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British Standard Methods for
Hardness test (Rockwell method) and for
verification of hardness testing machines
(Rockwell method)

Méthodes d'essai de dureté (dureté Rockwell) et de vérification des machines
d'essai de dureté (Rockwell)

Verfahren zur Härteprüfung (Rockwell-Verfahren) und zur Prüfung von Härteprüfmaschinen
(Rockwell-Verfahren)

Foreword

This British Standard has been prepared under the direction of the Iron and Steel and Non-ferrous Metals Standards Committees. It is published as a single document in order to draw attention to the need for regular verification of hardness testing machines (Rockwell method) and to the availability of traceability to the national standard hardness scales. This British Standard supersedes BS 891 : Part 1 : 1962 and BS 891 : Part 2 : 1964, which are withdrawn.

The Technical Committee has taken full account of ISO 6508 and ISO 716 prepared by the International Organization for Standardization (ISO).

The Technical Committee has reconsidered the scope of this standard with the intention of including new developments wherever justifiable. For instance, major changes have occurred in the design of testing machines and in order to differentiate between the inherently greater accuracy of the new digital machines, grade 1 requirements are specified for these machines and less demanding grade 2 requirements are specified for older analogue machines.

In addition, requirements for anvils, including surface finish, have been specified and more demanding tolerances have been specified for indenters in order to give greater accuracy and long term reproducibility resulting from, for example, changes in the indenters.

As previously, the full direct verification procedure is carried out on a new machine or after major overhaul of a machine. Further checking that the accuracy of the machine is valid is provided by application of the indirect verification, following machine assembly and installation. Regular checks of accuracy of an installed machine, e.g. as part of quality assurance procedures or immediately after servicing, would normally be carried out by means of the indirect procedure (see appendix A). As the extent of usage of machines varies considerably it is not possible to give rules for frequency of such verifications. Guidance may be obtained on the basis of informed technical judgement from recognized calibrating authorities.

Considerable importance is attached by the committee to routine monitoring and maintenance of a testing machine's performance between verifications. Although these procedures are not part of the standard as such, a recommended form of procedure that does not impose onerous obligations upon users is given in appendix A.

Compliance with a British Standard does not of itself confer immunity from legal obligations.