

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
METHODS OF TESTING CONVEYOR AND ELEVATOR BELTING

AS 1334.11
DETERMINATION OF IGNITABILITY AND MAXIMUM
SURFACE TEMPERATURE OF BELTING SUBJECTED
TO FRICTION

1 SCOPE. This Standard sets out a method for determining the ignitability and the maximum surface temperature of conveyor and elevator belting subjected to friction.

NOTE: This method is derived from Department of Mines, N.S.W., Testing Memorandum No. 2, Test and Approval of Fire Resistant Conveyor Belting for Use in Coal and Shale Mines.

2 REFERENCED DOCUMENT. The following Standard is referred to in this Standard:

BS

4937 International thermocouple reference tables
Part 20—Specification for thermocouple tolerances

3 PRINCIPLE. A length of belting held stationary under an applied load is passed around a drum pulley rotating at constant speed and the surface temperature of the drum is recorded until—

- (a) the belting breaks;
- (b) the surface temperature exceeds the specified limit;
- (c) the belting is observed to exhibit flaming or glowing; or
- (d) the specified time elapses.

4 APPLICATION TO FIRE HAZARD ASSESSMENT. These test results on their own do not indicate the fire hazard of the belting under actual fire conditions and consequently, should not be applied to the assessment of fire hazard without taking into account additional supportive information.

NOTE: The fire hazard of the belting depends on the characteristics of the belting, how the belting is installed, how it is used, the environment in which it is present, and other factors.

5 APPARATUS. The following apparatus (see Figure 1) is required:

- (a) *Steel drum* (see Figure 2) which shall rotate under the test conditions with a peripheral speed of 2.12 ± 0.05 m/s.

NOTES:

1. A minimum shell thickness of 6 mm resulting from wear is tolerable.
 2. A power supply of 7.5 kW has been found suitable.
- (b) *Guide pulley* for changing the direction of the test piece from horizontal to vertical (see Figure 1).
 - (c) *Weight* having a total mass (including clamps and fittings) of 35 ± 0.5 kg.
 - (d) *Rigid support frame* for supporting the above equipment and containing an anchor point to which is attached one end of the test piece. The frame shall be designed to hold the test piece in a horizontal position and allow the test piece to pass over the drum through an arc of 180 degrees (see Figure 1). Flexible extension pieces may be provided for anchoring the test piece or supporting the weight.
 - (e) *Timing device* for measuring the time of test.