

# INTERNATIONAL STANDARD

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## **Vertical building elements — Impact resistance tests — Impact bodies and general test procedures**

*Ouvrages verticaux des constructions — Essais de résistance aux chocs — Corps de chocs et modalités des essais de choc*

Reference number  
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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7892 was prepared by Technical Committee ISO/TC 59, *Building construction*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Vertical building elements — Impact resistance tests — Impact bodies and general test procedures

## 0 Introduction

**0.1** This International Standard is one of a series of standards relating to the performance of building elements.

This series comprises firstly

- performance standards which indicate the type of performance characterizing each family of elements — façades, partitions, roofs, cross-walls, tridimensional units — making up a building with their scales of values, if required, and which also refer to suitable methods for determining performance,
- and, secondly, International Standards applicable to each family of elements, describing the means (measurement, calculation, test method or method of examination) by which a certain performance achieved by the element is to be evaluated or verified, and/or the means of forecasting the life expectancy.

In conjunction with this series of standards, another series will also be established defining the rules pertaining to dimensional coordination and modular coordination for the different families of elements, given that they and performance are so related that some correlation is desirable.

**0.2** The vertical walls of buildings may be subject to different types of impact as described below :

- impacts from small hard bodies, for example, corresponding to impact from a stone thrown from the outside or to impact from the corner of a piece of furniture on the inside,
- exceptional impacts from the inside, for example, corresponding to impacts from men, animals or deformable objects against walls, acting on a small area,
- exceptional impacts from the outside, for example, corresponding to projections of men or animals against the façades, their whole mass acting on a large impact area.

## 1 Scope and field of application

This International Standard defines

- the conventional impact bodies used in order to reproduce the effect of actual impacts on vertical building elements,
- the general test procedures, the test procedures specific to each type of building element tested being given in the standards specific to these building elements.

It applies to all vertical (or nearly vertical) building elements, excluding doorsets for which a method is specified in ISO 8270.<sup>1)</sup>

The impacts used for verifying a property of the material, often specific to the character of this material, are defined in the standards dealing with these materials.

The impacts used in order to create shock effects in particular types of walls are not dealt with in this International Standard.

The specifications particular to each type of building element (impact energy, location and number of impacts, etc.) as well as the criteria for the assessment of the results are given in the test and performance standards dealing with these building elements.

## 2 Types of impacts

The three types of conventional impacts to be applied are as follows.

NOTE — The impacts arising from an object moving at high speed (such as firearm projectiles, hail) are not considered in this International Standard.

### 2.1 Impacts from hard bodies

These represent in particular impacts resulting from the displacement or the projection of non-deformable objects (for example, displacement of a piece of furniture or throwing of a stone).

1) ISO 8270, *Doorsets — Soft heavy body impact test*.