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# International Standard



# 7845

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## **Horizontal joints between load-bearing walls and concrete floors — Laboratory mechanical tests — Effect of vertical loading and of moments transmitted by the floors**

*Assemblages horizontaux entre murs porteurs et planchers en béton — Méthodes d'essai mécanique en laboratoire — Sollicitations résultant de l'application de charges verticales et de moments transmis par les planchers*

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**Descriptors :** buildings, joints, tests, mechanical tests, mechanical properties, walls, floors.

## 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.

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 7845 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.

# Horizontal joints between load-bearing walls and concrete floors — Laboratory mechanical tests — Effect of vertical loading and of moments transmitted by the floors

## 0 Introduction

The analysis of structures with load-bearing walls and floors has shown the importance of the role that can be played by joints between the walls and floors.

Modern methods of calculation allow the influence of these joints to be taken into account when sufficient knowledge of their behaviour is available, and the purpose of this International Standard is, therefore, to provide a method for the experimental determination of the principal elements of the behaviour of some of these joints.

This International Standard does not deal with the interpretation or use of the test results. In particular, as these are tests which are often difficult to perform in large numbers, this International Standard does not specify a minimum repetition factor. Attention is drawn, however, to the dispersion which often affects the results of such tests and to the desirability of repeating several times those tests which are most representative of the real conditions.

Modern methods of calculation rely on knowledge of the mechanical properties of horizontal joints between load-bearing walls and floors. These properties relate to the limit states for cracking, rupture and excessive deformation. In addition, the verification of the limit states of the walls themselves takes into account the influence of the deformability of the joints on the

interaction between walls and floors. This International Standard provides test methods which can be used to determine the corresponding mechanical properties.

## 1 Scope

This International Standard specifies methods of test for the determination of the mechanical properties of horizontal joints between load-bearing walls and concrete floors subjected to vertical loading and moments transmitted by the floors.

## 2 Field of application

This International Standard is applicable to horizontal joints between load-bearing walls and concrete floors which are intended to transmit the moments of the floors to the walls. The walls may be interior or exterior walls, supporting a floor on one or on both sides.

The walls may be of masonry made up of units of small or medium dimensions (stone, solid, perforated or hollow bricks, solid or hollow blocks of heavy- or lightweight concrete). They may also be made of prefabricated units of big dimensions (large panels).

This International Standard is applicable in the case of effects on the joints resulting from the transmission by the upper wall of vertical loads  $N$  displaced from the centre of the wall by a distance  $e$  and from the transmission by the floor of vertical loads  $T$  and moments  $M$  (see figure 1).

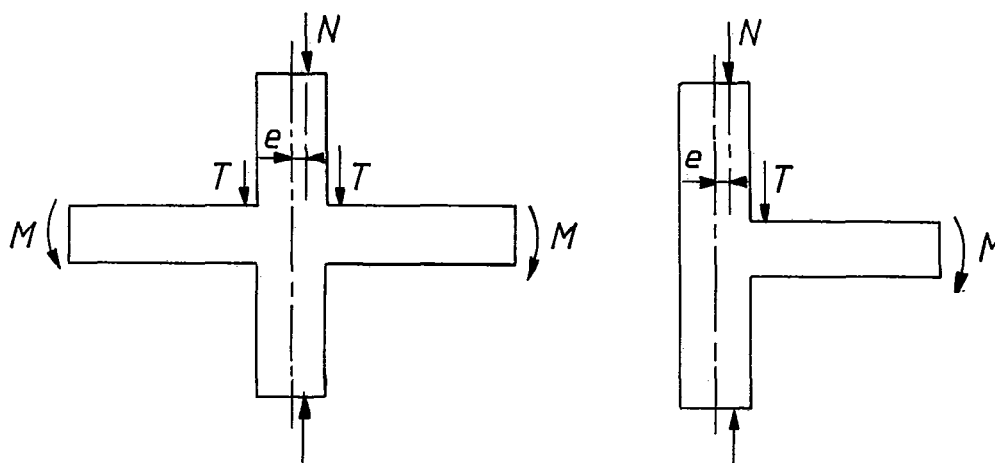


Figure 1