Australian Standard®

Maintenance of fire protection equipment

Part 6: Management procedures for maintaining the fire and smoke control features of air-handling systems

This Australian Standard was prepared by Committee ME/62, Ventilation and Airconditioning. It was approved on behalf of the Council of Standards Australia on 2 May 1997 and published on 5 June 1997.

The following interests are represented on Committee ME/62:

Air Conditioning and Mechanical Contractors Association of Australia

Air-conditioning and Refrigeration Equipment Manufacturers Association of Australia

Australian Building Codes Board

Australian Fire Authorities Council

Australian Institute of Building Surveyors

Australian Institute of Environmental Health

Australian Institute of Refrigeration, Air Conditioning and Heating

Chartered Institution of Building Services Engineers

Department of Contract and Management Services, W.A.

Fire Protection Industry Association of Australia

Institution of Refrigeration Heating and Airconditioning Engineers, New Zealand

Insurance Council of Australia

Metal Trades Industry Association of Australia

Plastics and Chemicals Industry Association

Property Council of Australia

Thermal Insulation Contractors Association of Australia

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PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee ME/62, Ventilation and Airconditioning, to supersede AS 1851.6—1983.

This Standard is the result of a consensus among representatives of the Joint Committee to produce it as an Australian Standard.

The objective of this document is to provide a Standardized basis for the maintenance of the fire and smoke control features of air-handling systems for use by system owners and maintainers.

The fire-precaution features of air-handling systems in buildings not only need to be designed, installed, commissioned and operated in accordance with AS 1668.1—1991, *The use of mechanical ventilation and air-conditioning in buildings*, Part 1: *Fire and smoke control*, but also need to be maintained at an adequate level of performance to ensure their availability in an emergency, hence safeguarding the occupants and minimizing property damage.

In the preparation of this Standard, consideration was given to the following:

(a) Poor management being the cause for the failure of a large number of maintenance programs associated with building services.

(b) Air-handling systems being designed to suit the requirements of individual buildings, which implies that the detailed maintenance required varies from system to system.

(c) Maintenance procedures having to be sufficiently flexible to take account of the particular features of an item of equipment and the environment in which it is installed.

(d) Unnecessary attention being as detrimental as insufficient maintenance in certain cases.

(e) Potential cost implications.

(f) Requirements for systems integrity testing.

Accordingly, this Standard is aimed at the management aspect of maintenance programs. Mandatory requirements for simple inspections are laid down. For initiating more complex inspections and corrective actions, appropriate routines are suggested.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies management procedures for controlling the inspection and testing of required fire and smoke control features associated with air-handling systems in buildings, to ensure their effective availability.

NOTES:

1 The procedures set out in this Standard and all consequential corrective actions, preferably, should be carried out, or at least be supervised, by competent personnel.

2 In the assessing of the need for corrective action, regard should be given to the various factors which may affect the precise performance from day to day. For this reason, critical limits of performance will need to be known. In this context a critical limit sets the level of a performance characteristic beyond which its effect could become detrimental to life safety.

3 It is recommended that the management system developed for the maintenance of the fire-precaution features of the air-handling systems is integrated with the management systems developed for other associated building services such as lifts, smoke detection systems, fire suppression systems and emergency power systems to create an integrated maintenance management system.

1.2 APPLICATION This Standard applies to scheduled periodic maintenance procedures following completion of satisfactory commissioning or recommissioning tests for all fire-precaution features of air-handling systems which come within the scope of AS 1668.1. It is not intended to be applied to commissioning or recommissioning tests, although it may be used as a basis for such tests where appropriate.

NOTE: Mandatory requirements for the frequency of simple inspections are laid down as Level 1 routines. Informative recommendations for more complex and detailed inspections are laid down as Levels 2, 3 and 4 routines.

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

AS
1668 The use of mechanical ventilation and air-conditioning in buildings
1668.1 Part 1: Fire and smoke control

1851 Maintenance of fire protection equipment
1851.3 Part 3: Automatic fire sprinklers
1851.5 Part 5: Automatic smoke/heat venting systems
1851.7 Part 7: Fire-resistant doorsets
1851.8 Part 8: Automatic fire detection and alarm systems
1851.10 Part 10: Emergency warning and intercommunication systems

AS 1851.6-1997 Maintenance of fire protection equipment - Management procedures for maintaining the fire and smoke control features of air-handling systems