ICS 27.120.30 SLOVENSKÁ TECHNICKÁ NORMA August 2021

STN	**Technológia jadrového paliva Návody na keramografickú prípravu spekaných peliet UO2 na mikroštruktúrne skúšanie (ISO 16793: 2018)**	**STN EN ISO 16793** 40 1014

Nuclear fuel technology - Guidelines for ceramographic preparation of UO2 sintered pellets for microstructure examination (ISO 16793:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/21

Obsahuje: EN ISO 16793:2021, ISO 16793:2018

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2021
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16793

February 2021

ICS 27.120.30

English Version

Nuclear fuel technology - Guidelines for ceramographic preparation of UO2 sintered pellets for microstructure examination (ISO 16793:2018)

Technologie du combustible nucléaire - Lignes directrices pour la préparation céramographique de pastilles UO2 frittées pour l'examen de la microstructure (ISO 16793:2018)

This European Standard was approved by CEN on 18 January 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2021 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 16793:2021 E

Contents

Page

European foreword

The text of ISO 16793:2018 has been prepared by Technical Committee ISO/TC 85 "Nuclear energy, nuclear technologies, and radiological protection" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 16793:2021 by Technical Committee CEN/TC 430 "Nuclear energy, nuclear technologies, and radiological protection" the secretariat of which is held by AFNOR.

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 August 2021, and conflicting national standards shall be withdrawn at the latest by August 2021.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 16793:2018 has been approved by CEN as EN ISO 16793:2021 without any modification.

INTERNATIONAL STANDARD

ISO 16793

Second edition
2018-08

Nuclear fuel technology — Guidelines for ceramographic preparation of UO_2 sintered pellets for microstructure examination

Technologie du combustible nucléaire — Lignes directrices pour la préparation céramographique de pastilles UO_2 frittées pour l'examen de la microstructure

Reference number
ISO 16793:2018(E)

© ISO 2018

COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

© ISO 2018 – All rights reserved

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 5, *Nuclear installations, processes and technologies*.

This second edition cancels and replaces the first edition (ISO 16793:2005), which has been technically revised.

© ISO 2018 – All rights reserved

INTERNATIONAL STANDARD ISO 16793:2018(E)

Nuclear fuel technology — Guidelines for ceramographic preparation of UO_2 sintered pellets for microstructure examination

1 Scope

This document describes the ceramographic preparation of uranium dioxide (UO_2) sintered pellets for qualitative and quantitative microstructure examinations.

These examinations can be carried out before and after thermal or chemical etching.

They enable

— observations of fissures, inter- or intra-granular pores and inclusions, and

— measurement of pore and grain size and measurement of pore and grain size distributions.

The measurement of average grain size can be carried out using a classical counting method as described in ISO 2624 or ASTM E112[3], i.e. intercept procedure, comparison with standard grids or reference photographs.

The measurement of pore-size distributions is usually carried out by an automatic image analyser. If the grain-size distributions are also measured with an image analyser, it is recommended that thermal etching be used to reveal the grain structure uniformly throughout the whole sample.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

© ISO 2018 – All rights reserved