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ELECTRICAL EQUIPMENT FOR EXPLOSIVE ATMOSPHERES—ELECTRICAL SYSTEMS OF DISPENSING EQUIPMENT

Part 2—LIQUEFIED PETROLEUM GAS DISPENSING EQUIPMENT

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 28 March 1988 and published on 17 June 1988.

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 Defence
Department of Industrial Relations and Employment, N.S.W.
Department of Labour, 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

Additional interests participating in preparation of Standard:

Manufacturers of LP gas dispensing equipment

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PREFACE

This Standard was prepared by the Association's Committee on Electrical Equipment in Hazardous Locations to supersede AS 2229.2—1982, *Electrical equipment for explosive atmospheres—Electrical systems of dispensing equipment,* Part 2: *Liquefied petroleum gas dispensing equipment.*

This Standard applies to dispensing equipment for liquefied petroleum gas; dispensing equipment for flammable liquid is specified in AS 2229.1, *Electrical equipment for explosive atmospheres—Electrical systems of dispensing equipment,* Part 1: *Flammable liquid dispensing equipment.* It prescribes requirements in respect of design, construction and marking and includes a section on testing. It is intended for the guidance of manufacturers, users, statutory authorities and associated interests and for use in association with AS 3000, *SAA Wiring Rules.*

The major differences between this edition and the 1982 edition are as follows:

(a) The 1982 edition allowed for a dispensing unit with additional safety devices to be marked 'Type A'. In this edition, the provision of the additional safety devices has been made mandatory for all dispensing units.

(b) New requirements have been included for equipment outside the cabinet but forming part of the dispensing unit.

(c) New requirements have been added for nozzles.

(d) The requirements for safety devices have been expanded to give more guidance to users and testing stations.

(e) The inclusion of more comprehensive requirements for the dispensing hose and breakaway coupling.

The classification of hazardous areas is described in AS 2430.1, *Classification of hazardous areas,* Part 1: *Explosive gas atmospheres.*

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SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies requirements for the electrical systems of liquefied petroleum gas (LP gas) dispensing equipment (referred to in this Standard as 'dispensing equipment') and for the electrical components and hydraulic components which may be used inside or outside the cabinet of such dispensing equipment.

This Standard does not apply to dispensing equipment installed in private premises where LP gas is not sold.

NOTE: Equipment complying with this Standard is suitable for use in driveway dispensing situations.

The tests specified herein are intended as type tests to prove a particular design for compliance with this Standard.

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

AS

1076 Code of practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications) Part 1: Basic requirements (AS 1076.1)

1425 SAA Automotive LP Gas Code

1596 SAA LP Gas Code

1826 Electrical equipment for explosive atmospheres—Special protection—Type of protection s

1869 Hose and hose assemblies for liquefied petroleum gases (LP gas), natural gas and town gas

1939 Classification of degrees of protection provided by enclosures for electrical equipment

2380 Electrical equipment for explosive gas atmospheres—Explosion protection techniques Part 1: General requirements (AS 2380.1) Part 7: Intrinsic safety i (AS 2380.7)

2420 Fire test methods for solid insulating materials and non-metallic enclosures used in electrical equipment

2430 Classification of hazardous areas Part 3: Specific occupancies (AS 2430.3)

3000 SAA Wiring Rules

3100 Approval and Test Specification for definitions and general requirements for electrical materials and equipment

3191 Approval and Test Specification for electric flexible cords

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

1.3.1 Dispenser cabinet—cabinet enclosing the hydraulic components other than the delivery hose or pipe, the break-away coupling, and the nozzle.

NOTE: A delivery pipe is regarded as part of the delivery hose if it has no joints (other than welded joints) inside an enclosure.

1.3.2 Liquefied petroleum gas (LP gas)—material which is composed of any of the following hydrocarbons, or mixtures of all or any of them—

propane (C_3H_8), propylene (C_3H_6), butane (C_4H_{10}) or butylene (C_4H_8).

NOTE: See AS 1596 for requirements governing the storage and handling of LP gas.

1.3.3 Liquefied petroleum gas dispensing equipment (referred to as 'dispensing equipment')—an assembly of equipment intended for the delivery of LP gas.

NOTE: The assembly may include a metering device, a counter, a delivery hose, a control nozzle and electric lighting.

1.4 GROUPING. Dispensing equipment shall be suitable for Group IIA as specified in AS 2380.1.

1.5 TEMPERATURE CLASSIFICATION. Dispensing equipment shall be suitable for temperature class T3, in accordance with the relevant requirements of AS 2380.1.