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Contents

Page

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Testing Machine Association (JTM)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS B 7738**:2001), which has been technically revised.

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Calibration and verification of helical compression and extension springs testing machines

Introduction

This Japanese Industrial Standard specifies the data of both “force” and “length” in the loading process of helical compression and extension springs, which are important elements for the basic performance evaluation of the said springs, and the calibration and verification methods for both of them.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies the method for calibration and verification of the force-measuring system and length measuring instrument of the compression and tension testing machines (hereafter referred to as testing machines) used for evaluation of compressive and tensile characteristics of helical compression and extension springs.

This Standard addresses the static calibration and verification of the force-measuring systems and length measuring instruments. The calibration values are not necessarily valid for high-speed or dynamic testing applications.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7506 *Gauge blocks*

JIS B 7517 *Vernier, dial and digital height gauges*

JIS B 7728 *Calibration of force-proving instruments used for the verification of uniaxial testing machines*

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1

calibration

operation that establishes the relationship between the indicated value of the force indicator of the testing machine and the reference force value, and between the indicated value of the length indicator of the testing machine and the reference length value

3.2

verification