AS 1826—1983

Australian Standard®

Electrical equipment for explosive atmospheres

Special protection—Type of protection s

This Australian standard was prepared by Committee EL/14, Electrical Equipment in Hazardous Locations. It was approved on behalf of the Council of the Standards Association of Australia on 1 February 1983 and published on 9 May 1983.

The following interests are represented on Committee EL/14:

Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
Australian Institute of Petroleum
Confederation of Australian Industry
Department of Industrial Relations, N.S.W.
Department of Minerals and Energy, Vic.
Department of Mines, Qld
Electrical Contractors Associations of Australia
Electricity Supply Association of Australia
Independent testing interests
Insurance Council of Australia
State electricity regulatory authorities

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PREFACE

This edition of this standard was prepared by the Association's Committee on Electrical Equipment in Hazardous Locations to supersede AS 1826—1976. It is intended for the guidance of manufacturers, users and statutory authorities, and for use with the SAA Wiring Rules and relevant Mining Regulations. It prescribes requirements in respect of design, construction and marking of the equipment specified, and includes a section on testing.

The major changes in this edition are:

(a) Reference is made to AS 2380, Part 1, for grouping of apparatus, temperature classification, requirements for enclosures and marking.

(b) The application of this standard has been clarified by the introduction of an application clause.

(c) The scope of the standard has been extended to include Zone 0.

(d) The deletion of requirements for encapsulation, as protection by encapsulation is now covered by a separate standard (AS 2431).

(e) The deletion of several other requirements such as clearance and creepage distances where the criteria are given in other standards.

(f) The deletion of the minimum length for flexible cords.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

ELECTRICAL EQUIPMENT FOR EXPLOSIVE ATMOSPHERES—SPECIAL PROTECTION—TYPE OF PROTECTION s

FOREWORD

This standard has been prepared to specify criteria for those types of electrical equipment which, by their nature, do not comply with the constructional or other requirements specified for equipment with types of protection covered by published Australian standards but which can be shown to be suitable for use in hazardous areas.

It is not practicable to prescribe precise requirements for all equipment, but this standard sets out certain basic and test requirements.

The classification of hazardous areas is dealt with in AS 2430, Parts 1 and 2. Part 1 applies to explosive gas atmospheres and recognizes the following zones:

Zone 0— an area in which an explosive gas atmosphere is present continuously, or is expected to be present for long periods or for short periods which occur with high frequency.

Zone 1— an area in which an explosive gas atmosphere can be expected to occur periodically or occasionally during normal operation.

Zone 2— an area in which an explosive gas atmosphere is not expected to occur in normal operation and if it occurs is likely to be present only infrequently and for short duration.

Apparatus complying with this standard will normally be suitable for use in a Zone 1 or Zone 2 area. However, in some instances the certifying authority may extend the certification to include Zone 0.