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Second edition
2018-03

Cryogenic vessels — Toughness requirements for materials at cryogenic temperature —

Part 2: Temperatures between -80 degrees C and -20 degrees C

*Réipients cryogéniques — Exigences de ténacité pour les matériaux
à température cryogénique —*

Partie 2: Températures comprises entre -80 degrés C et -20 degrés C



Reference number
ISO 21028-2:2018(E)

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Published in Switzerland

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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.

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This document was prepared by Technical Committee ISO/TC 220, *Cryogenic vessels*.

This second edition cancels and replaces the first edition (ISO 21028-2:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

- tables and figures on impact test temperatures and design reference have been modified;
- [Annex B](#) has been added to present an example of calculation of the lowest temperature authorized during operation.

A list of all parts in the ISO 21028 series can be found on the ISO website.

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Introduction

The use of materials at low temperatures entails special problems which should be addressed. Consideration should be given, in particular, to changes in mechanical characteristics, expansion and contraction phenomena and the thermal conduction of the various materials. The most important property to be considered is the material toughness at low temperature.