



**International
Standard**

ISO 21557

**Mining — Mining methods —
Classification and specification**

*Exploitation minière — Méthodes d'exploitation minière —
Classification et spécifications*

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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.

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 document 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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 82, *Mining*.

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.

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Introduction

A proper data classification allows the organisations to apply appropriate controls based on that predetermined category data. The controls often come with a cost. It does not necessarily need to have the same kinds of controls for all kinds of data.

Classifying your data can save your time and money because you are able to focus on what's important, and not waste your time putting unnecessary controls in place.

The primary purpose of this document on classification of mining methods is to promote uniformity and comparability of mining information and it will be easier to be found when needed.

There are four main reasons why Information classification is important:

- a) efficiency;
- b) security;
- c) culture of safety;
- d) conformity.

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Mining — Mining methods — Classification and specification

1 Scope

This document establishes a classification of mining methods based on specification such as ore grade and recovery, cost of infrastructure, ore extraction, labour and machine costs, underground support costs and geotechnical factors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22932 (all parts), *Mining — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22932 series apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 General

The purpose of a classification system for mining methods is to provide an initial guideline for the preliminary selection of a suitable method or methods. Its significance is great as this choice impinges on all future mine design decisions and, in turn, on safety, economy, and the environment.

The choice of a mining method assumes a previous but cursory knowledge of the methods themselves. It also assumes a brief understanding of ground control and of excavating and bulk handling equipment. In the formal mine design procedure, the choice of mining methods immediately follows geological and geotechnical studies, and feeds directly into the crucial milestone diagram where regions of the property are delineated as to prospective mining methods. This step in turn just precedes the subjective, complex, and critical layout and sequencing study.

The choice of mining method is an extremely important decision affecting the entire mining project;

The definition of the method permits to

- a) establish the configuration of the mine,
- b) choose mining equipment, and
- c) perform an economic evaluation of the project.

Examples of factors in the choice of mining method are:

- a) form of deposit;
- b) dimensions of deposit;