



Standard Guide for Measuring and Estimating Quantities of Insulated Piping and Components¹

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INTRODUCTION

A committee of ASTM International initiated this guide to improve industry-wide understanding of the components in an insulated piping system that affect the installed cost of insulating the system. The method of measurement standard used as a bias for this guide is the National Commercial and Industrial Standards.²

ASTM International defines a guide as a series of options or instructions that does not recommend a specific course of action. A guide only suggests a course of action. Its purpose is to offer guidance based on a consensus of viewpoints, but not to establish a fixed procedure. A guide is intended to increase the awareness of the user to available techniques in a given subject area and to provide information from which subsequent evaluation and standardization can be derived.

It is the intention that this guide will help gain wider acceptance and understanding of the concepts in the MICA standard.

1. Scope

1.1 This guide defines the components of an insulated piping system to be measured or counted to determine quantities and pricing for unit price contracts or extra work.

1.2 Pricing may be done through unit pricing for each item by pipe size, type of insulation system, insulation thickness, double or multilayer insulation, type of weatherproofing or jacketing, and pressure rating (if necessary) or through component (fitting) factor or multipliers.

1.2.1 Component (fitting) factors or multipliers, which are multipliers times the straight length of piping as shown in **Table 1**, determine relative prices for each component not within the scope of this guide. These factors or multipliers are to be determined by the insulating contractor relative to the given situation and insulation system specification.

1.2.2 It is suggested that only one type of pricing be used on a project.

1.2.3 The values stated in inch-pound units are to be regarded as the standard.

2. Referenced Documents

2.1 *ASTM Standards*:³

C168 Terminology Relating to Thermal Insulation

3. Terminology

3.1 *Definitions*—For definitions of terms used in this guide, see Terminology **C168**.

4. Summary of Guide

4.1 This guide lists examples of components of piping systems which effect insulation cost. From this list, components to be counted are selected by the involved parties.

5. Significance and Use

5.1 This guide establishes procedures to help parties involved in unit price piping insulation contracts reach agreement as to what components will be counted for pricing purposes.

6. Procedure

6.1 For a unit price-type contract, establish unit prices for straight run piping. These unit prices should include pipe size, type of insulation system, insulation thickness, single or

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² Further information is available from the Midwest Insulation Contractors Assn. (MICA), 2017 S. 139th Circle, Omaha, NE.

³ 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.