

SECTION 01 42 15

METRIC MEASUREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM SI10 (2010) American National Standard for Use of the International System of Units (SI): The Modern Metric System

1.2 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. The following criteria allow both metric and English inch-pound (I-P) measurements to be shown for a product:

- a. To substitute products that are manufactured to an industry recognized rounded metric (hard metric) dimension with I-P products.
- b. To indicate industry and/or Government standards, test values or other controlling factors (such as the code requirements where I-P values are needed for clarity).
- c. To trace back to the referenced standard(s), test value(s) or code(s).

1.3 USE OF MEASUREMENTS IN DRAWINGS AND SPECIFICATIONS

Measurements in drawings and specifications shall be in SI units, with I-P units in parenthesis in cases as indicated in Paragraph GENERAL and as otherwise authorized by the Contracting Officer. Procure the product in SI units unless otherwise authorized by the Contracting Officer. The Contractor is responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.3.1 Hard Metric

Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

1.3.2 Soft Metric

- a. A soft metric measurement is a non-mathematical, industry related conversion. Soft metric measurements are used for measurements

pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor.

- b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products.

1.3.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

Bring discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings to the attention of the Contracting Officer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

Submittals for Government approval or for information only covers the SI products actually being furnished for the project. Submit the required drawings and calculations in the same units used in the Contract documents describing the product or requirement unless otherwise instructed or approved. Use ASTM SI10 as the basis for establishing metric measurements required to be used in submittals.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

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