质检部门已通知这些产 品的生产企业立即进行整改。

A NEW GENERATION MODEL FOR ULTRA-CLEAN OZONE-FREE MINERAL WATER



解决方案

达意隆干1999年开始生产矿泉水灌装生产线,至 今已有近22年的矿泉水灌装牛产线设备研发 和制造经验。2011年完成了第一代微臭氧添加 (0.05~0.1mg/L) 矿泉水设备的开发,陆续为各大 水企提供了设备。

2020年,我们推出了最新一代无臭氧添加矿泉水机 02安全性高 型,该机型的微生物安全性指标,能耗指标均比上 一代机型上有大幅度提升。不仅可以应用于无臭氧 添加矿泉水场合,并且能耗比起上一代机型降低了 •盖灭菌: 40%以上,目前已经成功应用于国内某客户。

新一代超洁净无臭氧添加矿泉水机型

工艺流程

- 新机型采用吹灌旋组合方式,瓶胚首先经过封闭 式的理胚机进行理胚,排列整齐的胚在进入吹瓶 机前首先会经过瓶口UV杀菌段,对瓶口进行紫外 杀菌,之后会进行离子除尘,对瓶胚内的杂物颗 粒讲行去除。
- •去完尘的瓶胚利用吹瓶机的加温机热量进行双氧 水瓶胚干法杀菌。杀完菌的瓶胚经过无菌高压气

吹瓶成型后送入灌装机进行灌装旋盖流程。

•盖的处理:首先对盖进行离子除尘,去除盖内的颗 粒杂物,然后进行脉冲强光杀菌,杀完菌后的盖子 诵过无菌低压气进行送盖。

新一代机型的优势

01节能降耗

- •瓶胚干法杀菌中的瓶胚尺寸相对固定,灭菌空间 小,相比瓶子干法、湿法杀菌,药耗和能耗节省非 常显著。
- •瓶胚干法去残留利用吹瓶加温机本身的热量对瓶 胚的双氧水进行加热蒸发去残留,无需另外加热 风烘干或无菌水冲洗。

- •瓶灭菌:
- 无需考虑热变形、冲洗死角问题, 灭菌效率高;
- - 采用专利设计的脉冲强光杀菌,节能降耗的同时 可以保证高灭菌效;
- 包材污染控制:
- 吹灌旋的模式从源头上控制瓶的污染,制出即使 用的模式,杜绝了瓶子转运过程的二次污染;
- 灌装过程保护:
- 1) 机组整体采用百级净化;

2) 灌旋主机采用液封: 流量计电器元件阀门等不 易清洗且容易造成二次污染的部件都放置于机器 外部,百级环境内只留少量元件,从源头上减少灌 装环境被污染的可能;



3) 配置自动COP/SOP, 主机内部无需人工清洗 消毒, 减少人为污染风险, 延长了设备的连续运 行周期。

03极具竞争力

• 圈形大小代表设备的投入成本

 传统的超洁净设备,虽然在设备投入成本上较小, 但是在安全性和生产成本上都很差,而无菌设备 虽然在安全性上也能满足我们无臭氧添加矿泉水 的生产要求,但是其设备投入成本极高,并且设备 生产成本上也不占优势。

达意隆推出的超洁净无臭氧添加矿泉水设备,不仅 设备投入适中,而且在安全性和设备生产成本上极 具优势和竞争力,能够在降低设备生产能耗的同时, 极大提高低无臭氧矿泉水生产的安全性。在将来, 随着消费者安全意识的增强和国家标准的持续改进, 无臭氧矿泉水工艺会越来越受到重视。

In the context of COVID-19, the food and beverage industry is facing a large number of professional challenges. Enterprises need to strictly control every detail of the production process, and ensure the safety and hygiene of the food production environment, aiming to provide high-quality and healthy products to the public.

At present, the mineral water industry is faced with bromate exceeding in the production process. As a leading enterprise in liquid packaging industry, Tech-Long Packaging Machinery Co., Ltd. has put forward corresponding solutions to this problem.

Food safety in mineral water industry

In the production of bottled mineral water, it is easy to produce bromate if ozone sterilization method is not used properly. Because there is an obvious contradiction between the control of the total number of bacteria and the control of bromate in the process, and it will increase the cost pressure of enterprises, bromate has

become a relatively big problem in the industry. Bromate (usually potassium bromate) is classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC) in toxicology and limits have been set in many developed countries. Under normal circumstances, water does not contain bromate, but bromide is common. When water is disinfected with ozone bromate reacts with ozone and is oxidized to form bromate. The International Center for Research on Cancer (IARC) believes that potassium bromate has carcinogenic effect on experimental animals, but the carcinogenic effect on humans is not certain, so bromate is listed as a possible carcinogenic substance to humans.

The General Administration of Quality Supervision(AQSIQ) has launched a special spot check on bromate in bottled water. There are 104 kinds of bottled water that have been tested, 13 products contain bromate that exceeds the limit set by the Sanitary Standards for Drinking Water. Local quality inspection authorities have informed the manufacturers of these products to rectify the situation immediately.

The solution

Tech-Long has began to produce mineral water filling production line in 1999. Up to now, it has nearly 22 years of experience in R&D and manufacturing of mineral water filling production line equipment. In 2011, the company completed the development of the first generation of microozone-added (0.05 ~ 0.1mg/L) mineral water equipment, and successively provided equipment for major water enterprises.

In 2020, we launched the latest generation of ozone-free mineral water models, whose microbial safety and energy consumption indexes have been greatly improved compared with the previous generation models. It can not only be applied to situations without ozoneadded mineral water, but also reduce energy consumption by more than 40% compared with the previous generation model. It has been successfully applied to a domestic customer.

A new generation models for ultra-clean ozone-free mineral water

The process

- The new model adopts the combination of blowing, filling and capping. The preforms are first treated by a closed preform unscrambler. The neatly arranged preforms will first go through the bottle neck UV sterilization section before entering the blowing machine, and then the ion dust removal will be carried out to remove the sundries in the preforms.
- Dedusted preforms are sterilized by H202 dry method using the heat of the oven of the blowing machine. The sterilized preform is formed by aseptic high-pressure air blowing and sent to the filling machine for filling and capping process.
- Cap treatment: firstly, ion dust removal was carried out on the cap to remove the particles



and sundries in the cap, and then pulsed strong light sterilization was carried out. After sterilization, the cap was feded by the sterile low pressure air.

Advantages of new generation models

01 Energy Saving and Consumption Reduction

- In preform dry sterilization, the preform size is relatively fixed and the sterilization space is small. Compared with bottle dry sterilization and wet sterilization, the drug and energy consumption are significantly saved.
- Residue removal by preform dry method using the heat of the oven of blower to heat and evaporate H2O2 of preform to remove residue, without additional heating air drying or sterile water washing.

02 High Security • Bottle sterilization: No need to consider the problem of
deformation by heating and ignoring flushing
dead angle, it has high sterilization efficiency;
Cap sterilization:

The patent design of pulse strong light sterilization, can ensure high sterilization effect with less energy and consumption; • Packaging material pollution control:

The model of BFC combi controls the bottle pollution from the source, and it can come into use as soon as it is produced, which eliminates the secondary pollution in the bottle transfering process.

• Filling process protection:

1) The whole unit adopts hundred-grade purification;

2) The filling machine adopts liquid seal: the components that are difficult to clean and easy to cause secondary pollution, such as flow meter electrical components valves, are placed outside the machine, leaving only a



small number of components in the hundredgrade environment, reducing the possibility of pollution of the filling environment from the source;

3) Automatic COP/SOP configuration, no manual cleaning and disinfection inside the host machine, reduce the risk of artificial pollution and prolong the continuous operation cycle of the equipment.

03 Very Competitive Overall

- The circle size represents the input cost of the equipment
- Traditional ultra-clean equipment, although low in equipment investment cost, is poor in safety and production cost, and aseptic equipment can meet our production requirements of ozone-free mineral water in safety, but its equipment investment cost is very high, and equipment production cost is

not dominant.

The ultra-clean ozone-free mineral water equipment launched by Tech-Long not only has moderate investment in equipment, but also has advantages and competitiveness in safety and equipment production cost, which can greatly improve the safety of ozone-free or low mineral water production while reducing energy consumption of equipment. In the future, with the enhancement of consumer's safety awareness and the continuous improvement of national standards, ozone-free mineral water process will be paid more and more attention.

ogy and Processing 技术与加工

低温鲜奶延长货架期 解决方案 The Solution to Extend Shelf Life of Low Temperature Fresh Milk

0

5加工 Technology and Processing

3

9



一、低温鲜奶发展背景

随着生鲜电商崛起,冷链生鲜物流日益完善,需要 根据华经情报网统计:目前低温鲜奶占整个国内乳 冷藏的"低温鲜奶"在我国日益普及。低温鲜奶其风 失也比常温灭菌奶慢。

制品市场约8%,而UHT常温灭菌奶在22%左右,但 味接近新鲜牛乳,不但喝起来口感更"鲜",营养流 由于鲜奶营养、新鲜的特点符合消费者的健康饮奶 需求,自2018年以来鲜奶年销售额都在以10%以上 的速度快速增长,已经成为乳制品行业不容忽视的 黄金赛道。

2019年乳制品细分市场销售份额



二、目前制约低温鲜奶发展主要因素(痛点)

1、产品货架期

受限于目前的生产技术条件,市场上大部分低温鲜 奶的保质期一般都在3~7天(部分可达10天以上), 货架期短导致大部分的低温鲜奶带有地域性。

2、生产成本偏高

除了产品的推广费用、奶源成本、物流成本、人力成 本外,传统的低温鲜奶的生产成本由包材成本和生 产设备能耗成本构成。

三、传统瓶子干法生产技术存在的缺点

1、工艺流程简述

传统的超洁净瓶子工艺流程如下: 瓶子通过上瓶平 台/风道/理瓶机送入灌装机的双氧水杀菌工位进行 杀菌,接着瓶子进入热空气烘干工位,对瓶内的双 氧水进行蒸发烘干去残留,杀完菌的瓶子进入灌装、 旋盖机进行产品的灌装封盖过程;盖子的杀菌通常 采用紫外或者脉冲强光光谱杀菌。

2、安全性问题(影响货架期)

1) 光谱/紫外杀菌方式存在阴影效应, 对盖子螺纹 处光无法直射的地方的灭菌效果有限,并且光灭菌 方式对霉菌的杀灭效果较差;

2) 瓶子送入灌装机的过程只能选择理瓶机、风道或 人工上瓶形式,瓶子转运过程中难以避免受到二次 污染,并且干式杀菌缺少机械冲洗过程,对转运过 程产生的污染杂物难以去除,存在安全隐患;

3) 大瓶型(1L以上家庭装瓶型) 灭菌,由于内部空

间大,效率难以得到保证;

4) 设备外部清洗消毒通常采用手动方式,存在人工 清洗死角;

5) 灌、旋主机整机放在主机百级空间内,设备内部 灌装环境难以保证,生产过程中容易受到环境污染

3、能耗(影响生产成本)

1) 瓶子双氧水注入后, 需要烘干工位, 烘干电耗消 耗巨大;

2) 由于存在热杀菌和烘干工位, 瓶子需要受热, 因 此瓶子克重受限,无法做低克重降低包材成本; 3) 生产大瓶型(1L以上家庭装瓶型) 产品在能耗 (药耗、加热电耗)上非常巨大。

因此,在目前生产技术条件下,生产成本偏高和货架 期短是限制低温鲜奶发展的主要因素。

四、我司推出新的解决方案

1、合适的包材选择,降低包材成本 包材选用PET瓶,相对传统的HDPE瓶,PET具有以 下优点:



克重降低;

2) 相比HDPE, 韧性、强度更高, 密封性能更好, 产 品不漏,损耗也更小;

3) 阻氧性比HDPE极大提高, 口感风味保存更好; 在 相同的存储条件下货架期比HDPE瓶更长; 4) 可添加色母,实现高阻光性,对一些光敏性产品 有很好的隔光效果。

2、新的设备组合、新的工艺路线

达意隆超洁净瓶胚干法杀菌吹灌旋工艺流程:

采用吹灌旋组合方式,瓶胚首先经过封闭式的理胚 机进行理胚,排列整齐的胚在进入吹瓶机前首先会 经过瓶口UV杀菌段,对瓶口进行紫外杀菌,之后会 进行离子除尘,对瓶胚内的杂物颗粒进行去除;去 完尘的瓶胚利用吹瓶机的加温机热量进行双氧水 瓶胚干法杀菌。杀完菌的瓶胚经过无菌高压气吹瓶 成型后送入灌装机进行灌装旋盖流程。

盖的处理首先对盖进行离子除尘,去除盖内的颗粒 杂物,然后进行双氧水干法杀菌,杀完菌后的盖子 通过无菌低压气进行吹扫和送盖。

1) 原材料成本比HDPE更低,并且在相同容量下,瓶 3、降低设备能耗,提高产品安全性,延长货架期

能耗优势:

1) 瓶胚干法杀菌瓶胚尺寸相对固定,耗量在 2~6ml/min,相比瓶子干法杀菌,药耗节省非常显 著;

2) 瓶胚干法去残留利用吹瓶加温机本身的热量对 瓶胚的双氧水进行加热蒸发去残留,无需另外加热 风烘干。

安全性优势:

1) 瓶灭菌: 瓶子干法灭菌需要考虑瓶子厚度, 瓶子 太薄会热变形, 而瓶胚灭菌无需考虑灭菌热变形的 问题,瓶灭菌效率根据需求可以稳定达到3~5log; 2) 盖灭菌:采用过氧化氢蒸汽杀菌,气态过氧化氢 形式对盖子覆盖无死角,并且过氧化氢杀菌具有广 谱性,杀菌效率稳定达到3log以上;

3) 包材污染控制: 吹灌旋的模式从源头上控制瓶的 污染:制出即使用的模式,杜绝了瓶子转运过程的 二次污染;

4) 灌装过程保护: 机组整体带百级净化, 灌旋主机 带液封:流量计电器元件阀门等不易清洗且容易造 成二次污染的部件都放置于机器外部,百级环境内



只留少量元件,从源头上减少灌装环境被污染的可 能;配置自动COP/SOP,主机内部无需人工清洗消 毒,减少人为污染风险,延长了设备的连续运行周期。

产品货架期:

从传统的3~7天提高至21天。

五、设备选择

圈形大小代表设备的投入成本:

传统的超洁净设备,虽然在设备投入成本上较小, 但是在安全性和生产成本上都很差,而无菌设备虽 然在安全性上也能满足我们低温鲜奶延长货架期的 要求,但是其设备投入成本极高,并且设备生产成 本上也不占优势。

达意隆推出的超洁净瓶胚干法杀菌吹灌旋设备,不 仅设备投入适中,而且在安全性和设备生产成本上 极具优势和竞争力,能够在降低设备生产能耗的同 时极大提高低温鲜奶产品的货架期,是各大乳品企 业生产长货架期低温鲜奶产品的首选。

I. Development background of lowtemperature fresh milk

With the rise of fresh e-commerce, cold chain fresh logistics is increasingly perfect, the need for cold storage of "low temperature fresh milk" is increasingly popular in China. The flavor of low-temperature fresh milk product is similar to that of fresh cow milk, which not only tastes "fresh" but also loses nutrients more slowly than that of normal temperature sterilized milk. According to the statistics of Huajing Intelligence Network: Now low-temperature milk accounted for about 8% of the whole domestic dairy market and UHT normal temperature mainly at about 22%, but as a result of characteristic of nutrition and fresh of fresh milk can meet the demand of consumer's health drinking milk, fresh milk since 2018 in annual sales are in rapid growth at a speed of more than 10%. It has become a gold circuit of



dairy industry that should not be ignored.

II. Main factors restricting the development of low-temperature fresh milk at present (pain point)

1. Product shelf life

Limited by the current production technology conditions, the shelf life of most lowtemperature fresh milk on the market is generally 3-7 days (some can reach more than 10 days), resulting in the short shelf life of most low-temperature fresh milk with regional characteristics.

2. High production cost

In addition to product promotion cost, milk source cost, logistics cost and labor cost, the production cost of traditional low-temperature fresh milk also consists of packaging material cost and energy consumption cost of production equipment.

III. The disadvantages of traditional bottle with dry method

1. Brief introduction of technological process

Traditional ultra-clean bottle process is as follows: bottles go through platform on the bottle/air conveyor/bottle unscrambler into the H2O2 sterilization workstation of filler, then the bottles go into the hot air drying station to have residual evaporation and drying for removal of H2O2. The sterilized bottle enters the filler and capper for the filling and capping process; The sterilization of the cap usually adopts ultraviolet or pulsed strong light spectrum sterilization. The picture

2. Safety problems (affecting shelf life)

1) Spectral/ultraviolet sterilization method has shadow effect, which has limited sterilization effect on the place where the light cannot be directly shooted at the cap thread, and the light sterilization method has poor killing effect on mold;

2) Bottles can only be sent into the filling machine in the form of bottle unscrambler, air conveyor or manual bottling. It is difficult to avoid secondary pollution in the process of bottle transfer, and dry sterilization lacks mechanical washing process, which makes it difficult to remove the contaminated debris generated in the process of transfer, causing potential safety hazards;

3) Sterilization of large bottle type (more than 1L family bottle type), due to large internal space, it is difficult to ensure the efficiency;

4) The external cleaning and sterilization of the equipment is usually carried out manually, and there is a dead angle of manual cleaning;

5) The host machine of the filling and blowing combi is placed in the hundred-grade level space, so the internal filling environment of the equipment is difficult to ensure, and the production process is prone to environmental pollution

3. Energy consumption (affecting production costs)

1) After H2O2 is injected into the bottle, the drying station is needed, and the drying power consumption is huge;

2) Because there are hot sterilization and drying stations, the bottles need to be heated, so the weight of the bottles is limited, so it is impossible to reduce the cost of packaging materials with low weight;

3) The consumption of energy (medicine consumption, heating power consumption) is very large in the production of large bottle type (family bottle type with more than 1L).

Therefore, under the current production technology, high production cost and short shelf life are the main factors that limit the development of low-temperature fresh milk.

Iv. Our Company Launches New Solutions

1. Suitable selection of packaging materials, reduce the cost of packaging materials Compared with the traditional HDPE bottle, PET has the following advantages:

1) The cost of raw materials is lower than HDPE, and the bottle weight is reduced under the same capacity;

2) Compared with HDPE, toughness, strength is higher, sealing performance is better, the product does not leak, loss is smaller;

3) Higher oxygen resistance than HDPE, better taste and flavor preservation; Longer shelf life than HDPE bottles under the same storage conditions;

4) Color masterbatch can be added to achieve high light resistance and good light isolation effect for some photosensitive products.

2. new equipment combination and process route

Tech-Long ultra-clean preform dry sterilization method process for BFC

Process flow:

Using the BFC combi, the preform is first treated by the closed preform unscrambler. The neatly arranged preforms will first pass through the bottle mouth UV sterilization section before entering the blowing machine, and the bottle mouth will be sterilized by UV. After that, the ion dust removal will be carried out to remove the sundries in the preform. The dedusted preforms are sterilized by H2O2 preform dry method using the heat of the oven of the blowing machine. The sterilized preforms are formed by aseptic high-pressure air blowing and then sent to the filler for filling and capping process.

The treatment of the cap is firstly ion dust removal will wipe off particles in the cap, and then proceed with H2O2 dry sterilization, after the sterilization the caps will go through sterile low pressure air for blowing and sending.

3. Reduce equipment consumption, improve product safety, prolong shelf life

Consumption advantages:

1) The size of the preforms that using dry sterilization method are relatively fixed, and the consumption is 2~6ml/min. Comparing with the bottle dry sterilization, the drug consumption effect is very significant;

2) Removing residue of preform by dry method is using the heat of the bottle blowing heater itself to heat and evaporate the H2O2 of preforms to remove residue, without additional heating air drying.

Security advantages:

1) Bottle sterilization: bottle sterilization with dry method needs to consider the thickness of the bottle. The bottle which is too thin will be deformation by heat, while preform sterilization does not need to consider the problem, bottle sterilization efficiency can reach 3~5log steadily according to the demand;

2) Cap sterilization: If H2O2 steam sterilization is adopted there will have no dead angle for cap covering in the form of gaseous H2O2, and H2O2 sterilization has broad spectrum, whose efficiency is more than 3log;

3) Pollution control of packaging materials: the BFC combi mode controls bottle pollution from the source: the mode of utiliziing as soon as producing eliminates secondary pollution in the process of bottle transfer;

4) Protection of filling process: the whole combi is equipped with hundred-grade purification, and the host machine is equipped with liquid

seal: the components that are difficult to clean and easy to cause secondary pollution, such as flow meter electrical components valves, are placed outside the machine, and only a **5. Equipment selection** few components are left in the hundred-grade environment, thus reducing the possibility of pollution of the filling environment from the source; Equiped with automatic COP/SOP, no manual cleaning and disinfection inside the host machine, reduce the risk of artificial pollution, prolong the continuous operation cycle of the equipment.

Product shelf life:

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Improved from the traditional 3~7 days to 21 days.

The circle size represents the input cost of the equipment

Traditional ultra-clean equipment, although in terms of equipment investment cost is low, but its safety and production cost are poor. Though the safety performance of aseptic equipment can also meet our requirements of lowtemperature fresh milk shelf life extension, but its equipment investment cost is very high, and equipment production cost is not dominant.

With the launch of the BFC equipment of ultraclean dry method sterilization for preform, not only investment of equipment is moderate, but also the cost of production safety and equipment have advantages and competitiveness. It can reduce energy consumption of production, and at the same time greatly enhance the shelf life of milk products in low temperature. It is a major choice of dairy companies whose products is low-temperature fresh milk with long shelf life.

ARKET NEWS市场 动态

A S E P T I C COLD FILLING PROMÓTES

DEVELOPMENT OF PLANT FOOD

无菌冷灌装推动植物性食品发展



2021年1月22日, Agrana Fruit发布了2021年全球餐饮业的全球消费趋势, 以植物, 肠道健康和免疫为主 题。新冠疫情加速了一些消费者趋势,而其他趋势则有所放缓。新冠疫情带来的变化已极大地影响了食 品和营养行业,这种变化将持续到2021年。

植物的力量

消费者对健康和可持续性的日益关注增加了人们对 在新冠疫情的推动下,植物性食品的热度不断上 植物性食品的兴趣,在Agrana Fruit的消费者研究 升,越来越多消费者关注相关的产品,如植物性乳 中,确定植物性食品为2021年大趋势的关键主题制品。这对技术和设备有一定要求,而无菌设备和 之一。消费者研究还显示,几乎90%的消费者定期 无菌技术恰能满足这些要求。对此,达意隆提供了 (至少每月一次)食用植物性乳制品。有些消费者 相应的解决方案。 不是素食主义者,但他们也会在饮食中加入更多植 物性食品。

解决方案





达意隆新一代PET瓶 无菌冷灌装生产线 采用过氧乙酸湿法杀菌冷工艺

达意隆湿法杀菌工艺的亮点:

- •方案成熟、工艺可靠;
- •附加的清洗效果:杀菌时候由于是液态方式,可以 形成机械清洗作用;
- 用于瓶和盖杀菌的过氧乙酸可以重复使用,节约资源;
- •可采取吹灌旋组合方式,设备结构紧凑,实现最大的场地利用;
- •还能避免风道二次污染,从无菌流程源头提高瓶 子清洁度;
- 流程监控:存储所有的工艺步骤,记录生产的流程数据;预留接口,可接入MES生产管理系统。

未来,植物性食品的发展趋势会越来越显著,达意 隆将继续顺应市场需求,推出相应的解决方案,始 终致力于饮料包装市场的开发与创新。



On January 22, 2021, Agrana Fruit reported the 2021 Global Consumption Trends for the Global Catering Industry, featuring plants, gut health and immunity. The COVID-19 pandemic has accelerated some consumption trends, while others have slowed. The food and nutrition industries are already being dramatically affected by changes casued by the COVID-19 pandemic, and these changes will continue until 2021.

THE POWER OF PLANTS

Growing consumer concern for health and sustainability has increased interest in plant foods. Identified in Agrana Fruit consumer research plant foods is one of the key themes for megatrend in 2021. Consumer studies also show that almost 90 percent of consumers eat plant dairy products regularly (at least once a month). Some consumers are not vegetarians, but they are also incorporating more plant foods into their diets.



THE SOLUTION

Driven by the COVID-19 pandemic, the popularity of plant food is rising, and more consumers are paying attention to related products, such as plant dairy products. This has certain requirements for technology and equipment, and aseptic equipment and technology can meet these requirements. To this, Tech-Long provides a corresponding solution.

TECH-LONG NEW GENERATION PET BOTTLE ASEPTIC COLD FILLING PRODUCTION LINE

ADOPT PEROXYACETIC ACID WET STERILIZATION AND COOLING PROCESS

Highlights of Tech-Long wet sterilization process:

- Mature scheme and reliable process;
- Additional cleaning effect: because the



method of sterilization is liquid, it can form mechanical cleaning effect;

- The peroxyacetic acid used for sterilization of bottles and caps can be reused, saving resources;
- Can adopt the BFC combi, make the equipment have compact structure that can achieve maximum site utilization;
- It can also avoid secondary pollution of air tunnel and improve bottle cleanliness from the source of aseptic process;
- Process monitoring: store all process steps and record production process data; Reserved ports for access to MES production management system.

In the future, the development trend of plant food will become more and more significant. Tech-Long will continue to adapt to market demand, introduce corresponding solutions, and always commit to the development and innovation of beverage packaging market.

APPLICATION OF ULTRA-CLEAN

超洁净设备在乳品行业中的应用



近年来,中国乳品行业正在蓬勃发展,产量和总产 值在最近10年内增长了10倍以上,逐渐吸引了世界 的目光。尽管相较于发达国家,中国乳制品行业起 步较晚,但得益于中国快速发展的经济水平及庞 大的人口基数,乳制品渗透率快速提升,行业迅猛 发展。

2019年,中国乳制品市场规模达4284亿人民币(折 合619亿美元),位列全球第二。当下,中国乳制品 市场已由渗透率快速提升阶段过渡至目前的价增驱 动阶段。

2020年初,乳制品受疫情影响较大,全年上市企 业实现收入增长3.63%、净利润下滑14.49%,盈 利受疫情、成本等因素影响。后疫情时代,消费者 对于乳制品需求加大,21年Q1板块实现收入、利 润同增35.89%、199.36%,较19Q1同期分别增长 22.92%、22.20%,行业一季度取得良好开局。

消费者加强了对包装使用便捷程度及可持续发展的 关注,市场上陆续出售PET瓶装的液态乳制品。

- 1 PET瓶原材料成本低,并且在相同容量下,瓶克重 降低,节省成本,产量提升,保护环境;
- 2 PET可以吹塑成各种形状和尺寸,标签设计多样 化,提供比纸盒更多的可能性,以此增加品牌认知 度;
- 3 PET阻氧性比高密度聚乙烯包装 (HDPE) 极大提高, 口感风味保存更好, 在相同的存储条件下货架

期比HDPE瓶更长; 4 PET可添加色母,实现高阻光性,对一些光敏性产 品有很好的隔光效果; 5 PET材质结实、韧性,易于运输,损耗小。

达意隆有着多年的包装经验,其中,超洁净冷链干 法杀菌工艺深得乳企青睐。超洁净冷链干法灌装系 统使用气态形式杀菌,不仅杀菌强度高,而且包材 内外表面全面覆盖,均匀接触,无任何杀菌死角。该 系统还配有流程监控,可储存所有的工艺步骤、记 录生产的流程数据。

In recent years, China's dairy industry is booming. The output and total output value have increased more than 10 times in the last 10 years, gradually attracting the attention of the world. Although China's dairy industry started late compared with developed countries, thanks to China's rapid economic development and huge population base, dairy penetration rate has risen rapidly and the industry has developed fast.

China's dairy market reached 428.4 billion RMB (\$61.9 billion) in 2019, ranking second in the world. At present, China's dairy market has transitioned from the stage of rapid increase in penetration to the current stage of price increase driving. At the beginning of 2020, dairy products were greatly affected by the epidemic. The annual revenue of listed companies increased by 3.63% but the net profit decreased by 14.49%, and the profit was affected by the epidemic and cost. In the post-epidemic era, consumers have increased their demand for dairy products. In 2021, the revenue and profit of Q1 segment increased by 35.89% and 199.36%. Compared with the same period of 2019 Q1, the growth was 22.92% and 22.20% respectively. The industry got off to a good start in the first quarter.

Consumers have paid more attention to the convenience and sustainable development of packaging, and liquid dairy products in PET bottles have been sold in the market.

- 1 The raw material cost of PET bottle is low, and under the same capacity, the bottle weight is reduced, cost is saved, production is increased, and it is environmental friendly;
- 2 PET can be blown into a variety of shapes and sizes, and the label design is diversified to provide more possibilities than paper, so as to increase brand recognition;
- 3 The oxygen resistance of PET is greatly

improved compared with HDPE packaging, taste and flavor preservation is better, and the shelf life is longer than HDPE bottles under the same storage conditions;

- 4 PET can add master color to achieve high light resistance, which can provide some photosensitive products for a good light isolation effect;
- 5 PET material is strong, tough, easy to transport with low loss.

Tech-Long has many years of packaging experience, among them, ultra-clean cold chain dry sterilization process is favored by dairy enterprises. Ultra-clean cold chain dry filling system uses gaseous sterilization, which not only has high sterilization intensity, but also fully covers the inner and outer surface of the package material. it has uniform contact without any dead Angle of sterilization. The system is also equipped with process monitoring, which can store all process steps and record production process data.

FOOD AND BEVERAGE ENTERPRISES: DEEPLY PRACTICE THE CONCEPT OF SUSTAINABLE DEVELOPMENT

食品饮料企业:

深入践行可持续发展理念





PET是饮料和硬质食品包装中最常用的包装材料, 它有着耐用和轻巧的特质,可以有效运输产品,不需 要经过二次包装,从而大幅减少了产品运输过程中 的燃料需求和温室气体排放。

据了解,在英国,大约72%的饮料包装、高达92%的 瓶装水,选择PET材料。不少大型饮料公司已制定企 业发展目标,以确保到2025年所有包装都能100% 回收。很多公司的目标是提高可循环利用的比例, PET is the most commonly used packaging 从2020年的25%提高到2025年的50%。

达意隆PET全自动旋转式吹瓶机是国内首家研制生 产的高速全自动旋转式吹瓶机,具有自动化、智能 化程度高,机器性能稳定可靠,生产效率高、成本 低、产品不受中间污染等特点,广泛用于生产多种 液态产品的PET瓶。

作为"绿色工厂"和"绿色供应链管理企业"的一员,

持续关注行业动态,运用信息技术加强节能减排管 理,推进绿色制造与智能制造的融合发展。

未来,达意隆将继续践行可持续发展理念,在液态 产品包装机械行业内树立绿色发展典范,与客户及 合作伙伴构建可持续的商业模式,实现合作共赢, 为保护地球环境贡献力量。

material in beverage and hard food packaging. It is durable and lightweight, and can effectively transport products without the need for secondary packaging, thus greatly reducing fuel requirements and greenhouse gas emissions during product transportation.

It is understood that in the UK, about 72% of beverage packaging, up to 92% of bottled 达意隆始终坚持绿色、节能、低碳的企业发展战略, water, choose PET materials. A number of large



beverage companies have set corporate targets to ensure 100% recycling of all packaging by 2025. Many aim to increase the proportion of recyclable from 25% by 2020 to 50% by 2025.

Tech-Long PET automatic rotary blowing machine is the first domestic high-speed automatic rotary blowing machine to production, with high degree of automation, intelligence, stability and reliable machine performance, high production efficiency, low cost, preventing from intermediate pollution and other characteristics, widely used in the production of a variety of liquid products of PET bottles.

As a member of "green factory" and "green supply chain management enterprise", Tech-Long always adheres to the enterprise development strategy of green, energy saving and low carbon, continuously pays attention to industry trends, using information technology to achieve energy saving and emission reduction management, and promotes the integrated development of green manufacturing and intelligent manufacturing.

In the future, Tech-Long will continue to practice the concept of sustainable development, set a model of green development in the liquid packaging machinery industry, and build a sustainable business model with customers and partners to achieve win-win cooperation and contribute to the protection of the earth's environment.



漫山遍野花如海 (摄影者: **洪峰** 达意隆营销中心) The flowers all over the mountains are like the sea[Photographer: Hong Feng Marketing Center]

▶ 广州达意隆包装机械股份有限公司 ■ECH-LONG TECH-LONG PACKAGING MACHINERY CO.,LTD.

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