STANDARD **3800**

First edition
1993-12-15

Threaded fasteners — Axial load fatigue testing — Test methods and evaluation of results

Éléments de fixation filetés — Essais de fatigue sous charge axiale — Méthode d'essai et évaluation des résultats

Reference number
ISO 3800:1993(E)

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 voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3800 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 1, *Mechanical properties of fasteners*.

This first edition of ISO 3800 cancels and replaces ISO 3800-1:1977, which has been technically revised.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Threaded fasteners — Axial load fatigue testing — Test methods and evaluation of results

1 Scope

This International Standard specifies the conditions for carrying out axial load fatigue tests on threaded fasteners, as well as recommendations for the evaluation of the results.

Unless otherwise agreed, the tests are of the fluctuating tension type and are carried out at room temperature, the loading applied being centric along the longitudinal axis of the fastener. The influence of the compliance of clamped parts on the strain of the fastener is not taken into account.

This method allows determination of the fatigue strength of threaded fasteners.

The test results can be influenced by the test conditions. For this reason, minimum requirements are specified to reduce this effect. In addition, calibration and centring control methods for the testing apparatus are included.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 273:1979, *Fasteners — Clearance holes for bolts and screws.*

ISO 554:1976, *Standard atmospheres for conditioning and/or testing — Specifications.*

ISO 885:1976, *General purpose bolts and screws — Metric series — Radii under the head.*

ISO 4032:1986, *Hexagon nuts, style 1 — Product grades A and B.*

ISO 4033:1979, *Hexagon nuts, style 2 — Product grades A and B.*

ISO 8673:1988, *Hexagon nuts, style 1, with metric fine pitch thread — Product grades A and B.*

ISO 8674:1988, *Hexagon nuts, style 2, with metric fine pitch thread — Product grades A and B.*

3 Symbols and their designations

See table 1.