

ICS 13.180
CCS A 25



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

GB/T 23699-2009

**Principles for selecting and using test persons for testing
anthropometric aspects of industrial products and designs**

工业产品及设计中人体测量学特性测试的被试选用原则

(English Translation)

Issued on: May 6, 2009

Implemented on: November 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and definitions
4 Test Type
4.1 Overview
4.2 Preliminary Test
4.3 Detailed Test
5 Test subjects
5.1 General Requirements and Recommendations
5.2 Test Procedure
5.3 Preliminary test subjects Option
5.4 Details of the test subjects Option
5.5 Experienced or inexperienced people
5.6 Products in the anthropometric characteristics of an acceptable standard
5.7 Test Procedure documentation and test results documentation
Appendix A (informative) elevator anthropometric characteristics of the test procedure Example
Annex B (informative) body size data
Reference

Foreword

This revised standard adopts ISO 15537:2004 "Design of Industrial Products and anthropometric characteristics of the test subjects selection principle" (in English).

This standard and ISO 15537:2004 as compared to the main differences are as follows.

--- Increase the informative Appendix B;

--- Table 1, Table 2 Move informative Appendix B, to table B. 3 and Table B. 4;

--- Increased 18 to 60-year-old Chinese male body size data (Table B.1) and 18-year-old to 55-year-old Chinese female human foot Inch data (Table B.2), to adapt to China's national conditions.

The Standard Appendix A, Appendix B is an informative annex.

This standard by the National Standardization Technical Committee on Ergonomics of human and centralized.

This standard was drafted. Beijing University of Aeronautics and Astronautics, China National Institute of Standardization, Tsinghua University, the Air Force Institute of Aviation Medicine, Beijing clothing College loaded, assembly Aeronautical Institute of Biomedical Engineering.

Introduction

Investigation on industrial products and designs in consideration of the extent to ergonomic requirements, generally by using a test device record Various changes in parameters (such as height) or a small number of parameters due to possible scenarios. For not given special test program parallel multi Functional test and (or) product characteristics measured, usually specify one or several persons as participants used the products being tested, and in the course of or the latter use of observation and questioning subjects.

By this method any results obtained, which are greatly dependent on the reliability of the test is the extent to which represents a different aspect Target user group. This standard is concerned that a matching of product and design the user group anthropometric characteristics.

Design of equipment should be reasonable considering the size of the target user group body. A method for the required inspection and product design meets it is organized by group and let them try different ways to test the product.

Appendix A provides a use of this standard example, Appendix B shows the human dimension of the data part of the Country.

Industrial product design and anthropometric characteristics test Subjects selection principles

1 Scope

This standard specifies the method of test group was formed in anthropometric characteristics were tested shall be representative of the group object to be measured target audience.

This standard applies to the design of industrial products and anthropometric characteristics of the test, and design of these products or in direct contact with the human body, or with people Size-related, such as. machinery, work equipment, personal protective equipment, consumer goods, work space, transportation or construction equipment.

This standard also applies to the human dimension of security-related products in the test.

Other aspects and other requirements of this standard does not involve tasks such as perception of information (except geometrical arrangement of the observed object) and a controller (Except their geometrical arrangement).

This standard is from the perspective of anthropometry to select subjects, but generally similar principles can also be used to test other variables, such as biomechanics Learn aspects of the test.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 5703-1999 Basic human body measurements for technological design (eqvISO 7250.1996)

3 Terms and Definitions

The following terms and definitions apply to this standard.

From the perspective of anthropometric point of view, for the tested product features, usage restrictions will cause the size of the target group of systemic or local.

Note 1: The key size and reach field gap, gestures, or other contact pressure may cause difficulty in use, discomfort or health risk factors.

Note 2: a test product can have more than a critical dimension, for example, the gap may be up to the domain and combinations thereof.

Example. The critical dimension may be out of the channel width, or the width and height of the combination.

Product key size of the corresponding body measurements.

Note: For example, a person may enter the channel body anthropometric key projects are those that cause the greatest constraint measurements, such as height and (or) body width, with Depending on the shape of the body passageway.

Of the expected use of the product design or user caused by the maximum limit of the critical dimensions of the product, additional equipment and key anthropometric items Purpose combination.

At least two width dimension (preferred Shoulder and hip width) and the thickness of two (preferred thick chest and abdomen thick) are less than 25 percentile who belongs to slender body, if not the 25th percentile, then use the 5th and 50th percentile of the average

of the target user group.

Example. Chinese adult men Shoulder 25th percentile value is calculated. $(398\text{mm} + 431\text{mm}) / 2 = 414.5\text{mm}$, Table B. 1.