INTERNATIONAL STANDARD 3108

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

Steel wire ropes for general purposes — Determination of actual breaking load

Câbles en acier pour usages courants — Détermination de la charge de rupture effective

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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.

International Standard ISO 3108 was drawn up by Technical Committee ISO/TC 105, *Steel wire ropes,* and circulated to the Member Bodies in February 1973.

It has been approved by the Member Bodies of the following countries :

Austria	France	South Africa, Rep. of
Belgium	Germany	Spain
Bulgaria	India	Sweden
Chile	Ireland	Switzerland
Czechoslovakia	Israel	Thailand
Denmark	Italy	Turkey
Finland	Romania	United Kingdom

This International Standard has also been approved by the International Organization for the Study of the Endurance of Wire Ropes (OIPEEC).

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Australia
Egypt, Arab Rep. of
New Zealand

Printed in Switzerland

Steel wire ropes for general purposes — Determination of actual breaking load

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of tensile test to destruction for determining the actual breaking load of steel wire ropes for general purposes as given in ISO 2408, *Steel wire ropes for general purposes — Characteristics.*

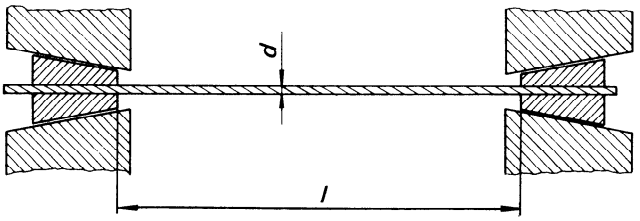
It may also be used for other ropes, unless the standard concerned specifically excludes its use, or gives another method.

2 TEST LENGTH

The test length (distance between the grips) shall be in accordance with the following table.

Dimensions in millimetres

Rope diameter d	Minimum test length l
$d \leqslant 6$	300
$6 < d \leqslant 20$	600
$d > 20$	30 × d



3 TEST PIECE

The minimum length of the test piece is made up of the test length plus an allowance for gripping.

The test piece shall be representative of the rope as a whole and free from defects. Prior to selection, the ends of the test piece shall be secured to prevent turn being put into or taken out of the test piece. In the same way, the rope from which the test piece is taken shall be secured. When cutting the test piece from the rope, neither the test piece nor the rope shall be damaged.

During testing, the test piece shall be gripped in such a way that all wires in the rope take part in the acceptance of the load. It may be useful to provide the test piece with conical sockets. If such sockets are used, care has to be taken that the casting material penetrates well to ensure intimate cohesion with the untwisted wires.

4 TESTING

4.1 Not more than 80 % of the minimum breaking load given in ISO 2408 may be applied quickly; the remaining load shall be applied slowly, at a rate of application of stress of approximately 10 MPa per second.

4.2 The actual breaking load is reached when no further increase of the load is possible.

4.3 Tests in which breaking occurs inside or adjacent to the grips may be discarded at the option of the manufacturer in cases where the minimum breaking load is not reached.

5 TEST REPORT

The test report shall include the following particulars :

a) the reference to the method used, that is, this International Standard;

b) the results (in terms of magnitude and unit);

c) any unusual features noted during the test;

d) any operation not included in this International Standard or regarded as optional.

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