

Transformed

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 243

TURNING TOOLS WITH CARBIDE TIPS
METRIC SERIES

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BRIEF HISTORY

The ISO Recommendation R 243, *Turning Tools with Carbide Tips – Metric Series*, was drawn up by Technical Committee ISO/TC 29, *Small Tools*, 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 1959, this Draft ISO Recommendation (No. 309) 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:

Belgium	Hungary	Poland
Burma	India	Portugal
Czechoslovakia	Italy	Romania
France	Mexico	Sweden
Germany	Netherlands	United Kingdom
Greece	Pakistan	U.S.S.R.

Three Member Bodies opposed the approval of the Draft:
Austria, Switzerland, U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in December 1961, to accept it as an ISO RECOMMENDATION.

TURNING TOOLS WITH CARBIDE TIPS

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INTRODUCTION

I. SCOPE

This ISO Recommendation relates to turning tools with carbide tips. For the present, it comprises two parts:

1. General
 - 1.1 Definition of right-hand tool and left-hand tool *
 - 1.2 Tool lengths
2. External tools.

Internal tools and various other matters, such as marking for example, may be the subjects of future ISO Recommendations.

As far as tool lengths and dimensions of external tools are concerned, this ISO Recommendation is valid for application in metric measure only; corresponding standardization in the inch system of measurement is to be the subject of future study.

The general definitions are applicable, however, whichever system of units of measurement is employed.

The shank sections and tips are selected from those contained in the relevant ISO Recommendations.**

II. SHANK SECTIONS

For the particular case of turning tools with carbide tips, only two types of sections are selected from among the various types provided for in the ISO Recommendation mentioned above:**

- (a) the square section $h = b$,
- (b) the rectangular section with a ratio of $\frac{h}{b} = 1.6$ approximately.

The choice between these two sections for any given tool is in accordance with the table for external tools. This choice is based on present-day techniques, but may be subject to revision in the future on the basis of studies to be undertaken by various countries with a view to establishing which type of section is best adapted to its purpose from a technical point of view.

* Although this definition is purely conventional in character, this ISO Recommendation should be regarded as applicable on this point in countries using the inch system of measurement, as well as in countries using the metric system of measurement, in order to avoid all risk of confusion.

** ISO Recommendation R 241 – *Shanks for turning and planing tools. Sections and tolerances*, and ISO Recommendation R 242 – *Carbide tips for turning tools. Metric series*.