Australian Standard®

Thermal insulation of pipework, ductwork and equipment—Selection, installation and finish

This Australian Standard was prepared by Committee ME/77, Thermal Insulation Mechanical Services. It was approved on behalf of the Council of Standards Australia on 16 August 1996 and published on 5 January 1997.

The following interests are represented on Committee ME/77:

Association of Consulting Engineers Australia

Australian Chamber of Commerce and Industry

Australian Institute of Refrigeration, Air Conditioning and Heating

Institution of Engineers, Australia

Master Plumbers and Mechanical Services Association of Australia

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OF AS 4426–1997

Thermal insulation of pipework, ductwork and equipment-Selection, installation and finish

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Thermal insulation of pipework, ductwork and equipment—Selection, installation and finish

PREFACE

This Standard was prepared by the Standards Australia Committee ME/77, Thermal Insulation Mechanical Services.

The objective of this Standard is to provide good practice procedures relating to the installation of insulation to mechanical services for use by designers, specifiers, regulators and inspectors of these systems. The Standard outlines requirements and guidelines for the process of selecting and installing thermal insulating systems for mechanical plant and services operating in the range of -75° C to $+800^{\circ}$ C.

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.

During the development of this Standard cognizance was taken of the technical requirements and contents of BS 5970, Code of practice for thermal insulation of pipework and equipment (in the temperature range $-100^{\circ}C$ to $+870^{\circ}C$).

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SECTION 1 SCOPE AND GENERAL

1.1 GENERAL

1.1.1 Scope This Standard deals with the selection, installation and finish of thermal insulation for pipework, ductwork, tanks, vessels and equipment in the temperature range -75°C to +800°C but excludes manufactured pre-insulated equipment, structural insulation of buildings and cold stores, fireproofing structures, refractory linings of plant, airborne installations and all external underground mains.

NOTES:

- 1 The Standard may be found to be generally applicable to the insulation of road and rail transport vehicles and of some assistance in marine insulation.
- 2 Appendices to the Standard provide guidance on inspection, testing and maintenance (Appendix A), protection against condensation (Appendix B), protection against corrosion (Appendix C) and relevant Australian Standards on insulation materials (Appendix D).
- **1.1.2** New designs and innovations Any alternative materials, designs, methods of assembly, and procedures that do not comply with specific requirements of this Standard, or are not mentioned in it, but give equivalent results to those specified, are not necessarily prohibited.
- **1.2 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

AS

- 1345 Identification of the contents of piping, conduits and ducts
- 1530 Methods for fire tests on building materials, components and structures (series)
- 2124 General conditions of contract
- 2352 Glossary of terms for thermal insulation of buildings
- 2545 Subcontract conditions
- 4254 Ductwork for air-handling systems in buildings
- 4300 General conditions of contract for design and construct
- 4303 General conditions of subcontract for design and construct

ASTM

- C236 Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box
- C739 Specification for Cellulosic Fibre (Wood-Base) Loose-Fill Thermal Insulation
- **1.3 DEFINITIONS** For the purposes of this Standard, the definitions given in AS 2352 and those below apply.