JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 2704-1 : 2018

(JSMA/JSA)

Coil springs—Part 1: Basic calculation methods

ICS 21.160

Reference number : JIS B 2704-1 : 2018 (E)

Date of Establishment: 2009-10-20
Date of Revision: 2018-03-20
Date of Public Notice in Official Gazette: 2018-03-20
Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Machine Elements

JIS B 2704-1:2018, First English edition published in 2018-10

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

KK/AT

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 Japan Spring Manufacturers Association (JSMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently, **JIS B 2704-1**:2009 is replaced with this Standard, and **JIS B 2709-1**: 2009 has been withdrawn and replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS B 2704 series consists of the following 2 parts under the general title "*Coil springs*":

Part 1: Basic calculation methods

Part 2: Expression of the specification

Coil springs—Part 1: Basic calculation methods

1 Scope

This Japanese Industrial Standard specifies the requirements for basic calculation methods for helical compression springs, helical extension springs and helical torsion springs (hereafter referred to as springs), which are for general use and made from metallic materials with circular cross-section.

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 0103 *Springs—Vocabulary*

JIS B 0156 *Springs—Symbols*

JIS B 2711 *Springs—Shot peening*

JIS G 3521 *Hard drawn steel wires*

JIS G 3522 *Piano wires*

JIS G 3560 *Oil tempered wire for mechanical springs*

JIS G 3561 *Oil tempered wire for valve springs*

JIS G 4314 *Stainless steel wires for springs*

JIS G 4801 *Spring steels*

JIS H 3260 *Copper and copper alloy wires*

JIS H 3270 *Copper beryllium alloy, phosphor bronze and nickel silver rods, bars and wires*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS B 0103** apply.

4 Materials

Materials used for springs given in Table 1 apply. The ○ marks given in Table 1 indicate recommended materials for each use. Materials other than those given in Table 1 and materials used for other purposes shall be as agreed between the manufacturer and the purchaser.