

Second edition  
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## Brazing — Imperfections in brazed joints

*Brasage fort — Défauts dans les assemblages réalisés par brasage fort*



Reference number  
ISO 18279:2023(E)

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## Foreword

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This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 13, *Brazing materials and processes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 18279:2003), which has been technically revised.

The main changes are as follows:

- An additional quality level for brazed joint imperfections has been added in [Annex B](#) in order to reflect the technical progress that has been achieved over the past decade as well as the need for increased requirements regarding reliability of brazed joints for critical applications. Quality levels have been reevaluated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html). Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.

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## Introduction

Brazed joints usually contain imperfections of various types, some of which are detrimental in almost every case while others can be detrimental or harmless, depending entirely on the service requirements of the joint in question. Therefore, it is often necessary to classify the imperfections in a brazed joint and then try to assess the significance of their effects on the behaviour of the joint in service. The classification is relatively easy and [Table 1](#) describes the imperfections that most commonly occur. The assessment of significance is not easy (see also [Annex A](#)).

For welded joints, there has been extensive work carried out for many years on the significance of imperfections in service; however, such work has not been carried out on brazed joints. Moreover, the work on welded joints is only rarely relevant to brazed joints, mainly because of differences in geometry and stressing. Therefore, this document cannot give definitive quality levels for brazed joints. These can only be produced as experience is gained from industrial applications. However, [Annex B](#) gives some suggestions for quality levels for general applications, which can be of help where detailed information is not available. The use of quality levels can only be successful if the imperfections that are relevant to the application of the brazed joint are determined.