Table 5 Continuous Thread and Double-End Stud Length Tolerances

Range, L_T	Double-End Studs	Clamping and Continuous-Thread Studs
From 3/4 through 2 1/2	±0.03	±0.04
Over 2 1/2 through 4	±0.05	±0.08
Over 4 through 8	±0.08	±0.10
Over 8 through 16	±0.10	±0.12
Over 16	±0.12	±0.18

Table 6 Flange Bolting Stud (Stud Bolt) Length Tolerances

Range, L	Flange Bolting Stud (Stud Bolt)
From 3/4 through 12	±0.062
Over 12 through 18	±0.125
Over 18	±0.250

thread on the other end. Dimensions for U are the same as those in Table 1. The length tolerances in Table 6 are applied to the L dimension.

Flange bolting studs (stud bolts) can be made as continuous thread (Table 1) or double-end (Table 2) with the only difference being that nominal length, L, applies to flange bolting studs and overall length, L_T, applies to all other stud types.

7.3 Length Increments

The overall length of continuous thread and double-end studs and the nominal length of flange bolting studs shall be in one-quarter inch increments for lengths through 10 in. For stud lengths greater than 10 in., lengths shall be in whole inches and one-half inch increments.

8 STUD ENDS

Stud ends shall be chamfered from the major diameter to a diameter equal to or less than the thread root diameter. The length of the chamfered end to the first full formed thread at major diameter, as determined by the distance the chamfered end enters into a cylindrical NOT GO major diameter ring gage, shall be one to two thread pitches on each end. The ends of the stud shall be reasonably square with the axis of the stud, but the slight rim or cup resulting from manufacturing shall be permissible. The ends shall be suitable for marking.

9 THREAD LENGTH

(a) For continuously threaded studs and flange bolting studs, the entire length of the stud shall be threaded except for the ends, as denoted by dimension, U, in Table 1.

(b) For double-end studs, full threads are required for the lengths B and B_M, except for the ends, as denoted by dimension, U, in Tables 2 and 3.

(c) The transition from full thread to incomplete thread shall be smooth and uniform. The major diameter for incomplete threads shall not exceed the actual diameter of the complete (full form) threads.

(d) For the nut ends of studs, the transition from full thread to no thread shall be within five thread pitches from the minimum full thread length, B.

10 SCREW THREADS

10.1 UNC, UNF, and 8UN Thread Series and Tolerance Class

Threads shall be unified inch coarse, fine, or 8-thread series Class 2A in accordance with ASME B1.1. Unless otherwise specified by the purchaser, coated and plated threads shall conform to the maximum limit of Class 3A (GO) and the minimum limit of Class 2A (NOT GO).

10.2 Class 5 Interference-Fit Threads (for Tap-End Studs)

In addition to the threads identified in para. 10.1, interference-fit threads may be ordered for the tap end of tap-end type studs. These threads shall be interference fit (Class 5) of the modified National thread form in the coarse thread series (NC) in sizes 0.250 in. through 1.500 in. in accordance with ASME B1.12.

NOTE: To achieve the desired performance from an NC-5 thread, the indication of the proper suffix indicating the size of the major diameter is critical. The designation of an NC-5 thread is not complete without the inclusion of the suffix. To select the appropriate suffix for a specific application, the user should consult Appendices B and C in ASME B1.12. Additional information on NC-5 thread applications is available in SAE J2271.

10.3 Thread Gaging

Unless otherwise specified, dimensional acceptability of screw threads shall be determined based on System 21 of ASME B1.3.

11 MATERIALS AND MECHANICAL PROPERTIES

11.1 Materials for Continuous Thread Studs, Double-End Studs, and Clamping Studs

Unless otherwise specified, steel studs shall conform to the requirements of ASTM A354, SAE J429, or ASTM A449, as identified by the purchaser.

Unless otherwise specified, studs of corrosion resistant stainless steels shall conform to the requirements of a specified group and condition designated in ASTM F593.