Designation: E1282 – 98 (Reapproved 2004)

Standard Guide for Specifying the Chemical Compositions and Selecting Sampling Practices and Quantitative Analysis Methods for Metals, Ores, and Related Materials[1]

This standard is issued under the fixed designation E1282; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide covers procedures for specifying compositional requirements and identifying appropriate sampling and quantitative analysis methodologies to be referenced in product specification standards for metals, ores, and related materials. It is not intended to replace or conflict with either individual product specifications or standards covering broad classifications of products such as Test Methods A751.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A276 Specification for Stainless Steel Bars and Shapes
A751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products
E34 Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys
E135 Terminology Relating to Analytical Chemistry for Metals, Ores, and Related Materials
E255 Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition
E342 Test Method for Determination of Chromium Oxide in Chrome Ores by Permanganate Titrimetry
E350 Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron
E1061 Specification for Direct-Reading Liquid Crystal Forehead Thermometers

3. Significance and Use

3.1 This guide is intended to assist those writing or revising compositional specification, sampling practice, and analysis method standards for ferrous and non-ferrous metals, ores, and related materials. It is directed toward those areas which must be addressed to properly coordinate compositional specification, sampling practice, and analytical method standards. Its use will help ensure that compositional requirements are clearly defined and that sampling practices and analytical methods are available to meet product specifications.

3.2 This guide does not attempt to define which elements should be controlled, where samples should be taken, or how they should be analyzed. These items are addressed in standards such as Specification A276, Test Methods, Practices and Terminology A751, Test Method E34, Practice E255, Test Method E342, and Test Methods E350.

3.3 A primary purpose for ASTM sampling practices and analytical method standards is to provide widely-accepted and tested methodology for use in meeting ASTM product specifications. Although it is recognized that individual laboratories are free to use other methods, the availability of ASTM approved methodology is essential for referee purposes and to demonstrate that properly equipped laboratories can make the required measurements.

3.4 Sampling practices and analysis methods to be recommended for use in testing a given product are most easily selected cooperatively by the specification-writing and the methods-writing committees which have jurisdiction for the product. When existing sampling or analysis standards do not meet the needs of the new product specification standard, the specification-writing committee should request that the

[1] This guide is under the jurisdiction of ASTM Committee E01 on Analytical Chemistry for Metals, Ores, and Related Materials and is the direct responsibility of Subcommittee E01.20 on Fundamental Practices.

Current edition approved May 1, 2004. Published June 2004. Originally approved in 1989. Last previous edition approved in 1998 as E1282 – 98. DOI: 10.1520/E1282-98R04.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.