
INTERNATIONAL STANDARD



946

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

Grey cast iron — Beam unnotched impact test

Fonte grise — Essai de choc sur éprouvette non entaillée

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 25 has reviewed ISO Recommendation R 946 and found it technically suitable for transformation. International Standard ISO 946 therefore replaces ISO Recommendation R 946-1969 to which it is technically identical.

ISO Recommendation R 946 was approved by the Member Bodies of the following countries :

Belgium	India	Romania
Brazil	Ireland	South Africa, Rep. of
Canada	Israel	Sweden
Chile	Italy	Switzerland
Egypt, Arab Rep. of	Korea, Rep. of	Thailand
Finland	Netherlands	Turkey
France	Norway	United Kingdom
Germany	Poland	Yugoslavia
Greece	Portugal	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

Czechoslovakia

The Member Bodies of the following countries disapproved the transformation of ISO/R 946 into an International Standard :

Czechoslovakia
Switzerland

Grey cast iron — Beam unnotched impact test

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies requirements for the determination of the impact strength of grey cast iron containing graphite in flake form.

2 PRINCIPLE

2.1 The test consists in breaking, by a single blow from a swinging hammer, a series of unnotched machined cylindrical test pieces resting freely between supports, and measuring the difference between the kinetic energy of the hammer immediately before fracture and its residual energy after the fracture of the test piece.

2.2 The impact strength of the grey cast iron is the apparent energy absorbed in fracture denoted by the symbol KG , and is expressed in joules (see also annex A).

3 SYMBOLS AND DESIGNATIONS

Number	Symbol	Designation
1	l	Length of test piece
2	d	Diameter of test piece
3	E_p	Initial potential energy of testing machine
4	L	Distance between supports
5	—	Radius of curvature of supports
6	—	Taper of supports
7	—	Angle at tip of hammer
8	—	Radius of curvature of hammer
9	v	Speed of hammer at instant of striking
10	KG	Apparent energy absorbed in fracture

