Australian Standard™

AS 2362.24

Fire detection, warning, control and intercom systems—Methods of test

Method 24: Frangibility test

1 SCOPE

This Standard sets out the methods for evaluating the reliability of actuation for the frangible element of actuating devices.

2 APPLICATION

This Standard is intended to be used in conjunction with the performance requirements in the appropriate device Standard.

3 PRINCIPLE

Frangible elements will be subject to two defined tests. The first is a steady pressure test that shall not break or crack the element, or operate the actuating device. The second is an impact test which shall break, or appear to break, the element and initiate an alarm state.

4 APPARATUS

4.1 Apparatus arrangement for pressure test

The pressure test arrangement consists of a pivoted L-shaped arm, hung tray and weights as illustrated in Figure 1. The pressure test arrangement shall be capable of applying a force to the surface of the frangible element. The force shall be applied through a flat rubber surface of 15 ±1 mm diameter, having a hardness of 40 IRHD to 50 IRHD (International Rubber Hardness Degrees). This test arrangement shall be used to carry out the steady pressure test for the frangible element.

4.2 Apparatus arrangement for impact test

The impact test arrangement shall consist of a spherical brass pendulum of a mass 85 g ±1 g as illustrated in Figure 2.

5 PROCEDURE

5.1 Procedure using apparatus described in Figure1

5.1.1 *Setting up the frangible element*

Secure the actuating device to a wooden backing board and in turn, secure the backing board to a rigid surface, so that, the actuating device is in its normal orientation for activation.

5.1.2 *Testing the frangible element*

The procedure is as follows:

(a) Where an alarm test facility is provided, it shall be tested and reset immediately prior to each frangibility test. Record the result of the test facility operation.