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ASSOCIATION STANDARD

T/CSAE 83-2018

The emergency exit setting requirements for electric bus

电动客车应急出口设置规范

(English Translation)

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Preview: page 1 of 5 shown, 7 in the full document. Complete English PDF, instant download:
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Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms

4 Setup requirements

4.1 Number of emergency exits

4.2 Emergency exit settings

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Some elements of this standard may involve patents, and the standard issuing authority does not assume responsibility for identifying these patents.

This standard was proposed by the Technical Innovation Alliance of the Electric Vehicle Industry.

This specification was drafted. Shanghai Fire Research Institute of the Ministry of Public Security, Shanghai International Automobile City (Group) Co., Ltd., SAIC Wanxiang New Energy Bus Co., Ltd.

1 Scope

This standard specifies the quantity, size, location and logo of the emergency exit of electric buses.

This standard applies to electric buses with a length of 6m or more, including pure electric buses/city buses, hybrid buses/city City bus (including plug-in and extended program), fuel cell bus/city bus reference.

2 Normative references

The following documents are indispensable for the application of this document and the latest editions (including all amendments) apply to this specification.

GB/T 13094 passenger car structural safety requirements GB/T 19596 electric vehicle terminology GB 7258 Motorcycle Operation Safety Technical Conditions CJ/T 350 electric bus general technical conditions JT/T 1096 electric bus configuration requirements

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3 Terms

GB 13094, GB/T 19596, CJ/T 350, JT/T 1096 established and the following terms and definitions apply to this document.

4.1 Number of emergency exits

4.1.1

The number of vehicle emergency exits should be considered together with the number of passenger doors.

4.1.2

In order to meet the evacuation and out-of-vehicle assistance in emergency situations, the exit of each compartment (excluding the bathroom or cooking room) the minimum number (including passenger door and emergency exit) shall comply with the requirements of Table 1.

Table 1 Minimum number of exports

Number of passengers and crews (number) Minimum number of exits (units) 9 to 16 3 17 to 30 5 31 to 45 7 46 to 60 8 2T/CSAE 83 -.2018 Number of passengers and crews (number) Minimum number of exits (units) 61 to 75 9 76 to 90 10 91 to 110 11 111 to 130 12 > 130 13 Note. Regardless of the number of evacuation hatches, it can only be counted as one emergency exit.

4.1.3

Passenger cars with a length of more than 7m should be provided with evacuation hatches (double-decker buses should be located on the upper roof). Class A and Class I buses should at least one evacuation hatch shall be provided, and the minimum number of evacuation hatches for Class B, Class II and Class III passengers shall be in accordance with Table 2.

Table 2 Minimum number of evacuation hatches for Class II and Class III passenger cars

Number of occupants (number) Number of evacuation hatches (a) <= 50 1 > 50 2 Note. The double-decker bus refers to the upper layer.

4.1.4

In an emergency, all occupants of the lower deck of the double-deck passenger car should have a route that is evacuated outside the vehicle without the upper deck.

4.2 Emergency exit settings

Preview: page 3 of 5 shown, 7 in the full document. Complete English PDF, instant download:
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4.2.1

For passenger cars with a length of 6m or more, there is only one passenger door on the right side of the vehicle body and no driver's door is provided on the left side of the vehicle body.

Emergency doors should be placed on the left or rear of the car body. Passenger cars with a length of more than 7m should be provided with evacuation hatches.

4.2.2

The number of exits on the left and right sides of the passenger car should be basically the same, and the exit on the same side should be reasonably distributed along the length of the bus.

4.2.3

After the evacuation hatch is opened, the rechargeable energy storage system (or installation cabin) and the passenger cabin should remain intact.

The insulation part should be made of fireproof and heat insulation material, and the edge of the battery pack should be greater than or equal to 500mm.

4.2.4 Emergency door

4.2.4.1

The net height of the emergency door should be greater than or equal to 1250mm, and the net width should be greater than or equal to 550mm; however, the length of the vehicle is less than or equal to 7m.

For passenger cars, the net height of the emergency door should be greater than or equal to 1100mm. If the wheel cover protrudes within 400mm from the lowest point of the door hole, then the wheel cover the net width of the emergency door at the bulge can be reduced to 300mm.

4.2.4.2

The hinged emergency door on the side of the vehicle shall be hinged at the front end, and the outward opening angle shall be greater than or equal to 100° and shall be Keep it open at an angle. If the free passage of 550mm or more can be provided when the emergency door is opened, the opening degree is greater than or equal to 100°.

The request may not be satisfied.

4.2.4.3

The emergency door shall have a locking mechanism and be securely locked. The emergency door should be able to lock when it is closed, and under normal driving conditions it will not open itself due to vibration, bumps and collisions of the vehicle.

Preview: page 4 of 5 shown, 7 in the full document. Complete English PDF, instant download:
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Emergency doors should be effective to prevent misuse.

4.2.4.4
When the vehicle is stopped, the emergency door should be easy to open from inside and outside without tools. The emergency door should be separated from the driver.

Control opening and passenger manual opening two in-car opening modes, and having a door opening sound alarm device, when the emergency door is not completely closed Remind the driver. It is allowed to lock the door from the outside of the car, but it should be ensured that it can always be opened from the inside with the normal opening device;

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3T/CSAE 83 -.2018

Set a protective cover or other protective device that can be manually removed, and the height from the ground (when empty) should be less than or equal to 1800mm.

4.2.5 Emergency window and evacuation hatch

4.2.5.1
The area of the emergency window and evacuation hatch should be greater than or equal to (4 x 105) mm2, and can be connected to a 500mm x 700mm (Rectangle for a bus with a length of 7m or less of 450mm x 700mm); if the emergency window is located at the rear end of the bus, it can be connected internally.

A rectangle of 350 mm x 1550 mm and a radius of curvature of 250 mm or less is also considered to be satisfactory.

4.2.5.2
Hinged or catapult emergency windows shall be opened outwards. Horizontal hinges on the upper end of the emergency window should have an appropriate mechanism Keep it fully open. The type of ejection should not be completely separated from the vehicle during operation. The catapult emergency window should effectively prevent misoperation.

4.2.5.3
For the hinged emergency window that the driver cannot clearly see from his seat, an audible alarm device shall be installed.

The response is initiated by the movement of the window lock (not the window itself), alerting the driver when the emergency window is not fully closed.

4.2.5.4
The emergency window shall be equipped with a device that is easily and quickly opened from inside and outside the vehicle; or an automatic window breaking device; or easy to crush Safety glass (instead of laminated glass or plastic) and marked on the glass where it

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