

RECOMMENDED FORM FOR REPORTING TAPE CALIBRATIONSEXAMPLE

For: 100-Foot Iron-Nickel Alloy Tape (or Steel)  
XYZ Co.

Test No. \_\_\_\_\_

Submitted by:

This tape has been compared with the standards of \_\_\_\_\_ which are traceable to NBS. The horizontal distances between the centers of graduations of the indicated intervals have the following lengths at 68 °F (20 °C) when the tape is subjected to horizontally applied tensions and supported on a horizontal flat surface:

<u>Tension</u> (pounds)	<u>Interval</u> (feet)	<u>Length</u> (feet)	<u>Uncertainty</u> (feet)
20 (or 10)	0 to 100		
30	0 to 100		

Note that reported lengths may be converted to catenary suspension support lengths by use of the "Equations for Metallic Tapes" (GMP No. 9).

The uncertainty of the reported length value is based upon the limits imposed by the standards used for the calibration of the tape, the length of the interval, the character of the tape graduations and the repeatability of the measurement process where three standard deviations is taken as the limit of random error.

Measurements were made to the centers of the graduations at the edge of the tape ribbon nearest the observer with the zero mark to the left of the observer.

The average AE value for this tape is \_\_\_\_\_ pounds, where AE is the product of the average cross-sectional area of the tape ribbon and its Young's Modulus of Elasticity.

The average weight per foot of this tape is 0.0 \_\_\_\_\_ pound.

The assumed coefficient of thermal expansion for Invar tapes is 0.00000022 per °F (0.0000004 per °C). For steel tapes, the assumed coefficient is 0.00000645 per °F (0.0000116 per °C).

The exact relationship between the International System of Units and the U. S. customary units of length is one foot equals 0.3048 meter.