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Empty glass bottle inspectors

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some content of this document may involve patents. Publication of this document The institution does not assume responsibility for identifying these patents. This standard was proposed by the China National Machinery Industry Federation. This standard is under the jurisdiction of the National Food Packaging Machinery Standardization Technical Committee (SAC/TC494). This standard was drafted by: Shandong Mingjia Technology Co., Ltd., Tsinghua University, Guangzhou Wanshide Intelligent Equipment Technology Co., Ltd., Tianjin Rong Xinjia Machinery Co., Ltd., Hefei General Machinery Research Institute Co., Ltd., Slack Precision Manufacturing Co., Ltd., Beijing Boshi Zhidong Technology Co., Ltd., Shanghai Botron Electric Co., Ltd., Baumer Electronics (Shanghai) Co., Ltd., Teledar Dalestar (Shanghai) Trading Co., Ltd., China Light Industry Machinery Association, Hefei General Electromechanical Product Testing Institute Co., Ltd., South China University of Technology, Beijing Yanjing Beer Co., Ltd., China Resources Snow Flower Beer (China) Co., Ltd., Coca-Cola Beverage (Shanghai) Co., Ltd., Qingdao Beer Co., Ltd., Guangzhou Nansha Pearl River Beer Limited company, Danone (China) Food & Beverage Co., Ltd., Shanghai Want Want Food Group Co., Ltd., Hangzhou Wahaha Group Co., Ltd., Shandong Branch Technical University. The main drafters of this standard. Zhang Chun, Shi Chenbo, Liu Yuanqiang, Wang Guijin, Zhang Shujun, Wang Zhong, Chen Runjie, An Xu, Li Yuhang, Zhang Wei, Sun Weijie, Yang Hanlin, Meng Long, Zhang Kai, Gao Xiaoyu, Yang Huazhong, Wang Bingsheng, Xing Enhong, Cai Rui, Zhao Pingxue, Shi Zhuqing, Jiang Xinyu, Liu Bin, Song Yunliang, Wang Xin, Ji Rong, Tang Weiqiang, Zhao Wei, Chen Xiongfei, Ye Hui, Kang Chao, Li Yong, Li Kening, Yu Mingda, Zhao Pingyuan, Cao Maoyong. Empty glass bottle inspection machine

1 Scope

China's national standard for empty glass bottle inspection machines. It specifies the terms and definitions, the model, the classification, the structure, the basic parameters and the working conditions. The machine inspects returnable and new bottles before filling, and its job is to catch what would otherwise become a hazard or a contamination in a sealed product. For returnable bottles that means residual liquid, cigarette ends, caustic from the

washer, and above all glass fragments from a chipped finish - the sealing surface at the mouth, which is where a returned bottle is most often damaged and where a chip means the cap will not seal. For new bottles it means checking for the moulding faults that could cause a burst under carbonation pressure. Inspection is done optically as the bottle spins, with the base examined through the mouth, and the whole cycle takes a fraction of a second, on every bottle, because one missed defect reaches a consumer.

This standard specifies the terms and definitions, model, classification, structure, basic parameters and working conditions, technical requirements, and test requirements of the glass empty bottle inspection machine. Inspection methods, inspection rules, signs, packaging, transportation and storage requirements. This standard applies to quality inspection machines for packaging empty glass bottles (hereinafter referred to as "bottles") for liquid foods such as beverages, alcohol, condiments, dairy products, etc. (Hereinafter referred to as "bottle inspector").

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 191 Graphic mark for packaging, storage and transportation

GB 2894-2008 safety signs and guidelines for their use

GB/T 4208-2017 enclosure protection level (IP code)

GB 5226.1-2008 Mechanical Electrical Safety Mechanical Electrical Equipment Part 1. General Technical Conditions

GB/T 7311 Packaging machinery classification and model compilation method

GB/T 7932-2017 Pneumatic general rules and safety requirements for the system and its components

GB/T 9969 General Instructions for Use of Industrial Products

GB/T 13277.1-2008 Compressed air Part 1. Pollutant purification grade GB/T 13306 sign

GB/T 13384 General technical requirements for packaging of electromechanical products

GB/T 14253 General technical requirements for light industry machinery

GB 16798 Food Machinery Safety and Sanitation

GB/T 19891 Machinery Safety Hygienic requirements for machine design

JB/T 7232 Simple method for measuring the sound power level of packaging machinery noise JB/T 7233 Packaging machinery safety requirements

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Using machine vision and other optical, acoustic, and electrical detection technologies to accurately detect defects, foreign objects and contamination in empty glass bottles

3.2 Inspection unit inspectunit The bottle testing machine is composed of software and hardware to realize a certain detection function in the detection process.

3.3 Bottlemissingrate In the normal inspection process of the bottle inspector, the percentage of the number of sample bottles and the total number of sample bottles that have not completed the inspection function of all inspection units.