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# Hard coal — Froth flotation testing —

## Part 3: Release evaluation

*Houille — Essais de flottation —*

*Partie 3: Évaluation des émissions*

Reference number
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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 8858-3 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 1, *Coal preparation: Terminology and performance*.

ISO 8858 consists of the following parts, under the general title *Hard coal — Froth flotation testing*:

— *Part 1: Laboratory procedure*

— *Part 2: Sequential evaluation*

— *Part 3: Release evaluation*

# Introduction

The froth flotation of coal has widespread application for the recovery of fine coal particles and their separation from unwanted mineral matter. The response of coal to the froth flotation process is measured initially by a laboratory scale test. ISO 8858-1:1990 provides a means of evaluating the general flotation characteristics of a coal under a set of specified conditions and will not necessarily indicate the full potential of that coal. It is accepted that variation of the many parameters in the froth flotation process can be used to effect the beneficiation of the product. This part of ISO 8858 describes methods of applying certain test conditions to reveal the relative response of coals to the flotation process.

To facilitate the determination of how a particular coal will respond to froth flotation, a method of controlling the recovery of froth is used. This is done by inhibiting the process to a degree, determining the rate at which coal reacts and by progressively sampling the froth. This method provides a basis to vary test parameters to explore any special flotation characteristics.

This part of ISO 8858 is applicable to a wide range of coals and provides a method of comparison of flotation behaviour, and will facilitate the exchange of information relating to specific performance. It is expected that the use of this method will provide a tool for comparison of flotation characteristics.

From the results of the standard test, it is possible to draw evaluation curves similar to those obtained from the float and sinking of coal.

Because of the high reproducibility of results, the test represents a reliable means of comparing the flotation response of different samples.