



SLOVENSKI STANDARD

SIST EN 6018:2018

01-februar-2018

Aeronavtika - Preskusne metode za kovinske materiale - Določanje gostote v skladu z metodo premestitve

Aerospace series - Test methods for metallic materials - Determination of density according to displacement method

Luft- und Raumfahrt - Prüfverfahren für metallische Werkstoffe - Bestimmung der Dichte nach dem Auftriebsverfahren

Série aérospatiale - Méthodes d'essais applicables aux matériaux métalliques - Détermination de la densité par la méthode de déplacement

<https://standards.iteh.ai/catalog/standards/sist/f42a551c-8e3c-438c-897b-3701613870cb/sist-en-6018-2018>

Ta slovenski standard je istoveten z: EN 6018:2017

ICS:

49.025.05 Železove zlitine na splošno Ferrous alloys in general

SIST EN 6018:2018

en,fr,de

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EUROPEAN STANDARD

EN 6018

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 49.025.15; 49.025.01; 49.025.05

English Version

Aerospace series - Test methods for metallic materials - Determination of density according to displacement method

Série aérospatiale - Méthodes d'essais applicables aux
matériaux métalliques - Détermination de la densité
par la méthode de déplacement

Luft- und Raumfahrt - Prüfverfahren für metallische
Werkstoffe - Bestimmung der Dichte nach dem
Auftriebsverfahren

This European Standard was approved by CEN on 26 June 2017.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents		Page
European foreword		3
1	Scope	4
2	Test method	4
2.1	Test medium	4
2.2	Equipment	4
2.3	Performance	4
2.4	Evaluation	4

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European foreword

This document (EN 6018:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2018, and conflicting national standards shall be withdrawn at the latest by May 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 6018:2017 (E)

1 Scope

This European Standard defines the determination of density according to displacement method for metallic materials.

2 Test method

2.1 Test medium

Test liquid: distilled water or any other suitable liquid which may contain up to 0,1 % wetting agent in order to prevent the appearance of air bubbles.

2.2 Equipment

Weighing machine with an error limit of 0,000 1 g.

2.3 Performance

Suspended on a thin wire (maximum diameter 0,125 mm), the sample is weighed in air (m_1), immersed into the test liquid and again weighed (m_2), taking care that no air bubbles adhere to the sample.

The density of the test liquid (ρ_F) is determined by means of the aerometer and is to be checked prior to each measurement.

2.4 Evaluation

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The density (ρ) measured in is (kg/dm^3) is calculated according to the following equation :

$$\rho = \frac{m_1 \cdot \rho_F}{m_1 - m_2} \quad \text{SIST EN 6018:2018} \quad \text{https://standards.iteh.ai/catalog/standards/sist/f42a551c-8e3c-438c-897b-3701613870cb/sist-en-6018-2018} \quad (1)$$

where

m_1 mass of the sample weighed in air(kg);

m_2 mass of the sample reduced by the mass of displacement liquid (weighing the sample in the liquid) (kg);

ρ_F density of test liquid (kg/dm^3);

ρ density of weighed sample (kg/dm^3).