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Australian Standard®

MICROMETER HEADS—METRIC SERIES

[Title allocated by Defence Cataloguing Authority:
HEAD, MICROMETER NSC 5210]

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
MICROMETER HEADS—METRIC SERIES

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard specifies micrometer heads having measuring ranges of 13 mm or 25 mm respectively, and applies to micrometer heads with either rotatable or non-rotatable spindles.

NOTE: Whilst specific reference is not made to digital-readout micrometer heads such micrometer heads should meet the accuracy and performance requirements given in Clause 2.2 and Table 2.2.

1.2 CLASSIFICATION. Micrometer heads are classified into types in accordance with Table 1.1.

TABLE 1.1
TYPES OF MICROMETER HEADS

Type	Thimble diameter
1	Up to and including 25 mm
2	Over 25 mm and up to and including 60 mm
3	Over 60 mm

1.3 NOMENCLATURE. The terms relating to the important features of micrometer heads are given in Fig. 2.1.

1.4 DEFINITIONS. For the purpose of the standard the following definition and the definitions given in AS 1514 apply.

Micrometer head—a measuring instrument normally wed as a component in a measuring system such as a bench micrometer.

NOTE: The micrometer heed basically comprises a spindle with an accurate integral ground screw thread with a mating thimble and barrel (see Fig. 2.1). The spindle may be either of the rotating or non-rotating type.

1.5 MATERIALS AND HARDNESS.

1.5.1 Materials. The barrel and thimble of Type 1 micrometer heads shall be manufactured from a suitable quality steel. The barrel and thimble of Types 2 and 3 micrometer heads may be made from either a suitable quality steel or a suitable light alloy.

The micrometer spindle shall be manufactured from a high grade tool steel.

1.5.2 Hardness. The micrometer spindle after heat treatment shall have a hardness of not less than 800 HV. The measuring face may be tipped with tungsten carbide or other suitable hard material.

1.6 FINISH. The micrometer heads shall be cleanly finished and all sharp edges removed.

NOTE: It is recommended that for ease of reading, the thimble and barrel should be finished by dull chromium plating or an equivalent matt finish.

1.7 REFERENCE TEMPERATURE. The reference temperature to which the accuracy of micrometer heads is referred is 20°C.

1.8 MARKING. Each micrometer head shall be permanently and legibly marked with the manufacturer's name or trademark. It is also recommended that the thimble be marked with the minimum scale value.

1.9 PROTECTION AGAINST DAMAGE AND CORROSION.

1.9.1 Protection Case. Each micrometer head shall be supplied in a case or box of substantial construction and of non-corrosive material. The case shall be designed to restrain lateral and vertical displacement of the micrometer head when the lid is securely closed.

1.9.2 Packaging. During transit the micrometer head shall be protected against the effect of adverse climatic conditions with a suitable corrosive inhibitor, e.g. vapour phase inhibitor (VPI) paper.