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SUCTION SYSTEMS FOR MEDICAL USE IN HOSPITALS

STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Associated Chambers of Manufactures of Australia

Association of Consulting Engineers of Australia

Australian Society of Anaesthetists

Department of Construction

Departments of Health

Hospitals and hospital associations

Institute of Hospital Engineers

Metal Trades Industry Association of Australia

Royal Australasian College of Surgeons

State Departments of Public Works and Public Buildings

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To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

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AUSTRALIAN STANDARD

RULES FOR
SUCTION SYSTEMS FOR MEDICAL USE IN HOSPITALS

AS 2120 — 1977

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PREFACE

This standard was prepared by the Association's Committee on Medical Gases and Pipeline Services, under the authority of the Medical Materials and Equipment Standards Committee.

In the preparation of this standard, the committee took account of BS 4957, Medical Vacuum Pipeline Services for Use in Hospitals. The British standard specifies that each suction service point should be capable of permitting a free air flow of not less than 40 l/min when the ambient pressure is reduced to a gauge pressure of −53 kPa. The draft on which BS 4957 was based required a gauge pressure of −67 kPa. The committee responsible for the preparation of this standard decided on −60 kPa gauge pressure at the inlet to the suction service point as a reasonable compromise, which would be suitable for both compressed gas venturi ejector suction and pipeline suction.

This standard makes reference to the following standards:

AS 1169	SAA Medical Agents and Gases Safety Code
AS 1324	Air Filters for Use in Air Conditioning and General Ventilation
AS 1345	Identification of Piping, Conduits and Ducts
AS 1349	Bourdon Tube Pressure and Vacuum Gauges
AS 1432	Copper Tubes for Water, Gas and Sanitation
AS 3000	SAA Wiring Rules
AS K185	Colours for Specific Purposes
AS Z9	Barometer Conventions and Tables
BS 2050	Electrical Resistance of Conductive and Anti-static Products made from Flexible Polymeric Material
BS 2775	Rubber Stoppers and Tubing of Flexible Materials for Laboratory Use

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard Rules
for
SUCTION SYSTEMS FOR MEDICAL USE IN HOSPITALS

FOREWORD

Suction from a pipeline is required for the same clinical purposes as is suction from portable apparatus; therefore it must have comparable performance. However, since the suction service point in the former is analogous to the inlet of the pump in the latter allowance has to be made for the effect on the flow into a suction service point of the resistance of the control unit used. Requirements for a reasonable reserve performance are incorporated in the relevant sections of this standard; further allowances should not be necessary, unless it is intended to extend the pipeline in question in the future.

At this time, there are two techniques widely used in Australia, namely pipeline suction and venturi ejector suction. Each has its particular advantages. The standard makes no distinction between them, but specifies the performance and safety aspects to which both should conform.

The number of points in a ward is not specified, as this depends on the function of the ward. The number of points specified for other areas is the functional minimum: for instance, for the operating theatre, four points; for a delivery room, four points; for an anaesthetic room, one point; and for an intensive care area, four points per bed. It must be emphasized that the designation of special areas is the responsibility of the medical staff, who must always be consulted early in the planning of any new or extended pipeline.

Currently available evidence suggests that there is no hazard associated with the venting of waste anaesthetic gases into a central suction system. However, as the nature of future anaesthetic agents is unknown, the implications of their introduction into suction systems would need to be taken into account.

SECTION 1. SCOPE AND APPLICATION

1.1 SCOPE. These Rules (hereinafter referred to as 'the Code') set out basic requirements for suction systems for medical services in hospitals.

The Code is intended also to apply to suction systems for day-care centres and clinical situations but does not apply to suction systems for laboratories or hospital dental units.

1.2 APPLICATION. The suction system shall comply with the following requirements, as appropriate:

(a) Hospital pipeline suction systems .... Section 2

(b) Suction system user attachments for high and low suction .... Section 3

(c) Interconnection of user attachments for suction control .... Section 4

(d) Compressed gas venturi ejector operated suction system .... Section 5