
**Metallic materials — Wire — Reverse
torsion test**

Matériaux métalliques — Fils — Essai de torsion alternée



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Foreword

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The committee responsible for this document is ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 2, *Ductility testing*.

This second edition cancels and replaces the first edition (ISO 9649:1990), which has been technically revised.

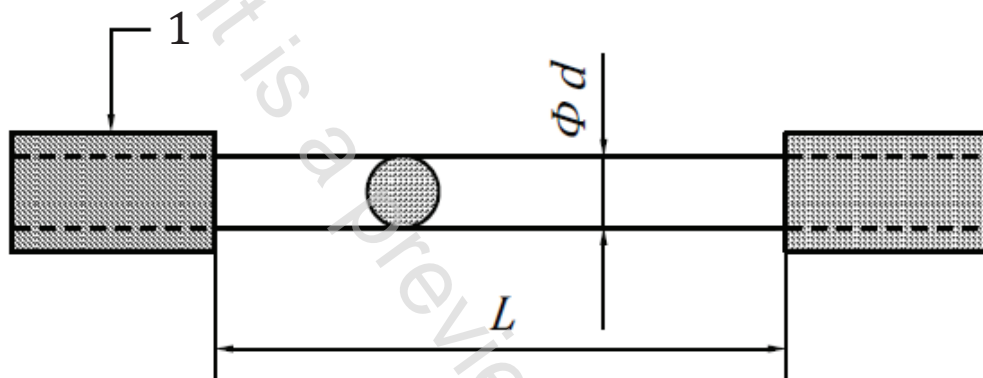
Metallic materials — Wire — Reverse torsion test

1 Scope

This International Standard specifies a method for determining the ability of metallic wire of diameter dimension from 0,3 mm to 10,0 mm inclusive to undergo plastic deformation during reverse torsion. This test is used to detect surface defects, as well as to assess ductility.

2 Symbols and designations

The symbols and designations used in the reverse torsion test of wires are shown in [Figure 1](#) and specified in [Table 1](#).



Key

1 grip

Figure 1 — Reverse torsion test of wires

Table 1 — Symbols and designations

Symbol	Designation	Unit
d	Diameter of a round wire	mm
L	Free length between grips	mm
N_1	Number of turns in one direction	—
N_2	Number of turns in the opposite direction	—

3 Principle

A test piece of wire is twisted a specified number of turns through 360° around its own axis in one direction, and then a specified number of turns through 360° in the opposite direction.