

Australian Standard™

Amusement rides and devices

Part 1: Design and construction



This Australian Standard was prepared by Committee ME/51, Amusement Rides and Devices. It was approved on behalf of the Council of Standards Australia on 31 October 1997 and published on 5 December 1997.

The following interests are represented on Committee ME/51:

Australian Amusement, Leisure and Recreation Association
Department of Labour, New Zealand
Department of Training and Industrial Relations, Qld
Institution of Engineers Australia
Metal Trades Industry Association of Australia
Ministry of Commerce, New Zealand
National Occupational Health and Safety Commission, Australia
Showmen's Guild of Australasia
Victorian Showmen's Guild
Victorian WorkCover Authority
WorkCover New South Wales
Workplace Standards Authority (Tasmania)
WorkSafe Western Australia

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This Standard was issued in draft form for comment as DR 96144.

AS 3533.1—1997
(Incorporating Amendment No. 1)

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Part 1: Design and construction

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/51, Amusement Rides and Devices, to supersede (in part) AS 3533—1988, *Amusement rides and devices*.

This Standard incorporates Amendment No. 1 (March 2001). The changes required by the Amendment(s) are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

Originally developed from technical literature, existing regulations and guidelines, the significant expansion of this Standard was made possible not only through the combined experience of the Committee and the organizations represented on it, but also through the contributions of several individuals and organizations having expert knowledge in those areas covered by this Standard for the first time.

The Committee acknowledges the contributions made by those individuals and organizations and by the Royal Australian Air Force on the subject of the influence of acceleration on the human body (Appendix D), and wishes to record its appreciation for their permission to include this material.

A major change to the previous edition is that AS 3533 has now been split into two parts as follows:

AS 3533.1 Part 1: Design and construction

AS 3533.2 Part 2: Operation and maintenance

This followed a request by the National Occupational Health and Safety Commission to enable the future referencing of AS 3533.1 within that organization's National Standard for Plant, thus promoting uniformity of practice across Australia in relation to the design, manufacture and registration of amusement rides and devices.

The splitting of the Standard has also enabled Part 2 (AS 3533.2) to be written specifically for the owners and operators involved in the day-to-day running of amusement rides and devices.

A logbook designed to satisfy the record-keeping requirements of most regulatory authorities in Australia is available as AS 3533.2 Supplement 1.

This Part (AS 3533.1) has been expanded in almost every Section, and includes a rewrite and simplification of the design classification system. New areas covered include the following:

- (a) Hazard identification, risk assessment and risk control measures in accordance with occupational health and safety legislation.
- (b) Amusement rides and devices located within buildings.
- (c) Quality assurance.
- (d) Specific requirements for numerous amusement rides and devices.

The appendices have been expanded to include information on failure to safety and additional guidelines on fatigue analysis of amusement structures.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Amusement rides and devices

Part 1: Design and construction

SECTION 1 SCOPE AND GENERAL

A1 **1.1 SCOPE** This Standard specifies requirements for the design, manufacture and construction of fixed and portable amusement rides and devices, excluding—

- (a) miniature trains and railway systems owned and operated by model railway societies, clubs or associations;
- (b) rides or devices covered by public transport legislation; and
- (c) plant specifically designed for sporting, professional stunt, theatrical or acrobatic activities.

NOTES:

- 1 The operation and maintenance of amusement rides and devices is covered by AS 3533.2, and a logbook is available as AS 3533.2 Supplement 1.
- 2 Compliance with the requirements and conditions set down by associations such as The Australian Association of Live Steamers is generally required for the miniature trains and railway systems mentioned above.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
1056	Storage water heaters
1056.1	Part 1: General requirements
1056.2	Part 2: Specific requirements for water heaters with single shells
1056.3	Part 3: Specific requirements for water heaters with composite shells
1170	Minimum design loads on structures (known as the SAA Loading Code)
1170.1	Part 1: Dead and live loads and load combinations
1170.2	Part 2: Wind loads
1170.3	Part 3: Snow loads
1170.4	Part 4: Earthquake loads
1210	Pressure vessels
1210 Supp1	Unfired Pressure Vessels—Advanced design and construction (Supplement to AS 1210—1997)
1228	Pressure equipment—Boilers
1271	Safety valves, other valves, liquid level gauges, and other fittings for boilers and unfired pressure vessels
1319	Safety signs for the occupational environment
1394	Round steel wire for ropes
1403	Design of rotating steel shafts

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