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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 32056-2015

**Escape test method for the emergency window glazing of high
speed multiple units**

高速动车组应急窗用玻璃逃生试验方法

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Building Materials Federation. The industry standard by the National Standardization Technical Committee special glass and glass (SAC/TC447) centralized. This standard is drafted by: China Building Materials Certification & Inspection Group Co., Ltd. Participated in the drafting of this standard. Anping Jinlong Vehicle Equipment Co., Ltd., Jiangsu Anchor Glass Co., Ltd., Fuyao Glass Industry Group Co., Ltd., Beijing Ming Shield Technology Co., Ltd., CSR Qingdao Sifang Locomotive Co., Ltd., China CNR Tangshan Railway Vehicle Co., Ltd. The main drafters of this standard. Hu Yue, CHENG Xue Ran, Ma Tao, Wangyin Mao, Wang Lin, Zhongda Xiang, Li, Zhang Li, Pang Shi-hong, Wang Chuang, Zhao Wei, Zang Shuguang. EMU emergency escape window glass Test Method

1 Scope

China's national test method for the escape performance of emergency window glazing in high speed multiple units. It specifies the terms and definitions, the safety measures, the test conditions, the test equipment and instruments, the test method, the evaluation of results and the test report, and it applies to the glazing of emergency windows in high speed multiple units designed for not less than 200 km/h. The problem it addresses is a genuine conflict of requirements. A high speed train window has to be strong: it is loaded by aerodynamic pressure at speed, hit by ballast and debris, and pressure-pulsed every time a train passes in the opposite direction in a tunnel, and it must not fail under any of those. Railway safety glazing built to GB 18045 is accordingly a laminated construction designed to stay intact when struck. But a train also has to be evacuated, and in a fire or after a derailment the emergency windows are the way out. Those same windows must therefore break, quickly, when struck deliberately from inside by a person using an emergency hammer - a person who may be injured, in smoke, and standing on an uneven floor. The standard is what verifies that the second requirement has been met without weakening the

first. It defines the emergency window as one specially designed and manufactured to be broken quickly in an emergency for escape or rescue, defines the emergency hammer with its sharp point, and prescribes the conditions under which the glazing is struck and how the result is judged. It opens, unusually for a test standard, with a safety clause requiring a helmet, face protection and heavy rubber gloves, because the test consists of deliberately shattering toughened glass by hand. Issued on 13 October 2015 and in force since 1 September 2016.

This standard specifies the high-speed EMU emergency escape window glass - Test methods and definitions of terms, security measures, test conditions, test Test equipment and instruments, test methods, evaluation and test report test results. This standard applies to the design speed of not less than 200km/h high-speed EMU emergency escape test with a glass window.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 1216 outside micrometer

GB 18045 railway vehicle safety glass

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Emergency window emergencywindow Specially designed and processing, emergency situations can be quickly broken, for escape or rescue windows.

3.2 Emergency hammer emergencyhammer Emergency situations for emergency glazing special crack tip hammer.

4 Safety Measures

Should wear protective helmet struck prepared with masks, thick rubber gloves and other personal protective equipment.

5 Test conditions

Unless otherwise specified, the test shall be carried out under the following conditions.

- a) Ambient temperature. $20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$;
- b) atmospheric pressure. $8.4 \times 10^4\text{Pa} \sim 1.06 \times 10^5\text{Pa}$;

c) Relative humidity. 40% to 80%.

6 Test equipment and apparatus

6.1 Emergency hammer By the sharp hammer, hammer and handle, as shown in Fig. Emergency hammer shall meet the following criteria.

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