Australian Standard™

Electric resistance welded steel air heater tubes

Standards Australia

This Australian Standard was prepared by Committee ME/1, Pressure Equipment. It was approved on behalf of the Council of Standards Australia on 7 July 2000 and published on 10 August 2000.

The following interests are represented on Committee ME/1:

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Welding Technology Institute of Australia
WorkCover N.S.W.
WorkSafe Western Australia

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Electric resistance welded steel air heater tubes

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PREFACE

This Standard was prepared by the Joint Standards Australia and Standards New Zealand Committee ME/1, Pressure Equipment to supersede AS 2556—1982, *Electric resistance welded steel air heater tubes*.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard. Consensus means general agreement by all parties. Consensus includes an attempt to remove all objections and implies much more than the concept of a simple majority, but not necessarily unanimity. It is consistent with this meaning that a member may be included in the Committee list and yet not be in full agreement with all clauses of this Standard.

The purpose of this revision is to update the referenced documents and bring the Standard into line with current editorial practices.

The tubes covered by this Standard may be used in banks located in the flues of boilers to raise the temperature of air for combustion purposes. They may also be used for similar application where they are subject to low pressures which are usually measured on a water gauge.

No provision has been made for pressure testing of the tubes as it is considered unnecessary in view of the low-working pressures at which the tubes are to be used.

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.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Electric resistance welded steel air heater tubes

1 SCOPE This Standard specifies requirements for electric resistance welded steel tubes in the as-welded condition intended for use in air heaters.

NOTE: Purchasing guidances are given in Appendix A.

2 APPLICATION This Standard is intended as a design guide for use by manufacturers of air heating exchangers.

3 REFERENCED DOCUMENTS The following Standards are referred to in this Standard:

AS or AS/NZS
1050 Methods for the analysis of iron and steel (series)

4 DEFINITIONS For the purpose of this Standard, the following definitions apply:

4.1 Outside diameter and thickness—the nominal outside diameter and nominal thickness.

4.2 Shall—indicates that a statement is mandatory.

4.3 Should—indicates a recommendation.

4.4 Tube, electric resistance welded—tube having a longitudinal butt joint wherein coalescence is produced by the heat obtained from resistance of the tube to the flow of electric current in a circuit of which the tube is a part, and by the application of pressure.

5 DESIGNATION Each tube bundle shall be designated by the number of this Standard, i.e. AS 2556, followed by the tube outside diameter and thickness.

6 STEELMAKING PROCESS The steel shall be made by an open hearth, a basic oxygen or an electric process.

For the purpose of this Standard, the basic oxygen process means the process of making steel in a basic converter blown with commercially pure oxygen.

7 CHEMICAL ANALYSIS

7.1 General The steel shall conform to the ladle analysis specified in Table 1.

NOTE: Product analysis is not required by this Standard.

TABLE 1
CHEMICAL COMPOSITION

Elements	Analysis, percent (max.)
Carbon	0.13
Manganese	0.60
Phosphorus	0.05
Sulfur	0.05