UDC 620.1.05 : 620.178.152.42

Ref. No. : ISO/R 674-1968 (E)

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 674

CALIBRATION OF STANDARDIZED BLOCKS TO BE USED FOR ROCKWELL B AND C SCALE HARDNESS TESTING MACHINES

1st EDITION

February 1968

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

Documents
Document Sharing Hub

Full document details: ISO_R 674_1968

BRIEF HISTORY

The ISO Recommendation R 674, *Calibration of standardized blocks to be used for Rockwell B and C scale hardness testing machines,* was drawn up by Technical Committee ISO/TC 17, *Steel,* the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1961 and led, in 1965, to the adoption of a Draft ISO Recommendation, which cancelled and replaced Draft ISO Recommendation No. 523.

In March 1966, this Draft ISO Recommendation (No. 929) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	India	South Africa, Rep. of
Austria	Israel	Spain
Belgium	Italy	Sweden
Canada	Japan	Switzerland
Czechoslovakia	Korea, Rep. of	Turkey
Denmark	Netherlands	U.A.R.
Finland	New Zealand	United Kingdom
France	Norway	U.S.S.R.
Germany	Poland	Yugoslavia
Hungary	Romania	

One Member Body opposed the approval of the Draft :

U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1968, to accept it as an ISO RECOMMENDATION.

AVA Documents
Document Sharing Hub

Full document details: ISO_R 674_1968

ISO Recommendation R 674 February 1968

1. SCOPE

This ISO Recommendation applies to the calibration of standardized blocks for the indirect verification of hardness testing machines as described in ISO Recommendation R..., * *Verification of Rockwell B and C scale hardness testing machines.* It does not necessarily apply to the calibration of test blocks which are used in the routine checking of the testing machine by the user, but it is not intended to preclude the use of blocks calibrated in accordance with this ISO Recommendation for the routine checking of a machine.

NOTE. – Test blocks which are used in routine checking of the testing machine may be calibrated using the load duration specified in clause 4.4 of ISO Recommendation R 80 (2nd edition), *Rockwell hardness test (B and C scales) for steel.*

2. MANUFACTURE

2.1 Each metal block to be standardized should be of a thickness of not less than 6 mm (1/4 in).

2.2 The block should be specially prepared and the attention of the manufacturer is drawn to the need to use a manufacturing process which will give the necessary homogeneity, stability of structure and uniformity of surface hardness. It is recommended that the fineness and regularity of grain and the uniformity of the metallurgical structure be verified by microscopical examination. A microscopical examination may also be made by the standardizing authority.

2.3 The standardized blocks should not be magnetized. It is recommended that the manufacturer should ensure that the blocks, if of steel, have been demagnetized.

2.4 The upper and lower surfaces of the standardized block should be flat within 0.005 mm and the parallelism of the block should be such that the thickness does not vary by more than 0.010 mm per 50 mm.

2.5 The lower surface of the standardized block should have a fine ground finish.

2.6 The test surface (upper surface) should be polished and its surface roughness should not exceed 0.0003 mm (centre line average).

It should be noted that the surface of the standardized block is necessarily work-hardened by any machining and polishing process. It is necessary to ensure that the machining and final polishing processes are such that the work-hardening effects are uniform over the surface and do not penetrate to too great a depth.

2.7 To permit checking that no material is subsequently removed from the standardized block, its thickness at the time of standardization should be marked on it to the nearest 0.1 mm (0.004 in), or an official mark should be made on the test surface (see section 13).

* At present Draft ISO Recommendation No. 928.

AVA Documents Document Sharing Hub

Full document details: ISO_R 674_1968