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Australian Standard 2117—1983

HOSE AND HOSE ASSEMBLIES FOR PETROLEUM AND PETROLEUM PRODUCTS— SUCTION AND DISCHARGE

STANDARDS ASSOCIATION OF AUSTRALIA
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The following interests are represented on Committee RU/1:

Australian Gas Association

Australian Institute of Petroleum Limited

Confederation of Australian Industry

Country Roads Board, Victoria

Department of Industrial Relations, N.S.W.

Electricity Trust of South Australia

Government Stores Department, N.S.W.

Metropolitan Water, Sewerage and Drainage Board, Sydney

Plastics Institute of Australia, Incorporated

Plastics and Rubber Institute

Railways of Australia Committee

Society of Automotive Engineers—Australasia

State Electricity Commission of Victoria

The Institution of the Rubber Industry

AUSTRALIAN STANDARD

HOSE AND HOSE ASSEMBLIES FOR PETROLEUM AND PETROLEUM PRODUCTS—
SUCTION AND DISCHARGE

AS 2117—1983

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PREFACE

This edition of this standard was prepared by the Association's Committee on Industrial Hose to supersede AS 2117—1980. It was prepared in order to rectify an omission in respect of burst requirements and to admit plastics components into the hose.

The standard applies to hoses commonly used for transferring crude oil and liquefied petroleum products (other than LP gas and natural gas) to and from marine tankers and bunkering vessels or for similar duties ashore.

Provision is made for classification according to description, working pressure and use.

The committee took into account requirements specified in—

ISO 1823* Rubber Hoses for Oil Suction and Discharge

BS 1435 Rubber Hose Assemblies for Oil Suction and Discharge Services

Users of this standard are advised to consult the 'International Oil Tanker and Safety Guide' issued by the Institute of Petroleum, London, which has been widely adopted by the oil industry in Australia as a guide for handling petroleum products.

Appendix A presents purchasing guidelines including contractual requirements and directs attention to matters requiring consideration at the time of the enquiry and/or order. The intention is to avoid misinterpretation or other problems to ensure a complete understanding of product requirements by both purchaser and supplier.

*Published by the International Organization for Standardization (ISO).

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
HOSE AND HOSE ASSEMBLIES FOR PETROLEUM AND PETROLEUM PRODUCTS—SUCTION AND DISCHARGE

SECTION 1. SCOPE AND GENERAL REQUIREMENTS

1.1 SCOPE. This standard specifies requirements for hose and hose assemblies for conveying petroleum and petroleum products at product temperatures up to 65°C and in ambient temperatures ranging from −20°C to 65°C.

1.2 APPLICATION. This standard is intended for hose applications for transferring liquid petroleum products to and from marine tankers or bunkering vessels or for similar duties ashore.

1.3 REFERENCED DOCUMENTS. The following documents are referred to in this standard:

AS 1180 Methods of Test for Hose Made from Elastomeric Materials
- 1180.1 Dimensions
- 1180.5A Hydrostatic Pressure—Burst Test
- 1180.5B Hydrostatic Pressure—Proof Test
- 1180.7A Resistance of Lining and Cover to Liquids
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- 1180.11 Hose and Coupling Compatibility
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- 1180.13C Determination of Electrical Continuity of Hose Assembly with Reinforcing Wire(s)

SAA MP19 Report on Preferred Numbers and Their Use

1.4 CLASSIFICATION.

1.4.1 General. Hose shall be classified in terms of—

(a) its type and its class or working pressure as detailed in Clauses 1.4.2 and 1.4.3;

(b) the grade of its internal surface according to its intended use as detailed in Clause 1.4.4 and

(c) its electrical kind as detailed in Clause 1.4.5.

1.4.2 Type. The type of hose, according to its description, shall be as follows:

Type	*Description*
1	Heavy duty hose, suction and discharge, for submarine and other offshore use, non-collapsible.
2	Hose, suction and discharge, for dockside and onshore use, non-collapsible.
3	Lightweight hose, discharge only, for dockside and onshore use, non-collapsible under normal use.
4	Lightweight hose, discharge only, for dockside and onshore use, collapsible.

NOTES:
1. The thickness of the cover of a Type 1 hose is commonly twice that of a Type 2 hose. The flanges can be heavy, hot-dip galvanized and the tail-piece can be completely covered right up to the flange.
2. Hoses, when derrick-handled, need to be supported in a saddle or cradle to avoid point loading stresses.

1.4.3 Class. Hose shall be classified on the basis of maximum working pressure (WP) in megapascals gauge, i.e. pressure above ambient, as follows:

Class	Working pressure MPa (max.)
A	0.7
B	1.0
C	1.5

1.4.4 Grade. The material for the internal surface of the hose shall be selected in accordance with its intended use, designated by a grade number as follows:

Grade	*Use*
1	For all grades of petroleum and petroleum products having an aromatic hydrocarbon content of 50 percent or less.
2	For all grades of petroleum and petroleum products having an aromatic hydrocarbon content greater than 50 percent.
3	For specific grades of petroleum products including petrochemicals having the compositions stated by the purchaser. (See Appendix A, Paragraph A3.1(a).)

1.4.5 Electrical kind. Hose shall be categorized in accordance with its electrical characteristics as follows:

Kind	*Characteristics*
1	Conducting. (The integral conductor(s) is the conducting medium. This conductor(s) may also provide reinforcement.) See Clause 2.6.1.
2	Intrinsically conducting. (The compound material is the conducting medium.) See Clause 2.6.2.
3	Anti-static. (The conductance of the external surface is sufficient to prevent the accumulation of static charges.) See Clause 2.6.3.
4	Insulating. See Clause 2.6.4.

NOTE: For each kind, the hose may or may not embody signalling cable(s).