INTERNATIONAL STANDARD 3316

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

Assembly tools for screws and nuts — Attachments for hand-operated square drive socket wrenches — Torque testing

Outils de manœuvre pour vis et écrous — Adaptateurs pour douilles à main à carré conducteur — Essai de résistance à la torsion

First edition — 1975-04-01

UDC 621.883 : 620.175

Ref. No. ISO 3316-1975 (E)

Descriptors : tools, assembly tools, wrenches, tests, torsion tests.

Price based on 2 pages

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 3316 was drawn up by Technical Committee ISO/TC 29, *Small tools,* and circulated to the Member Bodies in December 1973.

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

Austria	Hungary	Sweden
Belgium	India	Switzerland
Bulgaria	Ireland	Thailand
Canada	Israel	Turkey
Chile	Italy	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.S.R.
France	Romania	Yugoslavia
Germany	South Africa, Rep. of	

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

Japan

Printed in Switzerland

Assembly tools for screws and nuts — Attachments for hand-operated square drive socket wrenches — Torque testing

1 SCOPE AND FIELD OF APPLICATION

This International Standard applies to attachments for hand-operated square drive socket wrenches listed under numbers 203, 204, 205 and 206 in ISO 1703. It specifies :

— the minimum value for the hardness of their driving squares;

— the method of torque testing;

— the minimum values for their torsional strength.

2 REFERENCES

ISO 1174, *Assembly tools for bolts and screws — Driving squares for power socket wrenches and hand socket wrenches.*

ISO 1703, *Assembly tools for screws and nuts — Nomenclature.*

ISO 1711, *Hand operated wrenches and sockets — Technical specifications.*

3 DRIVING SQUARES

Driving squares shall be in accordance with ISO 1174, and have a minimum hardness of 39 HRC.

4 TORQUE TESTING

4.1 Procedure

Place the tool in a female test square and apply the corresponding torque.

Do not jerk or strike the tool when testing and apply the load gradually until the minimum testing torque (see clause 5) is reached. The torque is calculated as the product of the magnitude of the load by the distance measured between the point of application of the load and the axis of the female test square.

The across flats dimension of the female test square shall be equal to the nominal dimension with a tolerance of H8; the female test square shall be hardened to not less than 55 HRC.

A device in which the female test square can be rotated at a certain torque, determined with an accuracy of ± 2,5 %, may also be used for this test.

Following the application of the minimum test torque, the tool shall not show permanent deformation or other damage which could influence usability.

4.2 Special requirements

4.2.1 *Test of adaptor socket wrench, extension bar and universal joint, square drive*

Apply the torque using a driving part the square of which has been treated for a minimum hardness of 55 HRC and the across flats dimension of which is equal to the nominal dimension with a tolerance of h8.

The universal joint shall be tested in the position in which the two squares are on the same axis.

4.2.2 *Test of square drive bit for use with spiral ratchet drivers*

The end opposite to the square shall be fixed and the torque shall be applied to the square.