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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 14790.1-2009

Replacing GB/T 14790-1993

**Mechanical vibration -- Measurement and evaluation of human
exposure to hand-transmitted vibration -- Part 1: General
requirements**

(English Translation)

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Foreword

GB/T 14790 "Mechanical vibration of human exposure to hand-transmitted vibration measurement and evaluation" is divided into two parts.

- Part 1. General requirements;
- Part 2. A Practical Guide to Workplace measurements.

This section GB/T 14790 Part 1.

This section identical with ISO 5349-1:2001 "Mechanical vibration of human exposure to hand-transmitted vibration measurement and evaluation - Part 1. a General requirements "(in English).

For ease of use, for ISO 5349-1:2001 This part made the following editorial changes.

- With "this Part" instead of "international standard ISO 5349 in this section";
- Use the decimal symbol instead of decimal symbol " , . " , " ;

--- Remove the ISO 5349-1. Preface 2001;

--- Introduction of international standards were modified, according to GB/T 1.1 part of the provisions of the international standards into the Foreword Part Minute introduction;

--- Table title and figure caption format according to GB/T 1.1 provisions were modified;

--- Footnote to the provisions of note;

--- References in the part of the international standards to national standards equivalent thereto.

This Part replaces GB/T 14790-1993 "human exposure to hand-transmitted vibration measurement and evaluation methods." Section compared with the GB/T 14790-1993 The main changes are as follows.

--- This part of the degree of consistency with ISO 5349-1 as equivalent, while the previous version was equivalent.

--- Vibration exposure assessment in this section is based on the total value of vibration that three axial frequency weighted rms acceleration component squares and square root. The previous version, the evaluation is based on the frequency-weighted rms acceleration value of the maximum axial component.

--- This section 8h daily exposure to vibration energy such as Gross weighting, the previous version is used in 4h and other energy-weighted acceleration; before A version of the daily exposure of the reference time is 4h, this portion of the reference time to 8h.

--- This part of the Appendix A mathematically predetermined frequency weighting filter characteristic curve contains weighting band limitation described and the corresponding weighting factor and the previous version is slightly different curve.

--- This new section in Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, and canceled the previous version of Appendix A content.

Appendix A of this section is normative appendix, Appendix B, Appendix C, Appendix D, Annex E and Annex F is informative appendix.

This part of the National mechanical vibration, shock and condition monitoring Standardization Technical Committee (SAC/TC53) and focal points.

3.1 Terms and Definitions

ISO 2041 terms and definitions established in this section apply.

Note: For purposes of this section the convenience of users, and medical conditions associated vocabulary is given in Appendix B.

3.2 Symbol

This section uses the following symbols.

Uniaxial Rao hw to hand-transmitted vibration frequency weighted rms acceleration (r.m.s) value, in m/s^2 ;

Rao hw_x, Rao hw_y, Rao hw_z representing x0 axis, y-axis value hw Rao and z axes, in units of m/s^2 ;

Rao hv frequency weighted rms acceleration vibration total value (or sometimes called vector and acceleration and frequency weighting), corresponding three measurements Axial measurements Rao hw value of the square and the square root of units of m/s^2 ;

Rao hv (eq, 8h) daily vibration exposure (8H gross energy such as vibration), in units of m/s^2 ;

A (8) daily vibration exposure Rao hv (eq, 8h) simplified alternative terminology;

Dy average total population (cumulative) exposure time, years;

T total daily exposure to vibration Rao hv of time;

T0 8h (28800s) reference time;

Wh hand-transmitted vibration frequency weighting characteristics.

GB/T 14790.1-2009/ISO 5349-1:2001