

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 615

METHODS FOR DETERMINING THE MECHANICAL PROPERTIES
OF THE WELD METAL DEPOSITED
BY ELECTRODES 3.15 mm OR MORE IN DIAMETER

1st EDITION
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BRIEF HISTORY

The ISO Recommendation R 615, *Methods for Determining the Mechanical Properties of the Weld Metal Deposited by Electrodes 3.15 mm or more in Diameter*, was drawn up by Technical Committee ISO/TC 44, *Welding*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1955 and led, in 1958, to the adoption of a Draft ISO Recommendation.

In September 1958, this Draft ISO Recommendation (No. 231) 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:

Australia	Israel	Spain
Bulgaria	Italy	Sweden
Burma	Japan	Switzerland
Denmark	Norway	
Finland	Poland	
France	Republic	
Germany	of South Africa	
India	Romania	

Five Member Bodies opposed the approval of the Draft:

Belgium
Canada
Netherlands
United Kingdom
U.S.S.R.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in September 1967, to accept it as an ISO RECOMMENDATION.

**METHODS FOR DETERMINING THE MECHANICAL PROPERTIES
OF THE WELD METAL DEPOSITED
BY ELECTRODES 3.15 mm OR MORE IN DIAMETER**

FOREWORD

This ISO Recommendation is one of a set which also includes the following:

ISO/R 632, *Methods of Test for Determining whether an Electrode is a Deep Penetration Electrode.*

ISO/R 635, *Code of Symbols for Covered Electrodes for Arc Welding of Mild Steels and Low Alloy High Tensile Steels.*

ISO/R . . . , **Special Method of Mechanical Testing to Determine the Coding for Deep Penetration Electrodes.*

1. SCOPE

This ISO Recommendation describes methods for determining the mechanical properties of the weld metal deposited by electrodes 3.15 mm or more in diameter. **

These methods are not valid for electrodes covered by the symbol *P*.

2. TEST ASSEMBLY

2.1 Parent metal

The parent metal, including the backing strip, should be in non-alloyed sound quality steel without important segregations, in accordance with the following specification:

Carbon	0.2 % max.
Manganese	0.7 % max.
Sulphur	0.05% max.
Phosphorus	0.05% max.

2.2 Dimensions ***

2.2.1 Figure 1, page 9, shows the dimensions of the cross-section of the test assembly in relation to the diameter of the electrodes.

The plates which constitute the test assembly have a minimum length of

$$L = 200 \text{ mm} + 2 l$$

where *l* represents the length of the gripped end of the tensile test piece.

As a guide, the value of *l* is 35 mm.

The width of the test assembly has a value of

$$2 B + a$$

* At present Draft ISO Recommendation No. 1040.

** Proposed testing methods for other electrodes will be submitted later.

*** All measurements given in this ISO Recommendation are expressed in millimetres.