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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS B 7525-1**:2013 is replaced with this Standard.

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JIS B 7525 series consists of the following 3 parts under the general title “*Hydrometers*”:

Part 1: Density hydrometers

Part 2: Liquefied petroleum gases density hydrometers

Part 3: Specific gravity meters

Hydrometers—Part 1: Density hydrometers

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 649-1**:1981, Edition 1. Some of the technical contents of the said International Standard have been modified so that they are more in line with the actual usage of density hydrometers in Japan.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JD. Annexes JA to JC are unique to **JIS** and not given in the corresponding International Standard.

Annex JA and Annex JB of this Standard provide, among the requirements for density hydrometers stipulated by the Measurement Act, those related to the technical standards of construction and performance and test methods thereof. Being verified for conformance with these Annexes is not regarded as equivalent to passing the test stipulated by the Measurement Act.

1 Scope

This Standard specifies requirements for five basic series (L20, L50, M50, M100 and S50) of glass density hydrometers of constant mass that are graduated to indicate density (kg/m^3 or g/cm^3) at 20 °C or 15 °C (hereafter referred to as density hydrometers).

Each series comprises density hydrometers which between them cover the interval 600 kg/m^3 to 2 000 kg/m^3 (0.600 g/cm^3 to 2.000 g/cm^3).

The density hydrometers are graduated appropriately for use in liquids of low, medium or high surface tension.

It also specifies three sub-series (L50SP, M50SP and S50SP) of density hydrometers which are graduated to indicate density at either 20 °C or 15 °C. These density hydrometers are limited to the range 600 kg/m^3 to 1 100 kg/m^3 (0.600 g/cm^3 to 1.100 g/cm^3) and are for use in liquids of low surface tension.

The density hydrometers are required to follow the principles of construction and adjustment specified in **ISO 387**. This Standard does not cover density hydrometers with a built-in thermometer.

A table of standard categories of surface tension is given in Annex A. A table of recommended stem diameters is given, for guidance in manufacture, in Annex B.

Examples of form of density hydrometer are shown in Figure 1.

The requirements for density hydrometers used for transactions or certifications are given in Annex JA and Annex JB.

NOTE The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.