



INTERNATIONAL STANDARD ISO 7475:1984
TECHNICAL CORRIGENDUM 1

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

Balancing machines — Enclosures and other safety measures

TECHNICAL CORRIGENDUM 1

Machines à équilibrer — Enceintes et autres mesures de sécurité

RECTIFICATIF TECHNIQUE 1

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Page 1

Clause 1, Scope and field of application

Add after first paragraph:

In compliance with this International Standard, enclosures are selected on the basis of the absolute energy of a fragment (projected particle). The absolute energy of a fragment, however, can only be one criterion in selecting an appropriate enclosure (see 9.1).

Page 6

9.1 General

Add the following text after second paragraph:

ICS 21.120.40

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The selection of class C enclosures in accordance with this International Standard is based on the absolute energy of a fragment and is limited to fragment velocities between 10 m/s and 30 m/s. However, recent impact tests¹⁾ have proved that the area-specific energy (i.e. the ratio of the absolute energy to the size of the impact area of a fragment; see Table 2, seventh column) also affects the capability of a fragment to penetrate an enclosure.

It has been demonstrated (see reference [1]) that both a projectile with the data

- mass 100 g
- velocity 126 m/s
- absolute energy 806 J
- area-specific energy 5 J/mm²

and a projectile with the data

- mass 5 kg
- velocity 47 m/s
- absolute energy 5523 J
- area-specific energy 4 J/mm²

could be stopped by the same material thickness; i.e. the projectiles did not penetrate the enclosure. It is remarkable that the difference in absolute energies is almost in the order of magnitude while the area-specific energies are almost the same.

This result underlines the relevance of the area-specific energy for the penetration capability. Work is being undertaken to combine the two criteria (absolute and area-specific energy of a fragment). This will be included in a revision of this International Standard.

WARNING: Until the second edition of this International Standard is published, it is strongly recommended to avoid making an unreflected selection of safety enclosures considering exclusively the absolute energy of a fragment. A selection of safety enclosures should be made in cooperation with the supplier of the enclosure, considering both the absolute and the area-specific energy.

Page 9

Add the following **Bibliography**

- [1] Mewes, D., Trapp, R.-P. and Warlich, H.-J. Festigkeit von Werkstoffen bei Aufprallbeanspruchung (Strength of materials in case of mechanical impact). *Materialwiss. u. Werkstofftech*, **29**, 1998, pp. 258-262.

¹⁾ These impact tests have been carried out at the German Institute of Occupational Safety (Berufsgenossenschaftliches Institut für Arbeitssicherheit, BIA).