

Standards For Aluminum Sand and Permanent Mold Castings



PREFACE

THE ALUMINUM ASSOCIATION CASTING STANDARDS PROGRAM

Aluminum permanent mold and sand castings are widely used in all types of applications due to aluminum's exceptional characteristics and the great design flexibility inherent in these two casting processes.

Historically, foundries each used their own individual standards covering the various aspects of permanent mold and sand castings. As new techniques and molding materials became available, they also contributed to further variations. The variations in that information, along with the lack of data in many areas, indicated the need for reliable and realistic criteria to which castings could be consistently produced. These criteria would provide all persons involved in the procurement of castings with an instrument by which they could expect foundries to base proposals and produce castings to a specific quality level.

Therefore, The Aluminum Association, as a service to the customers of the industry, prepared this guide for designers, engineers, buyers and production personnel as to the most economical use of the permanent mold and sand casting processes. This guide has two chapters each of which contains a series of product standards: E Series, Engineering Standards and M Series, Metallurgical Standards and Data.

Dimensions, tolerances and other quantities expressed in both U.S. customary and Metric units in these standards are not necessarily identical due to rounding practices used by the committee.

These Product Standards are not intended to be limiting in any way but rather they are expected to provide a measure of optimum conditions for the most economical use of the processes included and to provide consistency in terminology and definition, thereby resulting in a better understanding between supplier and user. The use of these standards by any member or nonmember of The Aluminum Association is voluntary and issuance or existence of these standards does not in any respect prevent or restrict any member or nonmember from manufacturing or supplying products not in conformance with these standards.

As all published material is subject to change as new experience is gained, it is suggested that the data contained herein be verified with The Aluminum Association if there is any doubt as to their current validity.

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