



SURFACE VEHICLE RECOMMENDED PRACTICE

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Numbering System for Taps

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1. **Scope**—This SAE Recommended Practice provides a systematic method for the identification of ground thread taps for inch sizes up to 9.999 in with a Maximum Thread-per-Inch of 99.9, and Metric sizes up to 99.9 mm with a Maximum pitch of 9.99 mm. It is intended to assist in the cataloging and supplying of these tools. It is not intended for ACME, Buttress, or similar type thread forms.

NOTE 1—Caution must be taken when assigning codes to prevent specifying taps that cannot be physically or economically manufactured.

NOTE 2—The Code Number coming from the manufacturer **MUST** reflect the actual tool construction.

NOTE 3—In particular without limitation, SAE disclaims all responsibility for the accuracy or completeness of information contained within this report if the standards of this report are retrieved, combined, or used in connection with any software.

2. **References**

- 2.1 **Applicable Publications**—The following publications (latest revision) form a part of the specification to the extent specified herein.

NOTE—Reference information not specified to be manufacturer's standard practices. Manufacturer to supply additional technical information upon request.

- 2.1.1 ASME PUBLICATIONS—Available from American Society of Mechanical Engineers Order Department, 22 Law Drive, Box 2300, Fairfield, New Jersey 07007-2300. (The publications are also available through American National Standards Institute.)

ASME B94.9—Taps—Cut and Ground Threads

- 2.2 **Related Publications**—The following publications are provided for information purposes only and are not a required part of this document.

- 2.2.1 NUMBERING SYSTEMS SOFTWARE—Software products may exist to assist in the use of the standard. The following software product(s) are listed for information purposes only and do not constitute part of this document. **SAE expressly disclaims any responsibility for the operation of any Software used in connection with your use of this report.**

- 2.2.1.1 *Datom Engineering Software, Inc., Publication*—Available from Datom Engineering Software, Inc., 561 Somerset, Suite 3, Crystal Lake, IL 60014, (815) 477-3380.

Datom Engineering Software, Inc., TMS III-Drills-Electronic Reference Manual Nomenclature, Definitions, Sizes, and Tolerances of Twist Drills

- 2.2.2 ISO PUBLICATIONS—Available from International Organization for Standardization, 1 Rue DeVarembe, Case Postal 56, CH1211 Geneva 20 Switzerland. (The publications are also available through American National Standards Institute.)

ISO 529—Short machine taps and hand taps—Second Edition

ISO 2283—Long shank machine taps with nominal diameters from 3 to 24 mm and 1/8 to 1 in—First Edition (Amendment 1-1977) (Erratum—Aug. 1976)

ISO 2284—Hand taps for parallel and taper pipe threads—General dimensions and marking—Third Edition

ISO 2857—Ground thread taps for ISO metric threads of tolerances 4H to 8H and 4G to 6G Course and fine pitches—Manufacturing tolerances on the threaded portion—First Edition—(Amendment 1-1984) (Amendment 2-1986) (Corrigendum 1-1990)

ISO 5967—Taps and thread cutting—Nomenclature of the main types and terminology—First Edition

ISO 5969—Ground thread taps for pipe threads G series and Rp series—Tolerances on the threaded portion—First Edition—(Corrigendum 1-1991)

ISO 8051—Long shank taps with nominal diameters from M3 to M10—Taps with reinforced shank and recess—First Edition

ISO 8830—High speed steel machine taps with ground threads—Technical specifications—First Edition

- 2.2.3 JIS PUBLICATIONS—Available from Japanese Industrial Standards Committee, c/o Standards Department, Agency of Industrial Science and Technology, Ministry of International Trade and Industry, 1-3-1, Kasumigaseki, Chiyoda-ku, Tokyo 100, Japan. (The publications are also available through American National Standards Institute.)

JIS B4430—Short Machine Taps and Hand Taps for Metric Threads Errata—1994

JIS B4432—Hand Taps for Unified Coarse Thread

JIS B4433—Nut Taps

JIS B4438—Hand Taps for Unified Fine Thread

JIS B4439—Hand Taps for Sewing Machine Thread

JIS B4445—Hand Taps for Pipe Threads for Parallel Threads

JIS B4446—Hand Taps for Pipe Threads for Taper Threads

- 2.2.4 USCTI PUBLICATIONS—Available from United States Cutting Tool Institute, 1300 Summer Avenue, Cleveland, OH 44115.

Handbook of Standard Taps

3. **Numbering System**

- 3.1 **Formats**—The basic numbering system is subdivided into two formats for taps:

- 3.1.1 **FORMAT—21 POSITION**—Taps with overall lengths which comply with the referenced Standards.

- 3.1.2 **FORMAT—26 POSITION**—For Extension, Pulley, and Other Taps with overall lengths which do not comply with the referenced Standards.

3.2 Content of Numbering System—The numbering system utilizes 21 and 26 positions to fully describe the various dimensions, types, materials, and characteristics of taps.

Figure 1 illustrates the content and sequence of the 21 positions in the numbering system for taps whose overall lengths comply with the referenced Standards.

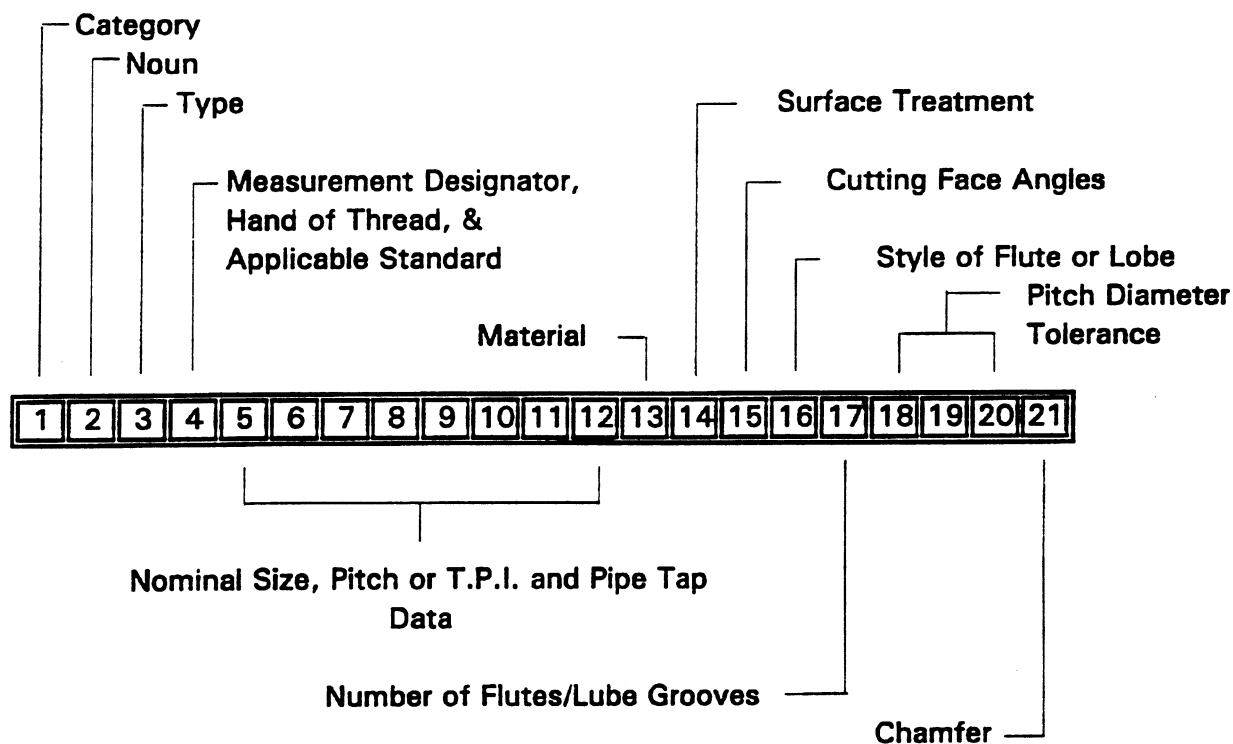


FIGURE 1—21 POSITION FORMAT

Figure 2 illustrates the content and sequence of the 26 positions in the numbering system for extension taps, pulley taps, and taps whose overall lengths do not comply with the referenced Standards.

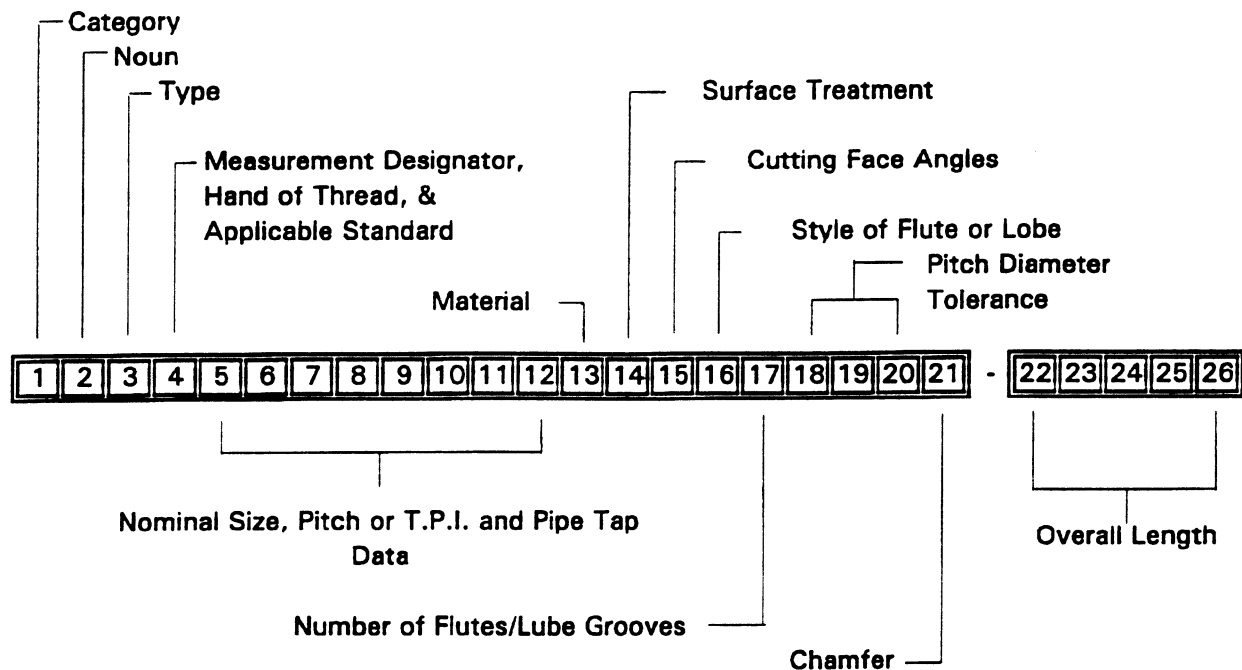


FIGURE 2—26 POSITION FORMAT

3.3 Positions—The content of each position is explained in detail in the following sections:

3.3.1 POSITIONS 1 AND 2, CATEGORY AND NOUN—Positions 1 and 2 will always be alphabetical. The following designations have been assigned:

Position 1: T—designates TOOL

Position 2: T—designates TAP

3.3.2 POSITION 3, TYPE—Position 3 will be alpha or numeric based on the type of tap. The following codes have been assigned for taps without oil holes:

- 1 – Standard Straight Thread (Fractional, Machine Screw, or Metric)
- 2 – Taper Pipe
- 3 – Straight Pipe
- 4 – Pulley
- 5 – Nut
- 6 – Thread Forming
- 7 – Standard Straight Thread—Screw Thread Insert (S.T.I.)
- 8 – Extension
- 9 – Short Thread Length
- W – Taper Pipe—Small Shank (1/8 in nominal diameter)
- X – Straight Pipe—Small Shank (1/8 in nominal diameter)