UDC 621.852

Ref. No : ISO/R 283 - 1962 (E)

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962

ISO RECOMMENDATION

R 283

FULL THICKNESS TENSILE STRENGTH AND ELONGATION OF CONVEYOR BELTS

SPECIFICATIONS AND METHOD OF TEST

1st EDITION
November 1962

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.

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962

BRIEF HISTORY

The ISO Recommendation R 283, *Full Thickness Tensile Strength and Elongation of Conveyor Belts – Specifications and Method of Test,* was drawn up by Technical Committee ISO/TC 41, *Pulleys and Belts (including Vee-Belts),* the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1956 and led, in 1959, to the adoption of a Draft ISO Recommendation.

In March 1961, this Draft ISO Recommendation (N° 442) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Australia	France	Spain
Austria	Germany	Sweden
Belgium	Greece	Turkey
Brazil	Iran	United Kingdom
Chile	Israel	U.S.A.
Colombia	Mexico	U.S.S.R.
Czechoslovakia	New Zealand	Yugoslavia
Denmark	Portugal	

One Member Body opposed the approval of the Draft: Italy

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in November 1962, to accept it as an ISO RECOMMENDATION.

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962

ISO Recommendation R 283 November 1962

FULL THICKNESS TENSILE STRENGTH AND ELONGATION OF CONVEYOR BELTS

SPECIFICATIONS AND METHOD OF TEST

1. SCOPE

The purpose of this ISO Recommendation is to lay down the conditions for full thickness tensile strength testing of conveyor belts, and also the corresponding specifications (breaking strength and elongation, elongation under reference load).

It applies to both "surface" and "underground" belts.

2. SPECIFICATIONS

2.1 Breaking strength

The *minimum* values of full width breaking strength in the longitudinal (warp) and the transverse (weft) directions are given in the table below in force units and referred to the unit of the width of the test piece.

Longitudinal direction *		Transverse direction	
Minimum values		Minimum values	
kgf/cm	lbf/in	kgf/cm	lbf/in
160	895	63	350
200	1120	80	450
250	1400	100	560
315	1760	125	700
400	2240	160	895
500	2800	free	
630	3525	,,	
800	4480	,,	

* The value of the breaking strength of a belt in the longitudinal direction is included in the standard designation for that belt.

NOTES

1. The metric values shown in the table above belong to the R 10 series of preferred numbers, in accordance with ISO Recommendation R 3, *Preferred Numbers — Series of Preferred Numbers.*
2. The table of metric values for *strength in the longitudinal direction* may be extended in both directions by using preferred numbers from the R 10 series downward or upward:

   125, 100 etc.
   1 000, 1 250 etc.

3. The table of metric values for *strength in the transverse direction* may be extended downward by using preferred numbers of the R 10 series in that direction:

   50, 40 etc.

   On the other hand, transverse strength remains open for belting of 800 kgf/cm (4480 lbf/in) and over (in the longitudinal direction).

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962

2.2 Elongations in the longitudinal direction*

The values shown below are given *unless otherwise specified* (this may occur in particular for single ply belts, metal belts and certain belts of very great length):

Elongation under reference load**	4 per cent maximum
(The tensile stress = 10 per cent of of the minimum specified strength and called "reference load").	
Breaking elongation	10 per cent minimum

3. METHOD OF TEST

3.1 Principle

A test piece cut from the full width of the belt is tensile tested until it breaks.

3.2 Apparatus

The apparatus consists of the following:

3.2.1 *Dynamometer.* The dynamometer load should be suitable for the strength of the test piece.

3.2.2 *Grips.* The form of the grips should ensure perfect fixing of the test piece and eliminate any possibility of slip during the tensile test. The use of grips with transverse serrations in accordance with Figure 1 is recommended. For very thick belts, the use of double compartment grips of the type shown in Figure 2 will be permitted.

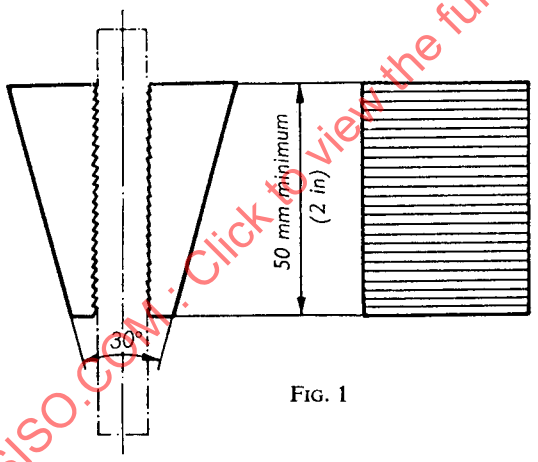

FIG. 1

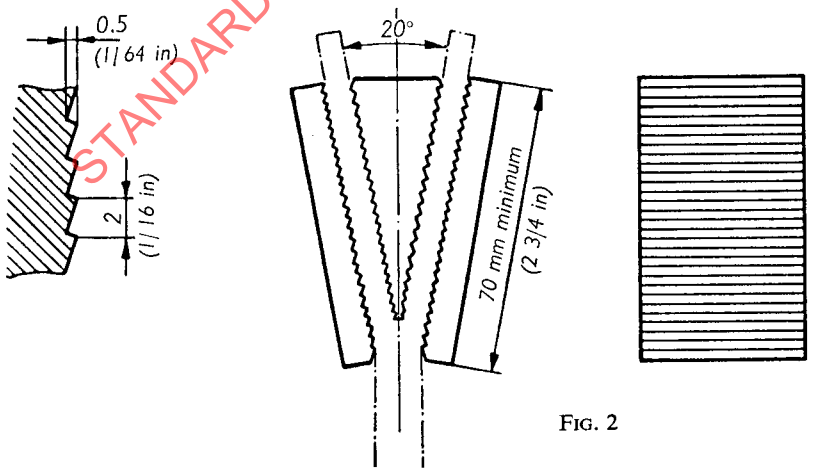

FIG. 2

* A specification for breaking elongation in the transverse direction will be studied later on.

** "Reference load" signifies the tensile stress equal to 10 per cent of the minimum strength specified in the table on page 3 (longitudinal direction).

STANDARDSISO.COM : Click to view the full PDF of ISO/R 283:1962