

**WHAT ARE THE NEW CHANGES TO THE  
ASME A17.1-2019 CODE UPDATE AND INSTALLATION FOR 3D DOOR  
PROTECTION UNDER ASME A17.1 2019 2.13.5 REOPENING DEVICE(S)  
FOR POWER-OPERATED HORIZONTALLY SLIDING DOORS AND GATES**



**ASME A17.1-2019 CODE FOR REOPENING DEVICE(S) FOR POWER-OPERATED  
SLIDING DOORS AND GATES 2.13.5**

The wording “Car Doors or Gates” has been replaced with “Sliding Doors and Gates” In the description of 2.13.5

2.13.5.1

Where required and function Car door has been replaced with power-operated doors and the entire operation of a door reopening device has been rewritten.

2.13.5.1 (a)

If an object has been detected in accordance with 2.13.5.3 or 2.13.5.4 when the doors are fully open, the hoistway door and car door shall not close or, when the doors are closing, the car door and hoistway door at the landing shall initiate a reversal without intentional delay beyond system response time and shall fully reopen or reopen a minimum of 36”.

2.13.5.1 (b)

If the doors fail to fully close [see 2.12.2.2(a)] within 10 s in addition to the door close data plate value, the doors shall fully open. *The code 2.12.2.2(a) defines a closed position of hoistway doors for horizontally sliding doors as (when the leading edge of the door is within 10 mm of the nearest face of the jamb or when panels of center opening doors are within 10 mm of each other.*

### 2.13.5.2 Rendering Inoperative

This section is new and replaces the old verbiage that stated for center opening doors, the reopening device shall be so designed and installed that the obstruction of either door panel when closing will cause the reopening device to function. *In this section we also have a new addition to the code with adding more additions to a sub section such as 2.13.5.2 (a) (2) (-a). The negative letter is their way of adding more information.*

- ❑ (a) The reopening device(s) shall be rendered inoperative.
  - (1) when the closing kinetic energy is reduced in accordance with 2.13.4.2.1(c) (1) and 2.13.4.2.1 (c) (2).
  - (2) For detection of approaching objects
    - (-a) within 18” of the point at which the leading edge of the landing door panel contacts the door jamb or opposing door panel.
    - (-b) when 20 s have transpired after the detection means of approaching objects first detects an object. When an object is detected in the path of the doors, the 20 s duration shall reset.
  - (3) For detection of objects in the door path, within 0.75” of the point at which the leading edge of the leading door panel contacts the door jamb or opposing door panel.
  
- ❑ (b) Where Phase 1 Emergency Recall Operation by a fire alarm initiating device is not provided, door reopening devices that can be affected by smoke or flame shall be rendered inoperative after the doors have been held open for 20 s after a door close signal has been initiated.
  
- ❑ (c) When the reopening device (s) has been rendered inoperative, a continuously sounding audible signal shall be provided. The sound level shall be 10 dBA minimum above ambient and not exceed 80 dEA. The sound level shall be measured 40” above the landing floor, 20” from the door face, along the centerline of the entrance opening, with the doors open. The signal shall sound until doors are fully closed. No case shall the sound level exceed 85 dBA inside the cab within 12” from centerline of the entrance 40” above the floor.

### 2.13.5.3 Detection of Approaching Objects

The reopening device(s) shall be designed to detect a cylindrical target(s) approaching the entrance opening of the landing-side doors as required by 2.13.5.3.1. The cylindrical target(s) shall be oriented with the base parallel to the floor, the height perpendicular to the floor, and properties conforming to the following:

- (a) diameter of 8”, height of 40”, and painted flat black per FED-STD-595C in the color range from 37005 through 37050.
- (b) diameter of 8”, height of 40”, and painted glossy white per FED-STD-595C in the color range from 17800 through 17999.

#### 2.13.5.3.1

Each cylindrical target shall be moved toward the entrance, perpendicular to the plane of the landing door, at any speed up to 3 ft/s. The cylindrical target shall be detected while moving toward the entrance anywhere between 20” and 9” from the landing-side face of the hoistway door and 9” ahead of the leading edge. The cylindrical target shall be permitted to be detected prior to the position defined above.

The approaching object detection means shall be effective until the leading edge of the doors is within 18” of the fully closed position and shall be permitted to be effective up to the fully closed position.

#### 2.13.5.4 Detection of Objects in the Door Path

The reopening device(s) shall be designed to detect rectangular prisms positioned as required by 2.13.5.4.1 and 2.13.5.4.2 with the properties conforming to the following:

- (a) 3.15” by 2” by 6”, painted flat black per FED-STD-595C in the color range from 37005 through 37050.
- (b) 3.15” by 2” by 6”, painted glossy white per FED-STD- 595C in the color range from 17800 through 17999.

#### 2.13.5.4.1

The device(s) shall be designed to detect prisms positioned anywhere within the opening width of the entrance vertically between two horizontal planes located 1” and 60”, respectively, above the floor and oriented with the 2” dimension parallel to the floor, the 6” dimension perpendicular to the door, and the 3.15” dimension perpendicular to the floor

- (a) wholly located between the vertical planes established by the landing-side face of the hoistway door and the car-side face of the car door or
- (b) centered between the two vertical planes described in (a) if the distance between the two planes is less than 6”.

#### 2.13.5.4.2

The device(s) shall be designed to detect prisms positioned anywhere within the opening width of the entrance on the floor and oriented with the 3.15” dimension parallel to the floor, the 6” dimension perpendicular to the door, and the 2” dimension perpendicular to the floor

- (a) wholly located between the vertical planes established by the landing-side face of the hoistway door and the car-side face of the car door or
- (b) centered between the two planes if the distance between the two planes is less than 6”

#### 2.13.5.5 Self Monitoring of Detection Means

The system shall be designed to be self-monitoring. After the door has reached its fully opened position and before door closing is initiated, the detection means shall be self-checked to verify the detection means is operational. If the self-check outcome is unsuccessful, power closing of the door(s) shall be at reduced kinetic energy conforming to 2.13.4.2.1(c)(2).

#### 2.13.5.6 Maintenance and On-Site Testing of Detection Means

The maintenance and method of on-site testing of the detection means shall be provided in the Maintenance Control Program on-site documentation  
(see 8.6.4.19.18).

**8.6.4.19.18 Door Reopening Device(s).** *The detection means of the door reopening device(s) shall be examined and tested to verify proper operation*

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