

2020

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

TSINGTAO BREWERY CO., LTD.





About this report

Scope of reporting

This is the 13th annual sustainable development report published by Tsingtao Brewery Co., Ltd. The data and information contained herein cover the operations and sustainable development practices of 60 wholly-owned / holding subsidiaries in China, and two jointly owned / operated breweries under Tsingtao Brewery Co., Ltd. from 1 January to 31 December, 2020. To ensure continuity and for the convenience of comparison, some of the data and information provided are not limited within the year 2020.

Editorial policy

This report is drafted in compliance with the *ESG Reporting Guide* issued by the HKEX, with reference to the *Global Reporting Initiative (GRI) G4*, and the *Corporate Environmental Reporting Guidelines of Shandong Province*. Also, the report is prepared in accordance with the *Social Responsibility and Disclosure of EP Information Guidelines* established by the Shanghai Stock Exchange as well as relevant requirements on sustainable development reporting and publishing drafted by the State-owned Assets Supervision and Administration Commission.

Content selection

This report focuses on the responsibilities of Tsingtao Brewery with regard to the sustainable development obligations to products, environment, community, employees and business partners, based on principles such as significance, quantification and consistency with the *ESG Reporting Guide* and accuracy, validity, significance, comparability etc. under the *Global Reporting Initiative (GRI) G4*. The collection of data and information in this report has been conducted in accordance with the company's existing working processes.

Explanation of short titles

Tsingtao Brewery Co Ltd. is hereinafter referred to as "Tsingtao Brewery", "the company" or "we" in the report. Tsingtao Brewery owns the copyright on this report.

The way we publish this report

The report is available in print and online. For online edition, please visit <http://www.tsingtao.com.cn>.



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Sustainable development indicators of Tsingtao Brewery



In 2020, Tsingtao Brewery overcame the negative influences by the COVID-19 with endeavouring spirit. The company assumed the "double success" in both epidemic prevention and control and quality development, with the extension from products to scenarios, the expansion from industry to ecosystem, the leap forward from single-track to multiple-track, and the

Economic responsibility

The company always attaches great importance to the returns for investors. Since the company was listed in 1993, the total cash

dividend has reached **7.9** billion yuan in the past 24 years.

Sales volume / 10,000 kl

782

Sales revenue /
hundred million yuan

277.60

Net profit attributable to shareholders
of the parent company / hundred
million yuan

22.01

EPS / yuan

1.629

transformation from traditional manufacturing to industrial internet.

Tsingtao Brewery will seize the opportunity for sustainable development, create value for consumers with more advanced innovation, and shoulder the responsibilities with multi-dimensional growth, making life better for all.

Environmental responsibility

In comparison with the figure in 2019, the water consumption per unit product dropped by

1.4%



In comparison with the figure in 2019, the comprehensive energy consumption per unit product dropped by

8.0%



In comparison with the figure in 2019, the CO₂ recovery per kl of cold wort in 2019 increased by

1.02%



Social responsibility

In 2020 Tsingtao Brewery spent **10.81** million yuan in cash and **3.03** million yuan in supplies for the prevention and control of the COVID-19.

Employees helped by the "Employee Care Fund": **17** people with a total sum of **630,000** yuan



Message from the Chairman



The year 2020 witnessed Tsingtao Brewery's shining new achievement in business outcome amid the challenging epidemic. The company has successfully completed all tasks for the 13th Five-Year Plan period and is now on a path of quality development.

The year 2021 is a new historical start of the 14th Five-Year Plan period for the company to open a new chapter of quality development with full confidence. Tsingtao Brewery will unswervingly implement the "leap forward with high-quality strategy", and continue to create more value for consumers, employees, investors, value chain partners, all sectors of society and communities.



Starting a new journey to quality development

Sticking to the direction of high quality Assuming more resilience for sustainable development

At the beginning of 2020, the brewery industry was struck by the epidemic and major offline consumption channels were suddenly in a state of shock. Tsingtao Brewery responded actively with a series of innovative measures for promotion including the “three offline actions” and the “three online arrangements”. New products were developed and new consumption scenarios were created with consumer-centred way of thinking. Under the guidance of green and sustainable development concept, the company initiated “ten investment operations”, kept optimising existing market and planning for increments with many branch breweries upgraded and expanded, and steadily advanced in the course of replacing old growth drivers with new ones. Amid the epidemic, Tsingtao Brewery stepped out for reform and launched the share incentive plan which was promised in 2014. With key personnel sharing the benefits and risks with the company, the measure has closely connected employees and the company’s goals for high-quality development.

We stick to the direction of high-quality development and have assumed the “double success” in both epidemic prevention and control and quality development. In spite of the epidemic, Tsingtao Brewery has recorded a business income of 27.76 billion yuan with 7.823 million kilolitres of products sold, and a record-breaking 2.2 billion yuan in net profit attributable to shareholders of the listed company. The company’s brand value amounted to 179.285 billion yuan, leading China’s brewery industry for 17 consecutive years.

We fully understand that with high-quality development as the main theme, the company will become more resilient in the course of sustainable development.

Standing on the starting point of the new journey, Tsingtao Brewery will unswervingly implement the “leap forward with high-quality strategy”, and pursue more sustainable development with high quality.

Creating joy for life Benefiting consumers

Tsingtao Brewery is always driven by the sense of meeting consumers’ demands. In July 2020 the company promoted a series of new products with craftsmanship including the Tsingtao Centennial Journey and the Tsingtao Amber Lager, in order to fulfil the need for consumption upgrading. In December 2020, the “Snow Tin” specially designed for the Olympic Winter Games Beijing 2022 was developed, connecting the beer to the Olympic spirit.

In 2020 Tsingtao Brewery opened over 200 restaurants under the brand of TSINGTAO 1903. Interactions were promoted between consumers and high-end, characterised and stylish products through these restaurants. A new way integrating advanced manufacturing and modern service industry is under exploration.

We deeply understand that the basic requirements of consumers must be met, as well as the change and potential of the consumers’ demands must be correctly observed before the company can grow.

We will continue carrying out the research and development capability of our national-level key laboratory, creating value for consumers with transition from “basic quality + featured quality” to “charming quality”.

Shouldering the new responsibilities as the “master of the industrial chain” Growing with the industrial chain

In 2020, Tsingtao Brewery pushed forward its industrial internet construction, launched the strategy of “integrating platform resources for high-quality leap forward”, bringing high-quality development to the company itself and modernising the industrial chain.

Tsingtao Brewery will continue to promote the reform of efficiency with innovation-driven measures, carry out the quality upgrading plan with supply side reform, integrate platform resources, expand the industrial chain, and make different business sectors complement each other. The company will further push forward the construction of industrial internet, promote continued transformation and upgrading along the industrial chain’s upstream and downstream sectors, and achieve all-win development in a healthy and sustainable manner.

Taking responsibility as the mission Creating value for the society

In 2020, we performed our social responsibility with a series of actions. In the critical moment when the whole nation was battling the COVID-19, we donated 10.81 million yuan in cash and 3.03 yuan in supplies for the prevention and control of the epidemic. We also participated in actions including poverty reduction in pairs, initiating responsible drinking, caring for the environment, establishing scholarships, caring for the community and bringing warmth to those in need.

The year 2021 marks the beginning of the 14th Five-Year Plan period. In the great course of implementing national strategies in developing real economy, improving manufacturing and constructing new development paradigm, we are fully confident to open a new chapter for high-quality development, and keep marching forward for a greener, better and more harmonious future.

Chairman, Tsingtao Brewery Co., Ltd.



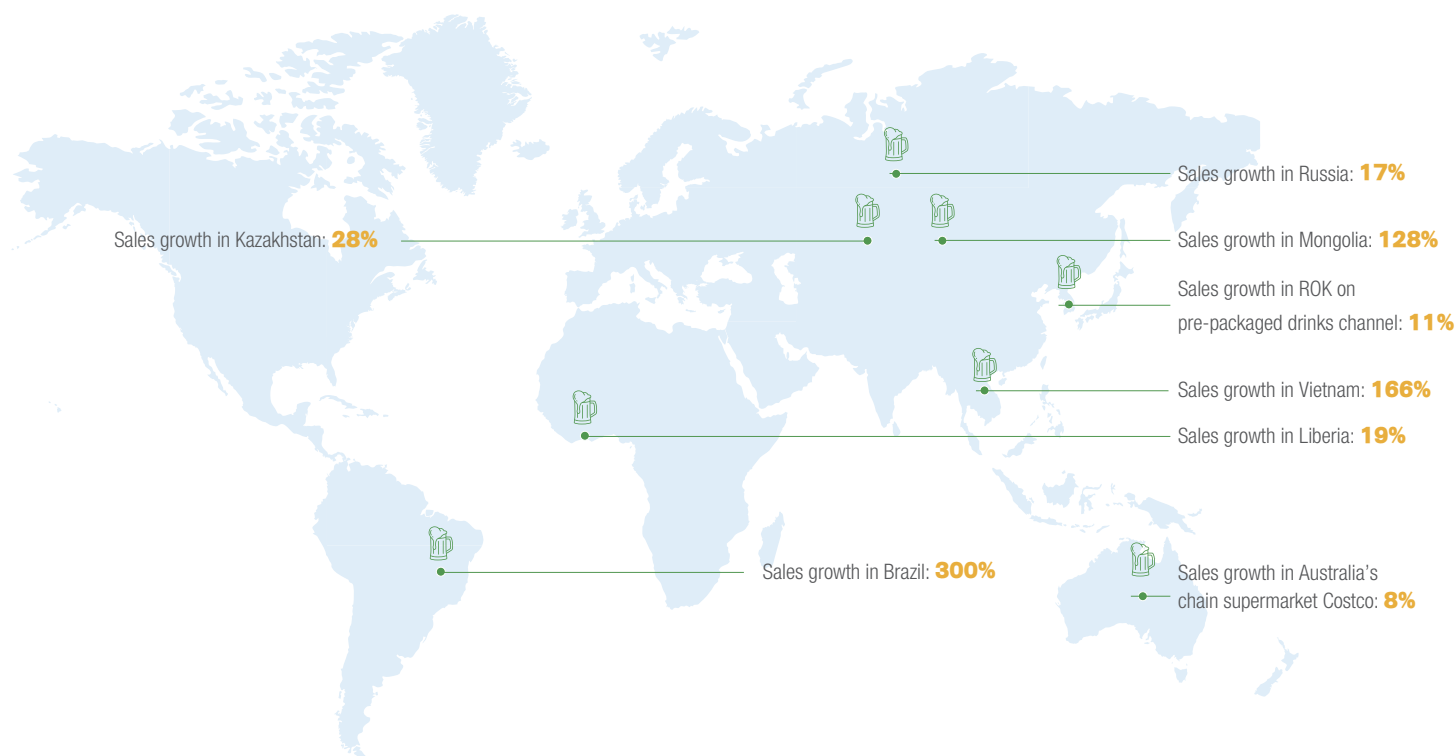
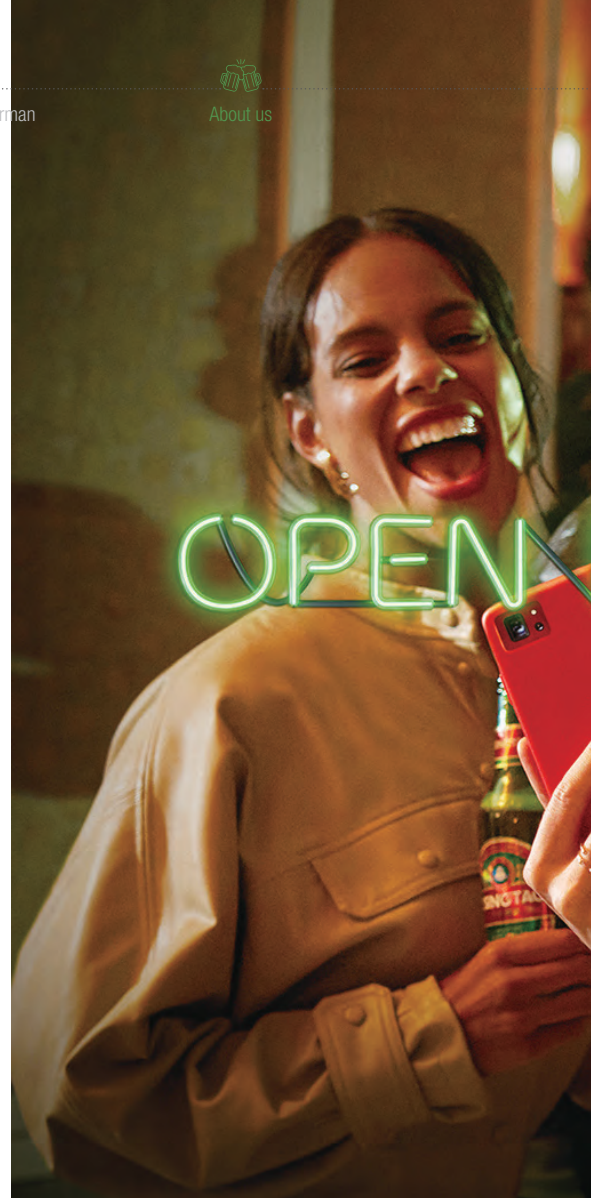
About us

Our company

The predecessor of Tsingtao Brewery Co., Ltd. (hereinafter referred to as "Tsingtao Brewery") is the Anglo-German Brewery Co., Ltd. which was founded by German and British settlers in the city of Qingdao in August 1903. Tsingtao Brewery is the earliest brewery in China. According to the 2020 ranking of the Top 500 Most Valuable Brands in China published by the Global Brand Lab, Tsingtao Brewery has been on top of Chinese beer industry for the 16th consecutive year with a brand value of 179.285 billion yuan.

Tsingtao Brewery was listed on the Hong Kong Stock Exchange and the Shanghai Stock Exchange Market in 1993, becoming the first Chinese company to be listed on both markets.

Until the end of 2020, the company has 60 wholly-owned / holding subsidiaries, and two jointly owned / operated breweries in 20 provinces, municipalities and autonomous regions in China, boasting the leading position in China's beer industry in terms of enterprise scale and market share.



117 years just for brewing good beer

Green brewery

Caring for the community

Creating harmony with the value chain

FOR POSSIBILITY



As the most renowned Chinese beer brand in the international market, Tsingtao Brewery is selling its products to over 100 countries including the USA, Canada, UK, France, Germany, Italy, Australia, the ROK, Japan, Denmark and Russia.

In 2020, the overseas market channels were severely impacted by control measures adopted by governments in response to the epidemic. Tsingtao Brewery quickly modified the strategy according to the external changes, invested more resources to packaged product channels and realised a recession-defying growth in regions such as SCO and ASEAN nations. The sales volume for SCO countries grew by 25%, and for the ASEAN region 46%. The sales in eleven markets including Vietnam, Mongolia and Brazil doubled.





Corporate governance

On 31 December 2019, there were eight members of the ninth board of directors with Tsingtao Brewery, of which three were executive directors, one was non-executive director and the other four were independent directors. There were seven members of the ninth board of supervisors with Tsingtao Brewery, of which four were shareholding supervisors and three were employee supervisors. The company is the first listed domestic company with a board in which external directors and supervisors account for the majority of the board of directors and the board of supervisors respectively.

The incumbent independent directors come from different professional backgrounds and are richly experienced in legal affairs, accounting and financial investment etc.

Since the company went public, Tsingtao Brewery has been developing an advanced system of corporate governance that conforms to international standards and continues to improve with pioneering mind and actions. Information such as the performance and major happenings of the company is accurately disclosed.

The company attaches great importance to the management of investor relations with active planning and promotion. Being listed both domestic and overseas, we keep consolidating our communication with investors from around the world under international common practice and in accordance to local administration. We built and maintained the liaison channels between our managing staff and shareholders and potential investors, and established the company's honest, open and transparent image in the capital market.

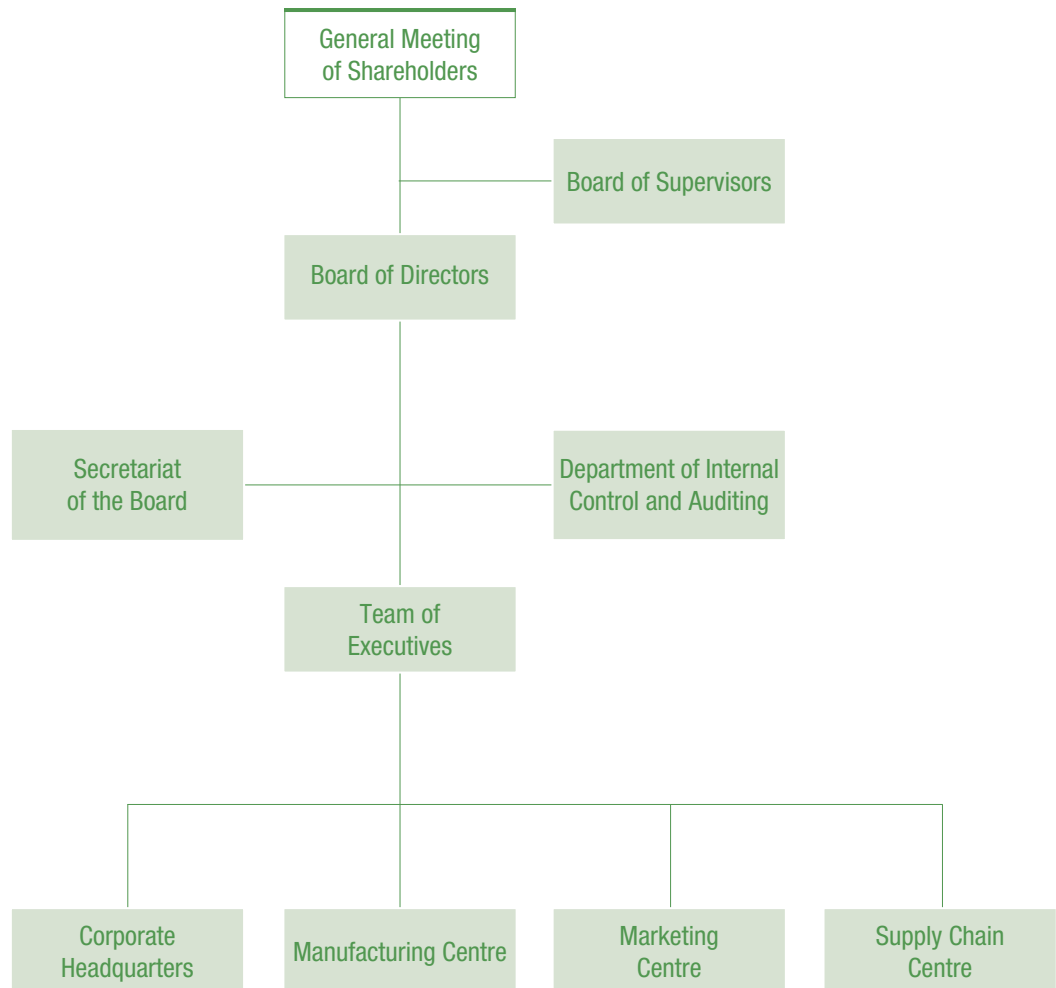
Tsingtao Brewery has improved the relation with investors in a visible manner. During the epidemic when roadshows were unavailable, we promoted the communication with international investors through telephone meetings. We actively participated in the group activities for training and protecting investors of local listed companies, established leadership groups for investor relations staffed by top-level managing staff, and carried out interaction events with major investor.

The company seized the opportunity and timely started the share incentive plan, making a historical breakthrough in the capital market since the company was listed 27 years ago.

Honours won in the capital market

►► The disclosure of Information has been recognised by the Shanghai Stock Exchange for seven consecutive years and the company keeps its Grade A ranking.

►► The capital market and all sectors of the society also fully recognised Tsingtao Brewery for the work on value for investment, information disclosure and investor relations, which demonstrated the excellent sustainable development capability.



Risk control and management

The sudden strike by the epidemic has brought tremendous challenges and risks in the year 2020. Nevertheless the company evaluated the risks from all levels and took positive measures to diminish losses.

While preventing and controlling the epidemic and resuming operation, the company continued to carry out risk control and improved the internal control system. Each department also strengthened auditing and examining to tackle problems on the operation of the system and detailed procedures with prominent outcomes.

Business ethics and compliance with regulations

Tsingtao Brewery has always strictly followed and executed the rules of the Party and laws and regulations of the nation on preventing bribery, blackmail, fraud and money laundering. In the course of cracking down on bribery, blackmail, fraud and money laundering we have been strictly executing the *Guidelines for Integrity and Self-discipline of the Communist Party of China*, *Regulation of the Communist Party of China on Disciplinary Actions*, the *Constitution of the People's Republic of China*, the *Supervision Law of the People's Republic of China* and the *Criminal Law of the People's Republic of China*, and implementing related provisions of the *Anti-unfair Competition Law of the People's Republic of China*, the *Regulations of the Central Commission for Discipline Inspection of the Communist Party of China on the Strict Prohibition of Seeking Illegitimate Gains by Misuse of Office* and the *Law of the People's Republic of China on Anti-money Laundering*.

- In 2020, the company promulgated the *Principal Liability List for Strict Party Self-governance with Tsingtao Brewery*, the *Accountability System for Responsibility Fulfilment* and the *Regulations on Integrity for Managing Staff and Employees of Tsingtao Brewery* and the *Code of Conduct for External Business Liaison* to further rectify the conduct of power.
- The company issued the *Letter on Advised Monitoring Measures, Initiative for Practising Frugality*, and the *Negative List of Advanced Topics for Discussion by the Party Committee of the Company*, organised a series of conferences for leading Party members to report their performances, and consolidated the mechanism of political supervision.
- The company refined daily monitoring procedures for key areas, positions and personnel, conducted disciplinary inspections in six units, corrected 93 problems, improved 45 management measures, conducted four warning education events, compiled 13 sets of courseware for warning education, and organised three warning education film shows, with the aim of fully enforcing strict Party governance at grassroot level.
- Zero tolerance to corruption. The company published the *List for executing the "First Form of Punishment and Supervision – Criticism and Self-criticism as well as Enquiries through Interview or Letters Should Be the Most Common"* to nip the problem in the bud. We organised the special meeting on *Interviews on Practising the Responsibilities on Comprehensive and Strict Party Governance*, and conducted interviews with managing Party members on understanding, practising and monitoring of responsibilities. Meanwhile we should also observe the *"Three Kinds of Unsuccessful Trials that Should be Exempted from Punishment"* in order to encourage managing staff to work conscientiously, and keep the company's development on track.



Special meeting on Interviews on Practising the Responsibilities on Comprehensive Strict Party Governance



Meeting for leading Party members to report their performances in accordance with comprehensive and strict Party governance



Undertaking the fourth round of inspection and supervision



Organising the fifth training event for members working on discipline inspection and supervision

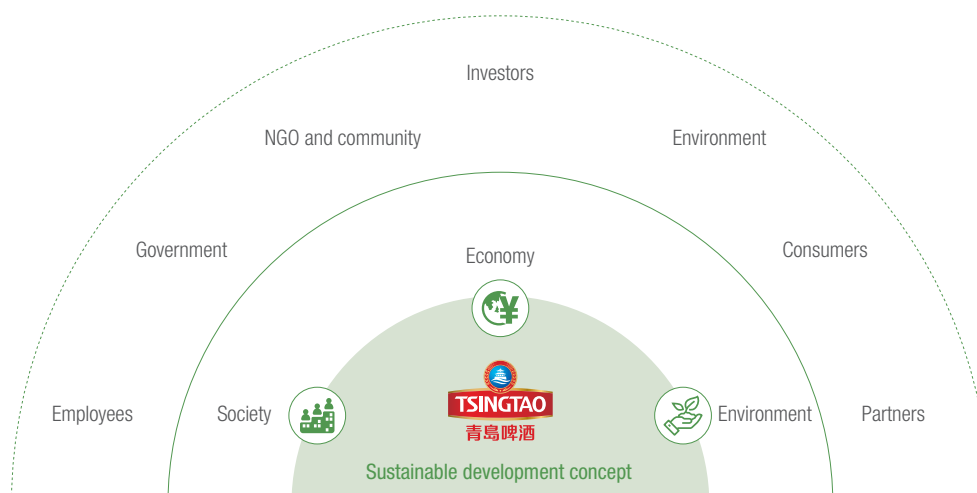
Intellectual Property Rights

Tsingtao Brewery constantly produces series of new products with unique characteristics which meet the market demands and highly respects and protects IPR with overall IPR protection measures on new products. The company strictly abides by IPR related laws and regulations of the People's Republic of China including but not limited to the *Trademark Law of the People's Republic of China*, *Patent Law of the People's Republic of China* and the *Copyright Law of the People's Republic of China*

with related judicial interpretations, and keeps updated with the revision and renew of related laws and regulations.

In 2020, the company kept promoting the IPR management system in coordination with the strategic goals, improving the IPR exploring and evaluating mechanisms, refining the working procedure for IPR confirmation and protection, and effectively helped the company in high-quality innovative development.

Cooperation with value chain partners for win-win



Stakeholders	Our responsibilities and commitments
Consumers	Providing safe and high-quality products and services
Environment	Energy conservation and cost reduction, water resources protection, tackling climate change, and developing circular economy
Investors	Maintaining steady operations, providing rational and sustainable returns and reporting precisely on major news regarding operations in a timely manner
Employees	Providing a safe working environment, good pay and benefits while showing concern for the health and career development of all employees
Business partners	Co-development and cooperation based on integrity and trust
NGO and community	Contributing to the community and its harmonious development by frequently engaging in all kinds of charitable activities
Government	Paying taxes as required, conforming with regulations and respecting the law

Becoming the climber amid the epidemic

Tsingtao Brewery responded actively with a series of innovative measures for promotion including the “three offline actions” and the “three online arrangements” to assume emerging channels such as online commerce, group buying and community purchasing. The company launched a non-contact delivery map for all sales units in China in only five days, rallied 100,000 sales personnel across the nation in five days, and conducted community sales events in many cities for five days. The “Tsingtao Beer speed” was acknowledged with direct interaction between salesperson and communities and between salesperson and terminal consumers.



In 2020 Tsingtao Brewery enhanced online sales measures. With multi-dimensional e-commerce system of “online supermarkets + official flagship shops + online franchise stores + WeChat markets” to seize the opportunity, the company promoted the brand communication with “live streaming sales”, forming the live streaming sales matrix integrating “top internet celebrity live streaming + second-tier internet celebrity live streaming + star live streaming + online shop live streaming”.

Building the new highland for high-quality development



In 2020 Tsingtao Brewery quickly launched key project construction and promoted the company's transformation and upgrading with projects. The expansion project of the Tsingtao Brewery Pingdu Intelligent Industry Demonstration Park, the expansion and upgrading project of Tsingtao Brewery Smart Manufacturing Demonstration Brewery, and the new Tsingtao Brewery West Coast Craft Brewery and Stylish Garden project were launched to build a comprehensive themed tourist destination for craft beer. Apart from that, in many places including Zaozuang, Dezhou, Heze, Xi'an, Maanshan, Chenzhou, Baoji and Kunshan, many projects were launched, covering industrial groups, smart manufacturing, intelligent logistics, modern culture and tourism, as well as high-end consumption, with a total investment of three billion yuan.



Honoured the World's First "Lighthouse Factory" in the Beer and Beverage Industry

On 15 March 2021, the World Economic Forum announced in Geneva, Switzerland, the global lighthouse network had a new member. The 118-year-old Tsingtao Brewery has become the world's first "lighthouse factory" in the beer and beverage industry.

The "lighthouse factory", a model of "digital manufacturing" and "globalisation 4.0" selected by the World Economic Forum and McKinsey & Company, is known as "the most advanced factory in the world". Evaluation of Tsingtao Brewery by the World Economic Forum goes "As consumers increasingly need personalised, differentiated and diversified beer products, Tsingtao Brewery, which has a history of 118 years, has redeployed intelligent digital technology in the value chain to meet the needs of consumers, reducing the delivery time of customer orders and new product development time by 50%. The share and revenue of customised beer increased by 33% and 14% respectively."

The industrial internet "lighthouse factory" of Tsingtao Brewery not only solved the problems of such as long production period and difficulty in product prediction. The company has filled in the gaps in beer and beverage industry with demonstrative effects and pragmatic values for the transformation of traditional manufacturing.



Product upgrading to better meet consumers' needs

Tsingtao Centennial Journey

The Tsingtao Centennial Journey was deemed a landmark product of Tsingtao Brewery in response to high-end and contextualised consumption upgrading. The R&D team with nearly a hundred staff led by Tsingtao Brewery's national-level brewers developed this product through two years of research and development, 52 rounds of brewing tests, over 900 rounds of expert tasting, and 417 rounds of tasting and evaluation by national-level brewers. This product has unparalleled amber appearance and pure and luxuriant golden colour, filling the gap of China's colour controlling technique for dark-coloured beer. The product has effectively met the consumers' demands which changed from enjoying the products to enjoying life, as well as from physical satisfaction to mental satisfaction.



Tsingtao Amber Lager

The dark-coloured lager beer is made from imported barley and luxurious European hops. The liquid is fragrant, smooth and refreshing with strong flavours of barley and caramel. The graceful fragrance of hops and ester flavour mix in a coordinated way, touching people's taste buds with slight bitter taste and prolonged aftertaste.



“Snow Tin” specially designed for the Olympic Winter Games Beijing 2022

Fifteen designs were developed in this series, incorporating elements of snowflakes into the fifteen official competitive events of the Winter Olympics on the surface of the tin, connecting the beer to the Olympic spirit.





Renewed Chinese-style tin

Tsingtao 1903 Chinese-style tin was renewed and the portrait of a lady with the style of old Shanghai similar to Hu Die, the movie star of the 1930s and the 1940s, was painted on the tin. This design reconstructed the scenario of stylish ladies drinking Tsingtao Beer, bringing the fashion then to nowadays, and promoting the re-upgrading of the Chinese style.



Tsingtao Draft in new appearance

Hua Chenyu was officially announced as the representative of Tsingtao Brewery for Tsingtao Draft, the beer brand with renewed package under the theme of "born for music". This product is rich in styles of both music and fashion with the cool feeling of electronic music.

Night Owl Beer

The beer brand is close to young consumers in cooperation with world famous IP brands, becoming the key concept of Muses together with Karl Lagerfeld. The product has fashionable culture elements and broke the existing boundaries with expanded imagination and builds the new image of century-old Chinese-style brand which is fashionable, modern and young with more multiple-faceted lifestyles and braver minds to express themselves.

Meanwhile Tsingtao Brewery promoted the Night Owl Beer night clubs which became the new rendezvous for young people with immersive experience and clashes of inspirations of young trend leaders.



Constructing the immersive consumption experience



Empowering the Olympic Winter Games Beijing 2022

On 18th December 2020, a press conference themed "Come to join us and Ganbei with the world" on the marketing strategy of Tsingtao Beer for the upcoming Beijing 2022 Winter Olympic Games was held in Genting Snow Park, Zhangjiakou. Tsingtao Brewery launched its official Olympic-themed film and the "Snow Tin" product specially designed for the Olympic Winter Games Beijing 2022.

Building the Beer Festival City IP

Since the first Qingdao International Beer Festival in 1991, the Qingdao International Beer Festival is already a 30-year-old grown-up. As a unique festival event the beer festival developed from Qingdao to the whole nation, and from China to the world, blossoming in every city. In 2020 the beer festival events extended from Shandong Peninsular to Anshan and Yingkou in the Liaodong Peninsular, from Dingxi and Pingliang in Gansu Province, to Yan'an and Baoji in Shaanxi Province, to Chengdu in Sichuan the "Heavenly Land of Plenty", from Taiyuan, Yuncheng, Datong and Changzhi in Shanxi Province by the Yellow River to Langfang the pearl on the Beijing-Tianjin-Hebei corridor in Hebei Province, from the vast Hulunbuir prairie in north China's Inner Mongolia Autonomous Region to Jiande in Zhejiang Province and the meadow of Wugong Mountain in Jiangxi Province. With beer as the medium in the interaction in the fields of commerce, tourism, culture and industry, beer festival events became the driving IP for regional economic growth.



Over 200 Tsingtao Beer bars were opened

In 2020, Tsingtao Brewery opened over 200 Tsingtao Beer bars with the title of TSINGTAO 1903, realising the effective integration and extension from traditional manufacturing to modern service industry, giving people more chances to enjoy their lives.



As the pioneer of China's chain beer bar, the TSINGTAO 1903 bars have become the stylish brand of Tsingtao Brewery. One TSINGTAO 1903 bar in your neighbourhood may connect consumers easily. This mode is centred upon the experience of consumers, especially the environment, convenience and comfort level of consumption experience. Through constantly improved freshness of products, multiple dimensional experiencing activities were undertaken to lead the new trend of stylish beer drinking. The chain bars have covered over 60 cities including Beijing, Shanghai, Shenzhen, Zhuhai, Xi'an, Dalian, Jinan, Xiamen, Changsha and Harbin, with positive influences such as extending the local industrial chains for fashion economy, helping night-time economy grow, and invigorating night-time markets.



117 years

just for brewing good beer



360°
whole value chain
management

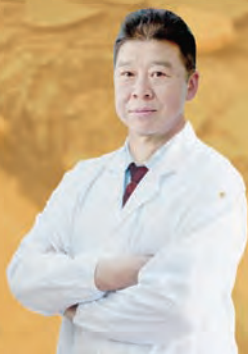


Over 1,800
quality testing
points



Veteran brewer with Tsingtao Brewery
Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery Co., Ltd.

Zhang Pei



Veteran brewer with Tsingtao Brewery
Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery (No. 2)
Co., Ltd.

Liang Gang



Veteran brewer with Tsingtao
Brewery CTO, Production Technology
Management Department

Zheng Min



Senior brewer with Tsingtao Brewery
Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery (Xiamen) Co., Ltd.

Gan Shuiyang



Upgrading consumption with “attractive quality”



Senior brewer with Tsingtao Brewery
CTO, Production Technology
Management Department

Liu Guangfeng



Senior brewer with Tsingtao Brewery
CTO, Production Technology
Management Department

Wang Kexin

As the leader of the industry, Tsingtao Brewery actively leads the high-quality development of the beer industry in China, and promotes the supply side structural reform, and the self-developed “triple-overlapping responsibilities monitoring and triple-decoding” quality management mode won the China Quality Award Nomination Award. In terms of product quality, the company is directed by the upgraded consumption needs that are high-level, multiple and characterised, and developing diversified products with “basic quality + characteristic quality + charming quality”. Through continued structural upgrading to high value-added products such as tinned beer and craft beer, the company preserves its competitive advantage over other brands in domestic markets for medium and high level products.

Tsingtao Brewery has put tasting as the driving force for quality improvement. Tasters of the company constantly improved their skills and knowledge, and 42 of them were recognised as national tasters (eight lifetime honoured tasters, one monitor for beer tasters and 33 beer tasters) in the 2020 national beer taster selecting event. Now the company is leading the industry with 42% of all national beer tasters of China.



Product management throughout the value chain

Food safety policy

Tsingtao Brewery strictly abides by the national and local laws and regulations such as the *Food Safety Law of the People's Republic of China*, *Regulation on the Implementation of the Food Safety Law of the People's Republic of China*, the *Product Quality Law of the People's Republic of China*, the *Administrative Measures for Food Production Licensing*, the *Administrative Measures for Food Operation Licensing*, and the *Measures for the Administration of Food Safety Sampling and Inspection*, to brew the beer that consumers like. We have implemented comprehensive hazard analysis and risk assessment on raw materials, production, packaging, storage, transport and other processes to identify and strictly controlled the critical control points in order to provide consumers with satisfying quality beer.



Senior brewer with Tsingtao Brewery
Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery
(No. 3) Co., Ltd.

Yin Yan

Strategic management on food safety

Tsingtao Brewery has built a food safety management system covering the whole life circle of products with HACCP, TACCP, and VACCP. Food safety is our first priority in strategic management and quality control. The company has built a closed-loop control process for food safety. Meanwhile we have established and improved our food safety accountability system, enhanced the food quality and safety responsibility system, underlined the importance of prevention, prevented food safety hazards and ensured product quality.

Food safety management innovation

Tsingtao Brewery stays firm with the quality safety management concept of "building the firewall for food safety" and conducts whole-supply chain quality management, continuously improving the whole-process quality control including source material, production procedure, logistics and marketing, covering over 30 management processes including the GMP, hazard analysis in production process and food safety management. The company has implemented the food safety red card and yellow card system, improved the food safety checklist management system, and consolidated the primary responsibility for food safety, to promote the quality leap forward of the company.

Benchmarking international food safety standards in quality control:

- Extend the food safety monitoring standard to advanced countries and regions including Europe, North America, Japan and ROK
- Conduct risk screening and control with beer and major raw materials by building risky substance testing database and making it internationally advanced



Senior brewer with Tsingtao Brewery
Chief Brewer, Tsingtao Brewery
(No. 4) Co., Ltd.

Ding Jian



Strict control on the source:

Establishing strict qualification management of suppliers, implementing strict material control risk monitoring and ensuring the quality safety of the upper stream supply chain

Multi-dimensional provider quality management

Strictly observe the managing rules of accessing standard set for provider quality management, and veto the problematic provider whenever there is a problem with their qualification management, product monitoring and on-site auditing.

Close monitoring system

Build food safety monitoring platform for beer products, formulating strict sampling procedures, exercising third-party independent sampling and testing measures, observing the whole-range product and raw material coverage monitoring principle, conducting targeted risk control, and monitoring identified risky material in a more frequent manner.



Best Product Quality Award in 2020
Chief Brewer, Yantai Beer Tsingtao
Brewery Asahi Co., Ltd.

Yun Bolan



Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery
(Shanghai Songjiang) Co., Ltd.

Xu Yong



Strict control on the process:

Setting up standardised quality management systems and modes in all manufacturers to effectively control quality and ensure food safety, building the quality monitoring and control system to implement the quality control covering the whole life circle of products connecting processes such as raw materials, production, logistics and terminals

Improving the red line management and upgrading the evaluation management system

The company formulated a series of standard documents including the *Minimum Inspection Frequency of Auxiliary Ingredients and Processing Agents for Brewing*, and conduct batch-by-batch inspection and acceptance with raw material and ingredients before they move forward to production stage.

The company formulated the internal control standards for semi-finished products and finished products, and built 433 SOPs (Standard Operating Procedures) for inspection. All semi-finished products and finished products in production process will be inspected and checked in accordance to the *Minimum Inspection Frequency of Auxiliary Ingredients and Processing Agents for Brewing* and the SOP system. Each batch of products shall be examined according to the executive standard of products before they go into the market.

Observing the "six-uniform management" on quality control

The quality control system is based on the "six-uniform management" of "uniform staff, uniform management, uniform testing method, uniform instrument, uniform data system and uniform quality control evaluation". We guarantee the quality control in compliance by advocating the in-front management of raw materials, optimising efficient testing methods, improving internal control at the streamline, training the QA staff to be multiply capable, further building the efficient quality control system, raising QA efficiency, and constantly carrying out strict quality controls.

Building strict and effective quality assessment system through the whole process

The first three-stage evaluation system was built in Tsingtao Brewery with whole-procedure evaluation control of raw material, production, logistics and terminals as the key points. Source and system evaluation risk management and control were enhanced to help frontline breweries improve the evaluation capacity, develop high-skill evaluation teams, and continue improve product quality.

Extending the supervision and control of products and sales channels

Pay attention to the supervision and control of special packaging and special logistics. The company keeps tracking customer feedback with new products, optimises the quality management of terminal products, builds special monitoring, closely examines key problems and hazardous projects, and prevents quality risks.

Tsingtao Brewery duly recalls any unsafe products on the market according to the nation's *Administrative Procedures for Food Recalls*. No cases of recalls due to safety or health hazards ever happened with Tsingtao Brewery's sold or transported products in 2020.



Digitalisation makes the research and development of new products more accurate

➤ In terms of product innovation, Tsingtao Brewery is leading the industry with its Key National Lab on Beer Fermentation Engineering, the only lab within brewery industry. Global talents gather here with new technique and technology, and quicken the steps for product development and marketing.

➤ On 16 July 2020, the report *Research and Application of Key Techniques on Maltogenic Amylase Control* submitted by the company won the second prize of the 2019 Scientific and Technological Innovation Award of the China Alcoholic Drinks Industry Association. In September the *Research and Application of Key Techniques for Top Fermentation White Beer* won the First Prize of Qingdao Science and Technology Progress. On 18 November the project *Development and Industrialisation of the Unique-Taste Pilsner* submitted by the post-doctorate station of Tsingtao Brewery prevailed over 880 projects and won the gold award of the 2020 Post-Doctorate Innovation and Entrepreneurship Competition, which has only two gold awards.



Best Product Quality Award in 2020
Chief Brewer, Tsingtao Brewery (Zhuohai)
Co., Ltd.

Li Yanbao

➤ A series of new products from the company won the awards from around the world. In June 2020, the Amber Lager won the 2019 China Alcoholic Drinks Industry Association "Green Drinking Award" of New Type Beer. In the 2020 China International Beer Challenge in October, Tsingtao 1903 won the "Tianlu Award Gold Prize (Four Stars)" and Tsingtao White Beer won the "Tianlu Award Gold Prize (One Star)".

The 360° whole value chain Brewing the “China Quality” with workmanship

The “360° whole value chain” was proposed by Tsingtao Brewery and the total-staff quality management concept and system was established. In the eyes of Tsingtao Brewery people, quality control should be expanded from the upstream to the downstream, and the total-staff quality management concept and system should be established to cover the whole process from design, research, development, raw material procurement, manufacturing, packing, transport through sales, so as to make the quality control more systematic and comprehensive.



Choosing each quality ingredient

- Water: the water for brewing has to pass seven phases of processing and over 100 rigorous tests to make sure it meets the criteria.
- Century-old yeast: we use pure German beer yeast and transport optimum yeast strains to each of our breweries regularly.
- Barley: we choose fully matured and bright quality barley from specific regions across the globe. Rigorous testing procedures are followed at every level of operation from choosing origin, selecting of variety, planting and harvesting to transport and storage.
- Rice: we build special production bases and warehouses for rice, entrust designated third party to conduct all-factor testing. The soil, water, air and the whole term of planting in production bases are monitored, while on-site full coverage inspections of rice suppliers are conducted, so as to ensure food safety.

1,800 quality testing points

- Internationally certified standard quality control system with over 1,800 quality checkpoints in the production process
- Universal quality control standard with real-time tracking and monitoring over quality management with affiliated breweries and factories
- Building the centralised third-party food safety testing system to cover all the brewing ingredients and materials that make direct contact with the beer to ensure FPY rates of procured materials reaches 100%

Quality appraisal control throughout the whole process

- All dimensional quality appraisal system which functions throughout the whole process
- All materials that will come in direct contact with the beer, including the gasket and water for bottle washing, are concluded in the scope of tasting and appraisal.
- Appraiser also test samples retrieved from the market regularly to ensure beer quality within shelf life.

Strict packaging process

- Onsite checking of the outer packaging quality of products in distributors' warehouses
- Continuously improving the evaluation system for outer packaging and add in BSC assessment criteria.
- We rinse pipes with beer in the final step of bottle-washing to prevent water drops from diluting the final product.

Smart supply chain management and delivery

- Modernising the whole industrial chain and supply chain from the upstream purchasing to the downstream delivery, building terminal-to-terminal integrated supply chain, and realising visible information sharing of orders
- Conducting convenient ordering, precise production and timely delivery, as well as uniform ordering, managing, scheduling and delivering, in order to keep the product fresh upon delivery



Each bottle of Tsingtao Beer has gone through over 1,800 quality testing points with every grain of barley and hops, even every drop on water selected with great care by Tsingtao Brewery people. The persistence on quality and the inheriting of workmanship spirit have brought non-stoppable internal driving force of the 117 years' sustainable development.

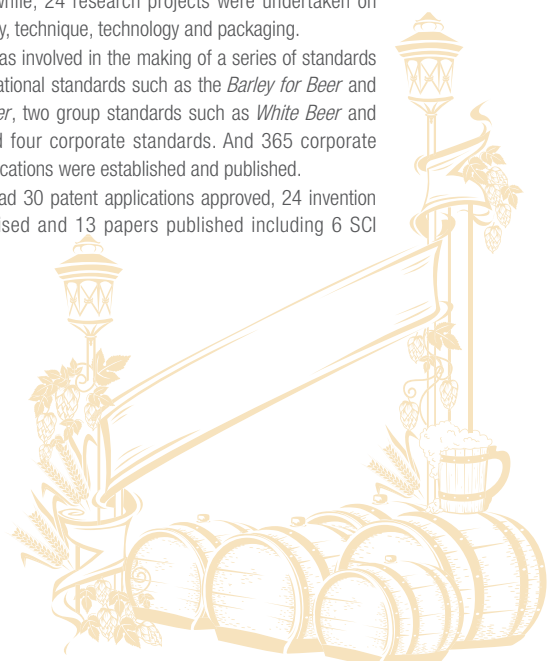


Advanced and comprehensive service system

- The integrated vertical management system for customer service aims at “four-unified and one-satisfied”, namely, unified management, standard, service and claim settlement, as well as making customers satisfied.
- Implementing the “six management modes”, i.e., systematic management mode, institutionalised work mode, standardised compensation mode, military-like action mode and human-centred staff management mode
- Advanced information management system, convenient communication channel connecting consumers to promote the efficiency and quality of customer service
- Building the three-stage customer service network with frontline units and big retailing clients around customers in the centre, realising “no-seam service” with quick coordination actions
- Tsingtao Brewery pays high attention to information management and consumer privacy protection, and improves the market information protection mechanism. The company requires related staffs to abide by national secrets laws and regulations as well as the *Secrets Code of the Tsingtao Brewery*, and specifically issues privacy clauses to avoid market information leak or loss, undertaking the duty of confidentiality and protecting information security.

Strong R&D capabilities

- Equipped with the Key National Lab on Beer Fermentation Engineering, the only lab within brewery industry which was identified as one of the first key laboratories of China's light industry
- In 2020, there were 22 new products on market and 33 in reserve. Meanwhile, 24 research projects were undertaken on improving quality, technique, technology and packaging.
- The company was involved in the making of a series of standards including two national standards such as the *Barley for Beer* and the *Malt for Beer*, two group standards such as *White Beer* and *Draft Beer*, and four corporate standards. And 365 corporate technical specifications were established and published.
- The company had 30 patent applications approved, 24 invention patents authorised and 13 papers published including 6 SCI papers.



Green brewery



Tsingtao Brewery sticks to the environmental concept of "One good turn deserves another" and sets "be the pace-setter in green development in beer industry" as the environmental outlook. The company aims at the environmental protection target "with environmental protection, low-carbon management and circular economy measures to promote the sustainable development of the company and realise the harmonious co-existence with the nature". Now the company's environmental protection, low-carbon management and circular economy measures have been set as the essential parts for the development strategy and the route to sustainable development.



in three years

Coal-fired boilers phased out
in seven breweries

Low-nitrogen gas-fired boilers upgrading
completed in
18 breweries

Outsourced steam or natural gas used in
96.6% of all breweries

Change rate in 2020

SO₂

Total SO₂ emission
dropped by 51%



Total NO_x emission
dropped by 36%



Total greenhouse gas emission
dropped by 8.2%



啤酒四厂
环保志愿者组织

绿色发展的楷模

Optimising management

In the reporting year, Tsingtao Brewery has strictly observed all essential environmental laws and regulations that may greatly impact the company, including the *Environmental Protection Law of the People's Republic of China*, *Law of the People's Republic of China on Prevention and Control of Water Pollution*, *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, *Law of the People's Republic of China on Prevention and Control of Pollution From Environmental Noise*, and the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*. With strict monitoring and control of the environmental protection facilities and the discharging of pollutants in production process, the stable and up-to-standard discharge of all pollutants was ensured and the performance of environmental protection was constantly improved.

The company has an independent department of safety and environment for the exclusive management of environmental protection, and all environment staff hold certificates. Management rules have been revised and upgraded, and technical standards related to environmental protection have been published. With the annual goals and guidelines in mind, we have systematically screened out management risks within the company, implemented the environment management rules, the target-oriented responsibility mechanism and the performance assessment system.





In 2020 the company invested

43 million yuan

for environmental technology reform.

As a food company Tsingtao Brewery strictly followed the rules on site selection settled by the *General Hygienic Regulation for Food Production of the National Food Safety Standard (GB14881)*. With a sense of responsibility to the environment and the community, in response to the safety and environment policies of the local government, we have fully investigated the water source, ecological surroundings and community environment and made the investigation result an essential reference for the new brewery's location. Tsingtao Brewery also considered environmental impacts by the wastes generated from the production process and took the most positive measures to minimise the negative impacts.

In 2020 the company invested 43 million yuan for environmental technology reform. Seven breweries won national, provincial and municipal honours for environmental protection, in which the Tsingtao Brewery (No. 2) Co., Ltd. and the Baoji company were awarded the fifth batch of National Green Factories. In 2021, based on the newly-moved or newly-built projects in Xi'an company and Zaozhuang company, a series of projects will be carried out including photovoltaic power generation, thermal energy centres, comprehensive water usage, rainwater collection and utilisation, secondary cooling, CO₂ recycling, decarbonisation in water treatment and ultrafiltration, to lead the industry in terms of comprehensive energy consumption.



Water usage, sewage and water resource management

Water is the source of life and water conservation is the essential task in the work of energy conservation and consumption reduction. Tsingtao Brewery strictly follows the requirements of laws and regulations including the *Law of the People's Republic of China on Prevention and Control of Water Pollution*. The company ensures the discharge meeting national and local standards with online wastewater monitoring equipment installed and entrusts qualified third-party for the comparison and monitoring work.

- The company strengthened the source control of wastewater and published the revised version of *Principles of Wastewater Source Control* in 2020. The impact of source substances could be evaluated from four dimensions including the possibility of shock, probability of prevention, level of severity and difficulty of remediation with the LEC method. Control measures were issued based on the classified source substances management. Lessons were learned from wastewater treatment emergency cases and abnormal emergency disposal scheme was established to ensure the stable operation of wastewater.
- The company revised the *Internal Control Standard of Wastewater Treatment* and the *Rules for the Operation of Wastewater Treatment Adjusting Tank*. Key process parameters were optimised to favour the



Tsingtao Brewery (Baoji) Co., Ltd.'s sewage treated and introduced in the wetland of the brewery, forming a garden-like sewage treatment station



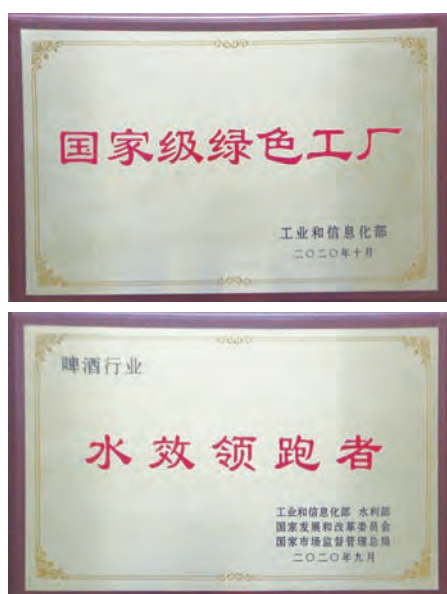
MST-EMB ultra-speed ion air flotation device for advanced wastewater treatment in Jieyang brewery

active growth of anaerobic sludge and improve anaerobic removal rate. Stricter process control was executed with wastewater, and the wastewater MES operation data sets of every brewery were analysed each week for closer watch of the trend to ensure all discharges were up to the standard. The company adopted another tracking on anaerobic sludge activity to collect the fundamental data of each brewery for comparative analysis. During the epidemic, wastewater treatment operation was controlled with newly issued key points on wastewater treatment operation manual. New technologies and new devices including the MST-EMB ultra-speed ion air flotation device and the aerobic rotary mixing aerator were applied to improve and optimise the wastewater treatment technique.

- Four new technological standards for water pollution source online monitoring system were identified, 51 changing points were sorted out, and environment experts from authorities were invited to deliver online video training courses to all staff. The company also contacted producers to discuss new solutions under updated rules including software upgrading, additional external quality control units and stage-by-stage phasing out of old equipment. And the *Standard Management Template for Online Wastewater Control Stations* was issued for valid online monitoring.

Water consumption					
	Unit	2018	2019	2020	Change in %
Water consumption	1,000 m ³	30,613	30,266	28,309	-6.5%
Water consumption per unit product of beer	m ³ /kl	3.86	3.74	3.69	-1.4%

Discharge of waste water					
	Unit	2018	2019	2020	Change in %
COD (discharged into natural water)	Tonne	81	64	64	0%
COD (total)	Tonne	1,056	1,025	937	-9%
Ammonia nitrogen (discharged into natural water bodies)	Tonne	2	2	2	0%
Ammonia nitrogen (total)	Tonne	108	107	91	-15%



In 2020 the Tsingtao Brewery (No. 2) Co., Ltd. and the Baoji company were awarded the fifth batch of National Green Factories. Meanwhile, the Baoji company won the honorary titles of "Green Factory" of Shaanxi Province, the "Forerunner of Water Efficiency" and the "Provincial Pacesetter of Water Conservation" in beer industry.



The Gansu company won the Class A Award for Environmental Protection in Standard Industrial Company of Gansu Province

Energy management and application of energy conservation technology

Systematic thinking, process control, increasing the energy utility rate and building a green energy conserving and environmental friendly enterprise – these are the persistent pursuit of Tsingtao people. Tsingtao Brewery always abides by the *Energy Conservation Law of the People's Republic of China* and the *Water Law of the People's Republic of China* and related laws and regulations. Internal rules including the *Energy Management System*, the *Production Statistics Management System* and related operation standards were exercised to continue improve the reform of energy conservation projects and the application of new energy conservation technologies. In 2020 Tsingtao Brewery achieved substantial results in energy conservation through energy management system perfection, equipment optimisation and detailed process management.

Application of new energy conservation technology

New boiling technique was introduced into four new breweries to lower down the steam consumption.

New brewing technique was applied in three new breweries to reduce the consumption of water, electricity and steam.

Promotion of energy conservation projects

Ten breweries adopted power-saving projects including additional small compressors, electricity control system and facility upgrading. Three breweries adopted vapour-saving projects including changing heating equipment and balanced thermal energy usage. And five breweries raised the recovery rate of CO₂ by improving the recovering facility.

Detailed process management

Energy report analysis system was built to display all energy consumption data of branch processes in visual charts, so that targeted improvement may be carried out with more comprehensive presentation of abnormal changes in data and weak links of the management process.

The company continued with the application of energy conservation projects, detailing the operation parameter and improving the performance. 18 breweries optimised the heat equilibrium of water processor and cut both electricity and water consumptions in a prominent way.

Energy consumption					
	Unit	2018	2019	2020	Change in %
Coal	10,000 tonnes of standard coal	4.24	2.95	2.75	-6.9%
Electric power consumption	10 million kWh	52.17	52.08	49.41	-5.1%
Natural gas	10 million m ³	9.43	9.84	8.92	-9.4%
Biomass fuel	kt	0.6	0.0	0.0	0
Thermal energy consumption	Billion kJ	3,826	3,857	3,082	-20.1%
Comprehensive energy consumption per unit product of beer	Standard coal per kL	0.044	0.042	0.039	-8.0%



Case study

Tsingtao Brewery (Zaozhuang) Co., Ltd. (under construction) will be an intelligent demonstration base for China's beer industry after its completion. The brewery will be equipped with most advanced facilities and become the smartest brewery which leads the industry in terms of per-capita efficiency and comprehensive energy consumption level. The project will adopt advanced systems including photovoltaic facility and thermal energy centre. And decarbonisation technique and ultrafiltration system will also be used in water treatment.

Dispersed photovoltaic power generation systems each of 2.0 MW with an average annual power generation of 2.2 kWh were built on the roof tops of packaging workshops and finished products warehouses. Acidification and decarburisation process was adopted in water treatment, reducing the generation of RO water by 40 m³/h and cutting 20% brine discharge. Ultrafiltration system was used in water treatment and about 90,000 m³ of washing and backwashing water used in multimedia tanks and carbon tanks was reused each year. Brine water was used as the recirculating water of the vacuum pump of the brewing machine. Level-1 energy efficiency IE4 motors were widely used in the brewery, saving 5% of power.



Case study

Tsingtao Brewery (Xi'an) Co., Ltd. (under construction) adopted reclaimed water facilities for landscaping and toilet flushing with an estimated recycling capacity of 20,000 m³ annually to solve the problem of water shortage in Xi'an. The RO system was modified to three-stage RO process and 30,000 m³ water could be recycled each year. In power consumption, the cooling system adopted segmented cooling to raise the cooling efficiency with over 10% cut in electricity. With expanded refrigerant and ice water tanks, processes could be carried during the valley hours to reduce electricity cost. The air compressing system adopted the two-stage compressors which could save energy by at least 15%.

Reduction of pollutant emission and tackling climate change

Tsingtao Brewery revised the indicators and frequency requirement of testing for environmental protection according to the *Self-Monitoring Technology Guidelines for Pollution Sources – Alcohol Products and Beverage Manufacturing Industry*. The company outsourced testing and inspection to third-party units, and applied the contemplate of agreement for entrusting testing and inspection within the whole company. Testing and inspection methods were regulated with priority to methods recommended by the national standard. The company regularly conduct remote examination of environment testing and inspection reports with each brewery. Annual onsite checking on environmental protection facilities were carried out in every workshop, and online inspection of monitoring data were executed. From 2020 the Discharge Permit System with beer industry was implemented and all breweries with Tsingtao Brewery were permit holders. In every quarter of the year the company would track the execution of Discharge Permit System implementation work and make sure breweries publicise their activities timely and accurately.

Waste gas management

Tsingtao Brewery strictly follows laws and regulations on waste gas including the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution* and ensures the emission meeting national and local standards with online flue monitoring equipment installed and entrusting qualified third-party for the comparison and monitoring work every month.

The company is eager in promoting clean energy with coal to gas conversion and CO₂ recovery and reuse projects. Coal-fired boilers were phased out in two breweries, gas boilers were adopted in 36 breweries and biogas boilers were used in 20 breweries to reduce greenhouse gas emission.

In 2020 the company carried out the *Low-Nitrogen Operation Manual of Gas Boilers* to conduct comprehensive management and control from four aspects including routine inspection, regular maintenance, and manual as well as online monitoring and tracking in order to ensure the stable and up-to-standard operation of gas boilers in both monthly manual monitoring and real-time online monitoring. The company focused on the standardisation of heavy pollution weather response and waste gas outlets and ensured laws and regulations were observed with the application of *Standard Procedure for Heavy Pollution Weather Response and Requirements for Archive Management* and the *Examples for Standard Waste Gas Outlets*.

Waste gas discharge					
	Unit	2018	2019	2020	Change in %
SO ₂	Tonne	39	37	18	-51%
NO _x	Tonne	219	199	128	-36%



Fuzhou brewery to replace coal with gas



Jieyang brewery to replace coal with gas

Greenhouse gas management

Tsingtao Brewery actively responds to the nation's call to tackle climate change, attaches great importance to carbon management and effectively controls greenhouse gases emission. The company has qualified third-party to investigate into the greenhouse gases emission with all breweries to master the complete emission data, and formed its own *Carbon Management Proposal* as well as a quantitative model for greenhouse gases.

To ensure the continued cutting of greenhouse gas emission, each brewery has set the goal for greenhouse gas emission per unit product, conducted a series of energy-saving and cost-reducing measures, and continued cutting down energy consumption with tailor-made measures. We monitor the data on energy consumption and greenhouse gases emission every month during the

production process to calculate the total greenhouse gases emission through the whole process and take corresponding measures to diminish emission i.e. using clean energy, recovering biogas and reusing waste heat. The major sources of greenhouse gases emission with Tsingtao Brewery are indirect emissions from electricity and heat usage. With energy management the consumption was constantly reduced.

In order to reduce carbon emission in production process, we have been collecting and purifying the CO₂ from fermentation for production needs, which makes a perfect recycle and reduces greenhouse gases emission. The amount of CO₂ recovered from 2018 to 2020 equals the effect of planting 3.66 million firs each with no less than 30 years of age and absorbing 111 kg CO₂ annually.

Greenhouse gas emission management				
Total amount of greenhouse gases	Unit	2019	2020	Change in %
Total emission	Tonne of CO ₂ equivalent	927,797	851,407	-8.2%
Range 1	Tonne of CO ₂ equivalent	310,871	264,024	-15.1%
Range 2	Tonne of CO ₂ equivalent	616,926	587,383	-4.8%
Total emission density	kg of CO ₂ equivalent/kL production	120.15	115.57	-3.8%
Total emission density (range 1)	kg of CO ₂ equivalent/kL production	40.26	35.84	-11.0%
Total emission density (range 2)	kg of CO ₂ equivalent/kL production	79.89	79.73	-0.2%

Training on environmental protection

Tsingtao Brewery attaches great importance to the training of the teams for environmental protection. All environment staff are qualified with certificates and trained regularly by experts from environmental authorities. Skill competitions were held to screen out talented environment staff and measures were taken to constantly improve the staff's capabilities as well as the company's environmental management level.

Tsingtao Brewery sticks to the principle of promoting talented staffs through competitions and held the Eights Vocational Skill Competition on Waste Water Treatment. The competition was held in the form of mock operation with reference to the form used in the first national vocational skill competition's "Water Treatment" sector. The competition was designed to improve the staffs' capabilities to solve practical problems in accordance with laws and regulations on updated online wastewater treatment operations.



Live stream training on greenhouse gas monitoring

Material consumption for waste and packaging

Tsingtao Brewery strictly abides by the 3R principle for circular economy, *Reduce, Reuse and Recycle*, and revised its management rules for solid wastes according to the newly promulgated *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*. The transport of solid wastes across provinces is required to be filed, and retraceable disposal of solid wastes is concerned, helping with the reducing of solid wastes. The amount of dangerous wastes generated was reduced by 12% in the year 2020 through actively observing the national list for dangerous solid wastes. And all dangerous solid wastes were treated by qualified organisations according to laws and regulations. With measures including sewage sludge reduction and garbage classification, the amount of harmless wastes was reduced by 6%.



The amount of dangerous wastes generated was reduced by

12% in the year 2020

through actively observing the national list for dangerous solid wastes.



With measures including sewage sludge reduction and garbage classification, the amount of harmless wastes was reduced by

6%

Reusable wastes generation and recycling

	Unit	2018			2019			2020			Change in %
		Amount generated	Amount recycled	Recycle rate	Amount generated	Amount recycled	Recycle rate	Amount generated	Amount recycled	Recycle rate	
Distiller's dried grains	Tonne	138,800	138,800	100%	134,100	134,100	100%	128,100	128,100	100%	-4%
Dried yeast	Tonne	11,500	11,500	100%	11,600	11,600	100%	11,000.0	11,000.0	100%	-5%

Consumption of packaging materials

Item	Unit	2018	2019	2020	Change in %
New bottles	kt	1,219	1,281	1,140	-11%
Recycled bottles	kt	3,371	3,372	3,109	-8%
Pop-top cans	kt	63	65	70	8%
Cartons	kt	226	227	215	-5%
Plastic film	kt	12.3	12.8	12.6	-2%

Initiating the action of green protection among all staffs

To practise green concept and build the most eco-friendly Tsingtao Brewery, environmental volunteers of Tsingtao Brewery carried out 220 events in 2020. During the World Environment Day activities, the company organised staffs to walk along the river and recorded more than 30 million steps in total, exceeding the total length of China's seven largest rivers. Meanwhile a series of activities were carried out including no disposable chopsticks campaign and environmental protection in communities. Various methods such as H5, live streaming and Tik Tok were taken to promote these events. Tsingtao Brewery will continue to create green value in every corner of the world as a creator of good life and constructor of beautiful China.



World Environment Day event in Maanshan branch



World Environment Day event in Xi'an branch



Environmental volunteers with Xuecheng branch cleaning garbage in the multi-tiered filtration wetland along the Panlong River



World Environment Day promotion with Shouguang branch



World Environment Day on-site promotion with Dezhou branch



Live stream interaction between the Rizhao branch and local environmental authorities for the promotion of environmental protection



Posters for World Environment Day



Caring for the community

As a responsible legal person, Tsingtao Brewery put the health and safety of the people and all staffs first during the critical moment when the whole nation was mobilised to fight the epidemic, providing aid to the frontline with donations of money and supplies.

A large, three-dimensional sculpture of the Tsingtao logo, featuring the letters 'T', 'G', and 'TAO' in a bold, white, sans-serif font. The sculpture is set on a dark, rectangular base and is positioned on a lush green golf course. In the background, there are dense green trees and a clear blue sky with scattered white clouds. The overall scene is bright and sunny, suggesting a pleasant day at the golf course.

Tsingtao



Donation of money and supplies at the first instant by Tsingtao Brewery



Baoji branch donated supplies to several neighbouring institutions

Combating the epidemic with concerted effort

At the time when all Chinese people were concerned about the COVID-19 epidemic, Tsingtao Brewery put the health and safety of the people and all staff on top and took solid measures to prevent and control the epidemic. On 29 January 2020 the company donated to the Qingdao Red Cross Society **10** million yuan in cash and supplies worth **2** million yuan. Each unit of the company also responded actively, donating **810,000** yuan in cash and supplies worth **1.03** million yuan for the prevention and control of the epidemic. The total donation aggregated **10.81** million yuan in cash and supplies worth **3.03** million yuan.

Meanwhile, each unit of the company also supported the local with donations. The Heze, Baoji, Luoyang and Pengcheng breweries donated self-made disinfectants to local epidemic combatting authorities. Breweries in Shandong Province donated supplies. Sales departments in Hubei donated **600** sets of daily supplies for the sick and **1,200** pieces of underwear to medical staffs. Suizhou brewery donated five mobile air sterilisers to pairing hospitals. Hangzhou brewery, Jiangsu sales department and the Rongcheng brewery also sent supplies to the frontline staff combatting the epidemic. These were the actions by the company which won unanimous praise.



Pengcheng branch organised donation



Sales staff delivered products to customers painstakingly

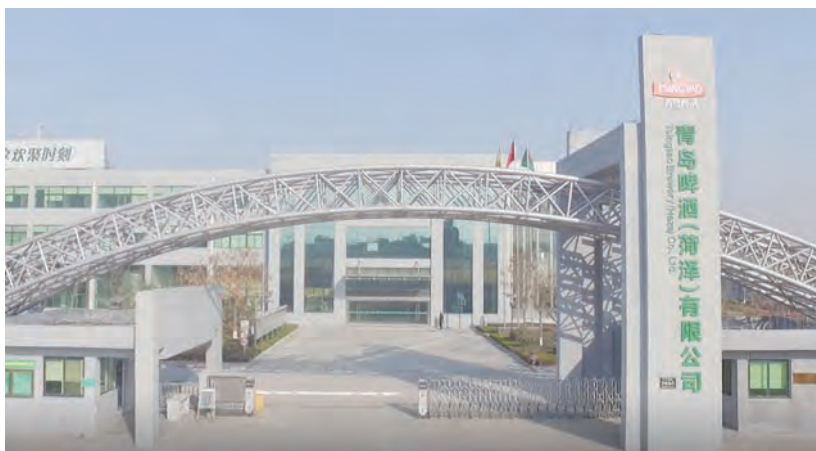


Contribution in poverty reduction and donation

Poverty reduction through industry development

Shandong: conglomerated industrial chain to drive local economy growth

In response to the call for poverty alleviation in aid of Heze City, Tsingtao Brewery signed an agreement with the Heze government to invest **180** million yuan for the Phase II expansion project of Heze brewery. With the aim of building the first-class brewery in China with higher quality and efficiency through transformation and upgrading, a **72,000** tin-per-hour production line and a **50,000** bottle-per-hour production line were built with related facilities, in which the tinned beer production line was in operation since August 2020. Increasing agglomeration of industrial chains drove the upstream and downstream industrial chains to develop in coordination and realised multiple forms of targeted poverty alleviation. Currently the Heze brewery has **35** upstream and midstream suppliers, **980** local bottle suppliers, and over **1,300** downstream partners. The company has made breakthroughs in driving economy growth of county-level regions.



Gansu and Guizhou: promoting integrated cultural and tourist industry

Tsingtao Brewery carried out the famous brand of Qingdao International Beer Festival and convened the Longnan Tsingtao Beer Festival for two consecutive years. It also became the title sponsor of the Huangguoshu International Beer Festival and Electronic Music Festival as well as the Huangguoshu Tsingtao Beer Carnival. In this way the local cultural and tourist resources were promoted to the whole world at large, the attraction of Longnan and Anshun to external investment grew greater, helping the local high-quality development in culture, tourism, economy and society.



The seventh Huangguoshu Tsingtao Beer Festival

Targeted poverty alleviation with joint efforts

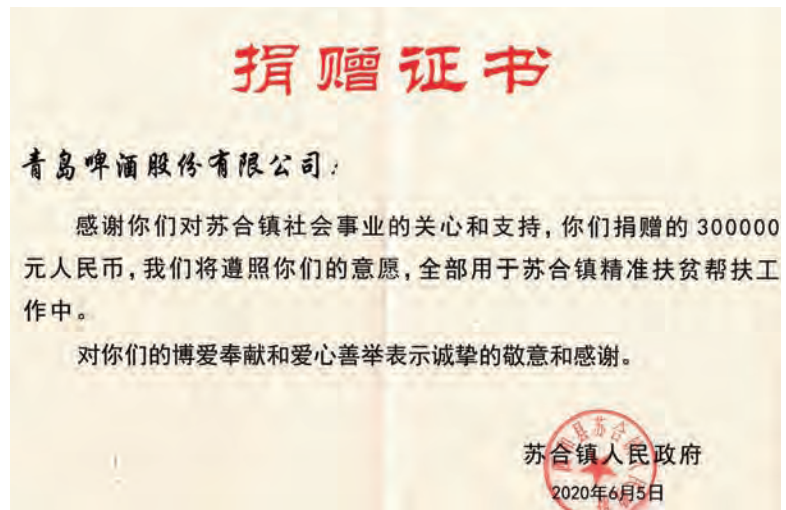
In June 2020, Tsingtao Brewery paired with the extreme poverty region of Shaijing Town, Xihe County, Longnan City, Gansu Province, helping poverty-stricken villages including Yuanshan Village, Chendi Village and Yangpo Village to get rid of poverty.

In August, places in Gansu had continued rainfalls and severe damages took place in Longnan due to floods and debris flows. Tsingtao Brewery contacted the Wudu District Bureau of Education in Longnan and organised donation for damaged schools and pupils from families with financial difficulties.

In 2020 the company held the Spring Festival activities together with the Federation of Trade Unions of Qingdao, delivering the "Longnan Agricultural Product Gift Packs" to workers from financially difficult families.

Tsingtao Brewery (Xi'an) Co., Ltd. has been working since 2018 on helping the local with poverty alleviation. In 2020 the Xi'an company invested in road infrastructure upgrading and vegetable greenhouse building, provided financial aids to pupils from poor families for schooling, and improved the living environment.

In 2020, the Weinan company held poverty alleviation activities in Dongsì Village of the Economic Development Zone, signed the Party co-building agreement with Dongsì Village Committee of Xinshi Subdistrict, and sent supplies. With the help of the grass-root level Party branch, the goal of poverty alleviation and rural area invigoration was steadily promoted.



Donation for social welfare

In 2020 the company financed the Qingdao University – Tsingtao Brewery Scholarship through Qingdao Education Development Fund. And 80 students were awarded the scholarship.

In October the company donated to the Qingdao Welfare Fund for the Disabled, which was the 17th annual donation since 2004.



Responsible drinking

Tsingtao Brewery always advocates the social responsibility of responsible drinking, promoting “responsible drinking for happy life”, calling for consumers to enjoy the happiness brought by beer and based on health, and initiating the green, healthy and quality lifestyle.

“

Our advice

People who should not drink Underage groups should not drink, and no-alcohol education should be provided. Pregnant women should not drink. And breast-feeding women should not drink. Drivers should not drive after drinking, and passengers should refuse to ride on a vehicle driven by the drunk. Patients under medical treatment or taking medicines should not drink. Avoid excessive drinking or drinking without food intake.

Our activities

Healthy life with beer Products are labelled with a sign warning “Excessive drinking can seriously damage your health.” Promoting public service ads “Do not drink and drive.” Developing low alcohol and low heat products We hand out leaflets to promote responsible drinking during sales promotions. Age verification reminder on our official website



The responsible drinking activity carried out by Tsingtao Brewery (No. 2) Co., Ltd.



Responsible drinking promotional event by the Xuzhou company

Caring for the community – passing on the warmth

Various welfare events conducted by the company in 2020



Party member brigade of Jujiang company participated in the battling against flood and reinforced the embankment.



The Luoyang company held the schooling aid event on 1 June, Children's Day



Volunteers from Sanshui company joined the co-building event with Yunxiu Community.

Creating harmony with the value chain

Employees are the most valuable of Tsingtao Brewery. The company “stimulates human resources with the system, builds a harmonious environment for development and creates happiness for employees”, in the hope of making ourselves the best employer with global influence. We empower the employees so that every staff may work and live happily in order to pass the happiness to global consumers.

Meanwhile Tsingtao Brewery never forgets to keep a thankful heart to upstream and downstream cooperation partners for their strong support. Our aim is to create, share and win together with business partners.





Let our employees work safely, healthily and happily

Tsingtao Brewery has always taken laws and regulations as the bottom line and red line, strictly abiding by safety laws and regulations including the *Production Safety Law of the People's Republic of China*, *Fire Control Law of the People's Republic of China* and the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, and put "turning the company to the employees' sanctuary for healthy and happy work" as the goal.

In 2020 Tsingtao Brewery implemented primary responsibility for security at all levels and conducted strict control measures, mobilising all staff for safety behaviour watch (with BBS), and conducting Job Safety Analysis before work for high-risk operations. No losses or accidents of severe injury have been recorded with 56 breweries, and the company won 39 honours, including 2 provincial honours and 19 municipal honours.

Improving practice with multiple measures with clearer entity responsibility


Refining and clarifying responsibility


The company formed safe production responsibility management system "to ensure that both local CPC committees and management are held accountable and that officials take responsibility for workplace safety in performing their duties". Employees signed 4,252 target responsibility documents at every level to implement the safe production responsibility management system.


Safety management frame and network covered all business fields. The *Safety Production Responsibility System Management Procedure* was reviewed and three central safety responsibilities were added, with refined list of responsibility and clearer safety responsibilities.


Multiple measures for level-by-level implementation



 Promoting the practice of the company with safety production committee: holding regular safety production committee meetings and inviting experts to deliver courses on implementing safety production entity responsibility

 Promoting the practice of general managers with the Ten Management Checkpoints: tracking the fulfilment of the ten points with general managers, held 1,041 special meetings, conducted 1,420 safety checks and delivered 65 safety open courses

 Promoting the practice of the workshop with pacesetter evaluation system: all 1,186 workshops joined the pacesetter evaluation system and 12 became outstanding workshops of the company level, in which way the safety management level of workshops got improved

 Promoting the practice of posts with risk maps: integrating risk source identification and hierarchical risk control requirements, building the comprehensive risk map without omission of major risks. 46 posts were screened and 972 risk points were identified with control measures drafted.

Promoting risk management and control in key areas and diminishing safety hazard

Four major management fields were settled in accordance to the requirements of the company's safety and operation management with a total investment of nearly 30 million yuan on safety.

Promoting the JSA evaluation events and conducting over 30,000 high-risk operation using JSA without accidents



Strengthening trainings to improve the safety culture with professional management capability

Forming the three levels of safety education system, conducting various forms of safety training with the opportunity of organised trainings on laws and regulations, safety management procedures and system building.

In 2020 the company conducted safety trainings with an average of 43.56 hours per person. With innovative online methods the company built a professional platform for safety training, prepared seven sets of courseware, and developed ten video courses for safety micro-classes. And staffs for safety management

and production studied over 13,000 times with these materials. With solid effects required, companies would deliver 58% of offline trainings to workshops, focusing on required technical knowledge and skills, hazardous points and practice.

The company organised special events for general managers including learning activities, trainings and examinations on safety production, not only to improve the safety management capability of general managers, but also to strengthen their leadership. General managers with 62 breweries all took the online exams and passed.

Conducting various activities themed “my safety my responsibility” to promote safety culture

In reference to the company's plan in the year, during the 19th “Month for Safe Production” of the nation, a series of cultural events on safety were carried out under the theme of “hold the bottom line and be the master to my own safety”. A strong atmosphere of safe production came into form and the first promotional film on the “Month for Safe Production” was made after the series of activities.

All-staff safe practice watch was carried out and 105,000 suggestions were collected to prevent repeated unsafe practices through analysis, tracking and reasoning.



“Month on Safe Production” activities by Songjiang company

Strengthening emergency management for practice

Three-stage emergency disposal system including comprehensive plan, special plan and onsite disposal plan was formed. 8,567 rehearsals were held among every level of management and standard process evaluations were carried with over 200 points to be improved.



Fire safety rehearsal with the Tsingtao Brewery (No. 4) Co., Ltd.

Comprehensive screening and compliance management to protect the vocational health of employees

Vocational health management system was improved and screening of the hazardous factors on vocational health hazard was carried out. Related legal requirements of the nation were identified and implemented, and working environment inspections were regularly conducted with identified vocational health hazards. Vocational health examinations were organised through the whole process from the beginning to the end of a post with a total staff of 12,000. The company invested 27 million yuan to protect the vocational health of employees.



Safety rehearsal competition with the Tsingtao Brewery (Jieyang) Co., Ltd.

Safeguarding the rights of employees and paying attention to employees' health

Equal and in-compliance employment

Tsingtao Brewery sticks to the bottom line of compliance to laws and regulations including the *Labour Law of the People's Republic of China*, *Labour Contract Law of the People's Republic of China*, *Law of the People's Republic of China on Promotion of Employment*, *Law of the People's Republic of China on the Protection of Minors*, *Social Insurance Law of the People's Republic of China* and the *Regulation on Work-Related Injury Insurance*.

Tsingtao Brewery always believes the employment concept of "letting the right people to the right thing" and pays attention to matching employees up with positions. The company adopts standard verification process and benchmarking during interviews, creating equal employment opportunity for each candidate while making sure each recruit up to the standard of employment and the requirements of the position. In terms of recruitment, promotion and salary, the company insists equal and in-compliance employment regardless of ethnicity, religious belief, gender, age or marital status of the employee.

The company has set the limit to the age of the employees for recruitment according to the law. No child labour or enforced labour is allowed in any business or working venue and no risks of child labour or enforced labour existed during 2020 with any business.



2020 Top 100 Model Employers of China



2020 China Model Company on Talent Management

Complete system for social welfare and security

Tsingtao Brewery sticks to the compliance to laws and regulations, signs employment contracts and pays for employees' social insurances as well as housing provident funds. In 2020 the company 100% signed employment contracts with employees and paid for their social insurances.

Tsingtao Brewery provides employees complete system for social welfare and security, and strictly observes national, provincial and municipal regulations including the *Regulation on Paid Annual Leave for Employees*, *Implementation Measures for Paid Annual Leave for Employees of Enterprises* and the *Opinions of the State Council on Reforming the Mechanism for Determining Wages in State-owned Enterprises*. Employees can enjoy paid-leaves, maternity and sick leaves, regular physical examinations and health trainings. Meanwhile the pay-for-performance reward mechanism was optimised to share the outcome of corporate development with employees.

The company launched the share incentive plan in 2020. With key personnel sharing the benefits and risks with the company, the measure has closely connected employees and the company's goals for high-quality development. And now 627 persons including executive directors, high-level managing staff, other key managing staff, intermediate-level managing staff and key backbone staff have joined the plan.

Safe resumption of work for prevention and control of the epidemic

Facing the sudden strike by the epidemic, the company responded quickly, purchased and delivered a batch of supplies including masks, medicine alcohol, forehead thermometers, disposable gloves and disinfectants. The needs of both employees and the company for resumption were met. And over 45 breweries in China were organised to provide medicine alcohol, masks, disinfectants and disposable gloves to those in need.

The company paid attention to employees' health and labour policy at the first instant. Since 29 Jan 2020, close tracking has been conducted with daily collecting of the epidemic prevention and control information. And the updated local policy was timely mastered with the situation of the staff's battle with COVID-19.

- The company arranged the resumption of work in an orderly way according to the national policy and the requirements of the local administration.
- The company actively studied and implemented policy documents issued by national, provincial and municipal human resources and social security authorities, communicated fully with employees and ensured the full execution of all benefiting policies to employees.



PCR tests were arranged for employees by Tsingtao Brewery

Democratic management to solve employees' problems

Tsingtao Brewery strictly follows the requirements of laws and regulations, respects the rights and wills of employees. The communication with employees is strengthened with various carriers including employee representative meetings, transparency in corporate affairs, community for employees, WeChat posts, internal magazines and systematic protection.

The company organises employee representative meetings every year. Delegates actively provide their ideas on the production management, reform and innovative development of the company and proposed a series of solutions and suggestions.

The company made open the management of corporate affairs in forms including bulletin board, internal newspaper, wall newspaper and blackboard newspaper, which drew the attention of employees and won their recognition.



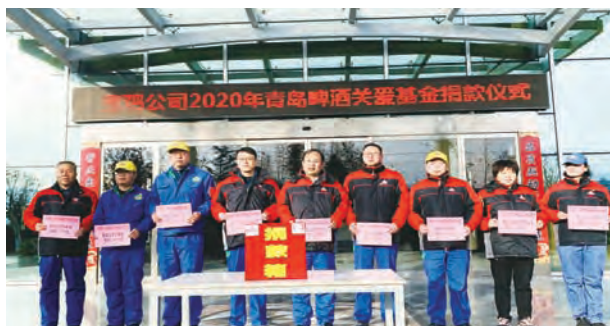
Unite the staff with various cultural and sports events

The company organised many cultural performances to praise the leading groups and people in the battle against the epidemic and demonstrate the pioneering spirit of the Tsingtao Brewery people. Branches of the company also carried various forms of events, such as ten sales units including the Jilin, Guangxi and Zhejiang regional branches holding sports events like competitions, basketball games and badminton matches, and manufacturing units including the Chenzhou, Changsha and Jieyang companies holding colourful events like dumpling matches, fun sports meetings and outward bounds.



Caring for employees with multiple measures

The company actively provided aids to employees in financial difficulties. In 2020 the Love Fund of the company provided help to 17 poor staffs of 15 branches who suffered from serious illness with a total amount of 630,000 yuan. According to the arrangement of the Federation of Trade Unions of Qingdao, the company actively involved in the targeted poverty aid work and helped 212 person times who met temporary financial difficulties due to illnesses of themselves or relatives.



Empowering employees and helping them grow

Facing the sudden strike of the epidemic in 2020, all staff united to tackle the challenges. On the basis of implementing epidemic prevention and control policies and protecting the health and safety of employees, staff training was launched with innovation in forms, empowering employees in both management and practice. Digitalised training tools were widely applied including live streaming, online self-study, WeChat study groups and the DingTalk platform. The mixed application of all kinds of online studying has brought out the new model of empowering for employees.



Quick transformation of the way of empowering:

As the epidemic severely impacted the offline training, the company timely changed to online forms, collecting in real time the work-related needs and designing tailored empowering projects from community sales to digital sales, and from class-by-class studying to online workshop. In 2020 a total length of 1.952 million person hours of training was carried out.



Professional certification to strengthen the base:

All vocational schools worked to promote training through live streaming and online exams, and issued certification to 6,200 persons in 2020.



Headquarters functions to widen the view:

The Tsingtao scholars' club was working on digitalisation and innovation to inspire innovative thinking as the empowering project from the headquarters. There were 4,100 persons to join the 16 batches of trainings.



Direct access to frontline sales information:

The company launched the live streaming courses and sent skill training to the frontline. For marketing staffs we built brand programmes including the Micro-classroom of pioneers and Learning community of regional managers to empower the frontline with individual capability. There was a series of live streaming courses *Community Marketing* in eight seasons with a total watch count of 32,000 person times and more than 4,300 pieces of comments. There were also 23 editions of Micro-classroom of pioneers live streaming courses and 179 online training classes with branch companies.

At the end of 2020 there were 35,678 employees in total, in which male staff numbered 23,427, which was 71.27% of the total staff, while female staff numbered 10,251, which was 28.73%.

Age groups	30 and below	7,092	Proportion: 19.88%
	31-40	14,032	Proportion: 39.33%
	41-50	10,145	Proportion: 28.43%
	Above 50	4,409	Proportion: 12.36%

About 50% of all employees are college graduates

Staffing	Managing staff	4,812	Proportion: 13.49%
	Financial staff	1,310	Proportion: 3.67%
	Engineering staff	2,336	Proportion: 6.55%
	Sales staff	11,491	Proportion: 32.21%
	Production service staff	15,729	Proportion: 44.09%

45.6% of all functional managing staff are female



Co-building plan with department heads

In order to improve the comprehensive capability of level-two intermediate staff and build a platform for discussion and communication to realise win-win with a co-building thinking by sharing ideas and outcomes, and improving management and method innovation, the company organised hot topic discussions including the “plan for new managing staff” and “multiple capability training mode”. The case pool of the company was enriched with 125 outstanding cases and 4,125 person times of studying, and the frontline managers were enlightened with resolutions.

Create, share and win together with business partners

Tsingtao Brewery highly values its business partnerships and works tirelessly to create mutually beneficial outcomes for all of its affiliates in the hope of growing together with cooperation partners.

Helping suppliers to succeed

Tsingtao Brewery strictly abides by the laws and regulations including the *Food Safety Law of the People's Republic of China*, *National Food Safety Standard Food Additive Usage Standard* and the *Sanitary Licensing Regulations for Production Enterprises of Disinfection Products*. Meanwhile the company has established and followed a series of internal management rules including the *Tsingtao Brewery's Supervision and Management System for Bidding*, *Bidding Management Process of Tsingtao Brewery*, *Standard Processes for the Entrance, Cooperation and Withdrawal of Suppliers of Tsingtao Brewery* and the *Rules for Procurement Operators*. We always ask suppliers to sign the *Commitment for Clean Service* before bidding to make sure business ethics are well performed. We hold non-scheduled supplier meetings by category annually, letting them know the development plan, managerial concepts and requirement of Tsingtao Brewery to improve their capability on exercising social responsibility and sustainable development, and let them grow together with Tsingtao Brewery.

The company also undertakes verification on suppliers for their performances in quality, safety, environmental protection and social responsibility, and strictly requires suppliers operate in accordance with related national, provincial and

municipal environmental laws and regulations. In the course of sourcing new suppliers and auditing existing suppliers, we have included the ISO 9001, ISO 14001 and ISO 22000 into the scope of certification requirements for suppliers.

According to laws and regulations, we have established the *Checklist of Required Certificates with Suppliers* for raw material, and all certificates and third-party testing reports are required. A list of qualified suppliers of materials in close contact with beer has been settled with a dynamic management of the list. We conduct the designated third-party testing mechanism for samples of materials in close contact with beer collected by Tsingtao Brewery. Those suppliers failed to meet the requirements of certificates or testing will lose the qualification for cooperation with us. Within the reporting period we have introduced in 29 new suppliers and removed 14 listed suppliers.

The company conducts with partner suppliers annual and onsite examinations and comprehensive evaluations in the fields including food safety, quality, service and actual supply completion rate with key attention to food safety, quality control and environmental protection outcome improvement.

Suppliers of non-production materials: **1,140**

Suppliers of materials for production (raw material, packaging materials and additives etc.): around **646**

In 2020, there were **1,786** applicable suppliers for the company, over **99%** being local Chinese suppliers.

- Facing the epidemic the company instructed suppliers on epidemic prevention and control supplies preparation, issuing measures on goods sterilisation and individual protection. Material such as masks and disinfectants were provided, and raises on logistics costs were covered to help suppliers with their production.
- The company has set promoting the domestic barley and hops industry as its important raw material strategy and cooperated with domestic suppliers in terms of financing, selective breeding, research, development and testing as well as barley preparation technology.
- The company is active in discussing cooperation with suppliers. Big hops and fragrant hops planting base were built in Qingdao and refining and selecting researches were carried with partners. Long-term purchasing contracts were signed to encourage planting, handsome prices were offered to quality products in order to raise the income of partners and planters.



Inspecting hop planting base

In 2020 we held supplier meetings and conducted online training

Promoting purchasing from big international barley producers together with suppliers and ensure safe supply of raw materials.

Supporting sales agents with sincerity

Tsingtao Brewery has a sales network covering the whole world and the company fully respects and recognises every agent. The company would like to work with sales agents to realise the common dream.



- In 2020 the company carried out five guidelines and standard practice packs with four dimensions including "optimising reforms, coordinating distribution, process management and encouragement system". With constant tracking of projects, the company instructed distributing partners to follow the trend of the industry, improve reforms on channels and realise shared success with cooperation.
- Six working guidelines were issued during the epidemic and new counter measures were introduced including non-contact delivery, livestream sales, self-service sales and community sales events, to help distributors recover their market operation as soon as possible.

Comments from a third party

Evaluation by the report

The COVID-19 struck the beer industry since the beginning of 2020, stagnating the production and sales channels of breweries, and causing the plummeting of beer sales in Q1. Since Q2 the epidemic was effectively controlled and various measures including the recovery of production and tax and fees cutting helped optimise the business environment. Beer companies found opportunities through crises, opened new chapters amid changes and expanded new sales modes, so that the contained and frozen consumption demands were released. Apart from meeting the various and efficient purchasing needs of consumers, new products were developed and digitalised industrial structure transformation was promoted. The company quickened the pace for high-quality development and achieved positive results.

We may found from the Environmental, Social and Governance Report 2020 that facing the sudden strike of the COVID-19, Tsingtao Brewery promptly responded, collecting money and supplies to aid the frontline with solid deeds to demonstrate the

company's sense of responsibility. Meanwhile the company restarted production and diminished the negative effects of the epidemic, implemented the "high-quality leap forward strategy" unswervingly. With the "double success" of prevention and control over the epidemic and high-quality development of the company, the company realised the expansion from products to scenes, from industries to ecosystems, from single-track race to multi-track race and from traditional manufacturing to industrial internet.

Tsingtao Brewery always sticks to safe brewing and green brewing, prioritising food safety control in the course of strategic management and quality control, realising the close-circuit control process of food safety management. The company can realise sustainable development through environmental protection, low-carbon management and circular economy. We remain true to our original aspiration, keep on with the paired poverty alleviation and schooling aid activities, initiate responsible drinking, output positive energy and create value for the society in a sustainable way.

Suggestions by the report

With the continued optimisation of the beer industry structure, the industry has come to a critical window for opportunity. While China is to accelerate the establishment of a "dual circulation" development pattern in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement, companies should firmly master the major needs of customers, carry out supply side structural reform, continue to develop effective domestic needs, provide better innovation and guidance in segmented consumption scenarios and channels especially with high-end and super high-end products. At the same time we need to further quicken up our steps for transformation, upgrading and innovative development. Carry on with digitalised transformation, empowering business with digitalised and smart upgrading.

The international situation nowadays is extremely complicated and challenging and the risks with raw material industrial chain is getting greater with the increasing dependency to external supplies. We need

to pay attention to the safety of the raw material industrial chain and clear up clogs. We need to support the development of domestic raw material industry for beer through interest-sharing and high-level cooperation with domestic raw material planting research institutions from breeding to each procedure of barley production.

As the leader in beer industry, Tsingtao Brewery should attach great importance to sustainable development and settle a strategy to comprehensively promote the energy reform and practise the way of production and living that is green, low-carbon, circular and sustainable. The brand is a 117-year-old national brand that has great potential to build itself into a global competitor through innovation and quality assurance, and a world first-class company in contribution to invigorating national brands.



Appendix: *Environmental, Social and Governance Indices*

ESG Indices			Page of disclosure
Environmental			
A1: Discharge	General disclosure	Relating to the discharge of waste gas and greenhouse gases, drain contamination to water and land, generation of hazardous or harmless wastes etc.: (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	26-31/ 34-35
	A1.1	Discharge data	27/31/ 34/35
	A1.2	Total emission of greenhouse gases (tonne) and (if applicable) density (per unit production or per facility)	35
	A1.3	Total hazardous waste (tonne) and (if applicable) density (per unit production or per facility)	36
	A1.4	Total harmless waste (tonne) and (if applicable) density (per unit production or per facility)	36
	A1.5	Description of measures and results of discharge reduction	28-37
	A1.6	Description of methods of treating hazardous and harmless wastes, and measures and results of reducing the waste	36
A2: Resource usage	General disclosure	Policies on effectively using resources (i.e. energy, water and other raw materials)	28-33
	A2.1	Total consumption (1,000 kWh) and density (per unit production or per facility) of direct and/or indirect energy (electricity, gas or oil) by category	3/33
	A2.2	Total water consumption and density (per unit production or per facility)	31
	A2.3	Description of plan and results of energy efficiency	30-33
	A2.4	Description of problems on acquiring suitable water source, and the plan and results of improving water usage efficiency	30-31
	A2.5	Total packaging material consumption and (if applicable) per unit consumption	36
A3: Environment and natural resources	General disclosure	Policies to diminish major impacts to the environment or natural resources by the publisher	26-37
	A3.1	Description of major impacts to the environment or natural resources by business activities, and actions taken to control the impacts	26-37
Social			
B1: Employment	General disclosure	On remuneration, dismissal, recruitment, promotion, hours of work, holidays, equal opportunity, diversification, anti-discrimination and other treatment or welfare: (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	50-51/53
	B1.1	Total employee statistics in gender, employment category, age group and region	53
	B1.2	Employee loss ratio statistics in gender, age group and region	-
B2: Health and safety	General disclosure	On providing safe workplace and protecting employees from vocational hazards (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	48-49
	B2.1	Number and ratio of job-related fatalities	-
	B2.2	Loss of working days due to job-related injuries	48
	B2.3	Description of measures taken for vocational health and safety, and related methods of execution and monitoring	48-49

ESG Indices			Page of disclosure
Social			
B3: Development and training	General disclosure	Policies on improving employees' knowledge and skills to perform the duty and description of training activities	53
	B3.1	Percentage of employees trained by gender and employment category (i.e. senior management, intermediate management etc.)	53
	B3.2	Average hours of training for each employee by gender and employment category	53
B4: Labour principles	General disclosure	On preventing child labour or forced labour: (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	50-51
	B4.1	Description of checking the recruitment practices to avoid child labour or forced labour	50
	B4.2	Description of measures taken to eliminate cases of violation upon discovery	50
B5: Supply chain management	General disclosure	Polices on managing environmental and social risks of the supply chain	54-55
	B5.1	Number of suppliers by region	54
	B5.2	Description of the convention of selecting suppliers, number of suppliers to undertake relative practices, and methods of execution and monitoring under conventions	54-55
B6: Product liability	General disclosure	On the health, safety, advertisement, tag and privacy facts of products and service, and remediation measures: (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	18-25/44
	B6.1	Percentage of sold or transported products to be recalled due to safety or health causes	21
	B6.2	Number of complaints received on product or service, and the measures of reaction	25
	B6.3	Description of convention on IPR protection	11
	B6.4	Description of quality verification and product recall process	20-21
	B6.5	Description of policies on consumer data and privacy protection, and related measures on execution and monitoring	24-25
B7: Anti-corruption	General disclosure	On preventing bribery, blackmail, fraud and money laundering: (a) policies; and (b) documents on conforming to relative laws and regulations with essential impacts to publishers	10
	B7.1	Number and results of lawsuits concluded on corruption by publisher or employees within the period of reporting	8-10
	B7.2	Description of prevention measures and reporting methods, and related measures on execution and monitoring	8-10
B8: Community investment	General disclosure	Policies on understanding the community demands by involvement and bringing community benefits into consideration during business operations	4-5/6-7/11-17 40-45/ 11-17/
	B8.1	Focused area of contribution (i.e. education, environmental issues, labour requirement, health, culture, sports)	24-25/37/ 40-45/50-52
			2-3/12-17/
	B8.2	Resources mobilised within the focused area (i.e. time, money)	29/40-43/ 51-52

YOUR FEEDBACK

Dear readers,

Thank you for reading the *Tsingtao Brewery Co., Ltd. Environmental, Social and Governance Report 2020*. Please write any suggestions and comments you may have on the following feedback form and return it to us via post, fax or email. Your feedback is welcome.

Name:

Organisation:

Tel:

Email:

Which chapters provided you with the most important information?

- | | |
|--|--------------------------|
| 1 The preface | <input type="checkbox"/> |
| 2 117 years just for brewing good beer | <input type="checkbox"/> |
| 3 Green Brewery | <input type="checkbox"/> |
| 4 Caring for the community | <input type="checkbox"/> |
| 5 Value chain in harmony | <input type="checkbox"/> |
| 6 Comments from a third party | <input type="checkbox"/> |



Your evaluation of the report

	Good	Fair	Not good
· Readability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Cogency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Layout design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Overall impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Your suggestions for our report next year