

Australian Standard[®]

Steel storage racking

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Association of Consulting Engineers Australia
Australian Institute of Steel Construction
Department of Occupational Health, Safety and Welfare, W.A.
Metal Trades Industry Association of Australia
Queensland University of Technology
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PREFACE

This Standard was prepared by the Standards Australia Committee on Steel Storage Racking in response to several requests from the Australian racking industry, to improve uniformity of racking performance and enhance public safety.

The design aspect of the Standard is based on permissible stress method and is intended to supplement AS 1250 and AS 1538.

Reference has been made to the American Rack Manufacturers Institute Specification (RMI), the British Storage Equipment Manufacturers Association (SEMA) and the European Racking Code FEM 10.2.02.

A Commentary provides background material to the requirements of this Standard.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	5
1.2 REFERENCED DOCUMENTS	5
1.3 DEFINITIONS	5
1.4 NOTATION	12
1.5 USE OF ALTERNATIVE MATERIALS OR METHODS	15
1.6 GENERAL REQUIREMENTS FOR RACKING INSTALLATIONS	15
SECTION 2 LOADS	
2.1 DESIGN LOADS	17
2.2 VERTICAL IMPACT LOADS	17
2.3 HORIZONTAL LOADS	17
2.4 WIND LOADS	18
2.5 EARTHQUAKE LOADS	18
SECTION 3 DESIGN PROCEDURES	
3.1 GENERAL	19
3.2 METHODS OF STRUCTURAL ANALYSIS	19
3.3 OVERTURNING	20
SECTION 4 DESIGN OF COLD-FORMED STEEL ELEMENTS AND MEMBERS	
4.1 ELEMENTS	21
4.2 MEMBERS	21
4.3 COMBINED BENDING AND COMPRESSION	23
SECTION 5 UPRIGHT FRAME STABILITY	
5.1 EFFECTIVE LENGTH FACTORS	25
5.2 STABILITY OF TRUSSED-BRACED UPRIGHT FRAMES	27
SECTION 6 CONNECTIONS AND BEARING PLATES	
6.1 GENERAL	28
6.2 BEAM SUPPORT CONNECTIONS	28
6.3 BASE PLATES	28
6.4 CONNECTIONS TO BUILDINGS	28
6.5 UPRIGHT SPLICES	28
SECTION 7 TOLERANCES AND CLEARANCES	
7.1 FINISHED TOLERANCES IN UNLOADED CONDITION	29
7.2 UNIT LOAD CLEARANCES	31
SECTION 8 TEST METHODS	
8.1 INTRODUCTION	32
8.2 STUB COLUMN TESTS	33
8.3 PALLET BEAM TESTS	34

8.4 PALLET BEAM TO COLUMN CONNECTION TESTS	36
8.5 UPRIGHT FRAME TEST	37

SECTION 9 OPERATION AND MAINTENANCE OF ADJUSTABLE PALLET RACKING

9.1 GENERAL	39
9.2 INSPECTIONS	39
9.3 DAMAGE DUE TO IMPACT	40
9.4 OUT-OF-PLUMB OF RACKING	41

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STANDARDS AUSTRALIA

Australian Standard

Steel storage racking

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out minimum requirements for the design (in permissible stress method), fabrication and erection tolerances, test methods, operation and maintenance.

This Standard applies to adjustable static pallet racking made of cold-formed or hot-rolled steel structural members. It covers both the situation where racking is installed within a building and where the racking forms part of the building frame.

The Standard does not cover drive-in and drive-through racking, cantilever racking, mobile racking or racking made of materials other than steel.

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

AS

1170 SAA Loading Code

1170.2 Part 2: Wind loads

1250 SAA Steel Structures Code

1538 Cold-formed Steel Structures Code

2121 SAA Earthquake Code

1.3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

1.3.1 Adjustable pallet racking—storage system comprising upright frames perpendicular to the aisles and independently adjustable, positive locking shelf beams, spanning between the frames parallel to the aisles, and designed to support unit loads (see Figures 1(a) to 1(c)).

1.3.2 Aisle width—space along which the unit load handling equipment operates (see Figure 2(a)).

1.3.3 Base plate—bearing plate bolted or welded to the underside of the column to transmit vertical and horizontal forces into the floor, and provide structural fastening of the upright frame to the floor.

1.3.4 Bay height—maximum vertical distance from the ground to the highest point of the unit load in a racking structure (see Figure 2(b)).

1.3.5 Bay width—see definition of shelf beam length (see Clause 1.3.24 and Figure 2(b)).

1.3.6 Ceiling clearance—minimum vertical distance between the highest part of the upright frame or the highest part of the unit load on the top shelf beam level and the underside of the ceiling or the support steelwork for the ceiling (see Figure 2(b)).



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