

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 7476

Issued 6-15-50

Revised

BOLTS AND SCREWS, STEEL, CORROSION AND HEAT RESISTANT Roll Threaded

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** High quality bolts and screws made from AMS 5721 steel for use up to 1150 F.
3. **FABRICATION:** Heads shall be formed by machining and not by upsetting. Threads shall be formed by rolling.
4. **TECHNICAL REQUIREMENTS:**
 - 4.1 **Threads:**
 - 4.1.1 Threads shall be produced by a single rolling. Flow lines at threads shall be continuous, shall follow the general thread contour, and shall be of maximum density at root of thread (see Figure 1).
 - 4.1.2 Threads shall have no multiple or single laps at the root or on the sides (see Figures 2,3, and 4), except that slight laps are permissible at the crest, on the non-pressure side inside the pitch diameter, and on the sides outside the pitch diameter (see Figures 5,6, and 7). Slight deviation from the thread contour is permissible at the crest of the thread as shown in Figure 8; the incomplete thread at each end may also deviate slightly from contour.
 - 4.1.3 Parts having holes for locking devices are permitted to have slight ovalization of the hole and the countersink and slight flattening of the crest of the thread at the countersink, provided the diameter of the hole is within specified tolerances.
 - 4.2 **Stress Relief:** Parts, after thread rolling, shall be heated at 1225 F \pm 10 for 3 hours and air cooled.
 - 4.3 **Hardness:** Hardness shall be uniform and as specified on the drawing but hardness of the threaded portion may be higher as a result of the thread rolling.
 - 4.4 **Cleaning:** Parts, after finishing, shall be degreased and then immersed for not less than 20 minutes in a solution of 1 volume of nitric acid (sp. gr. 1.42) and 9 volumes of water at room temperature.
5. **QUALITY:** Parts shall be uniform in quality and condition, clean, sound, smooth and free from burrs and foreign materials and from internal and external defects detrimental to their performance.
6. **REJECTIONS:** Parts not conforming to this specification or to authorized modifications will be subject to rejection.

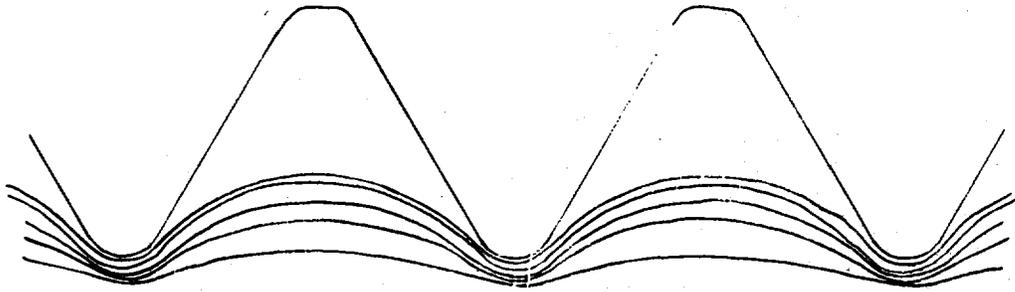


FIGURE 1
FLOW LINES
ROLLED THREAD

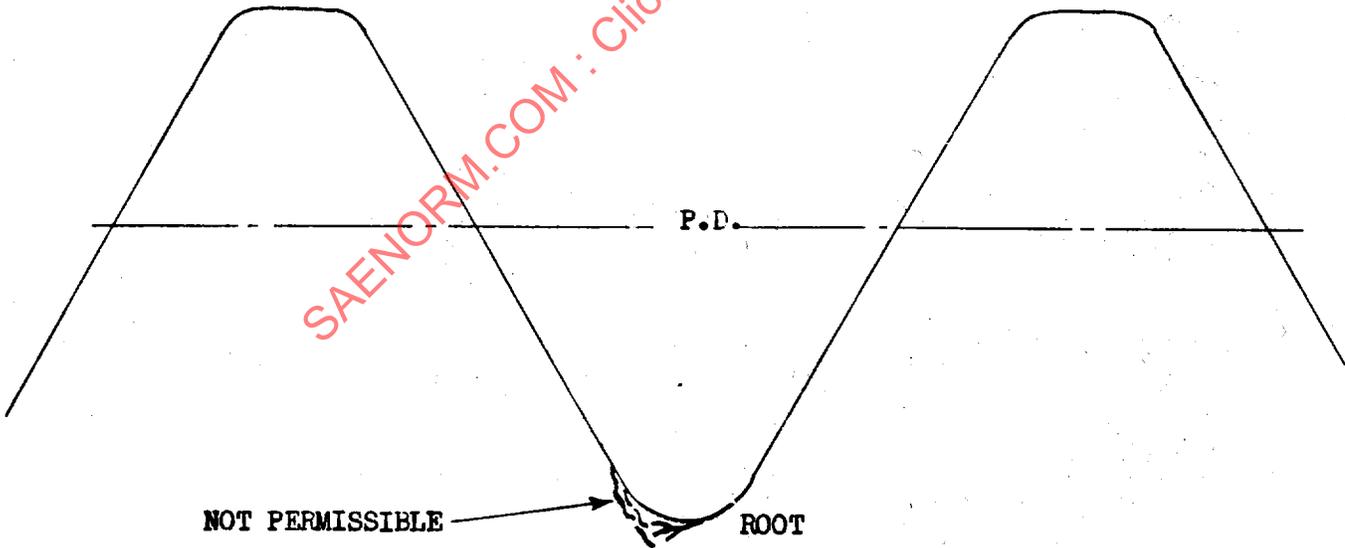


FIGURE 2
ROLLED THREAD

SAENORM.COM : Click to view the full PDF of ams7476

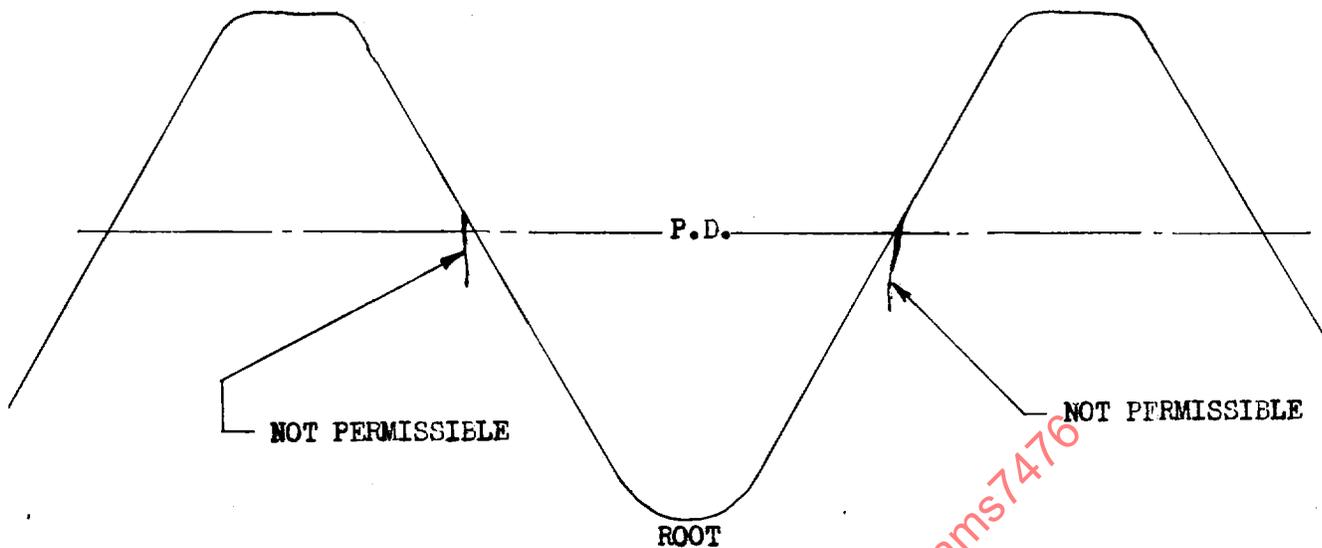


FIGURE 3
ROLLED THREAD

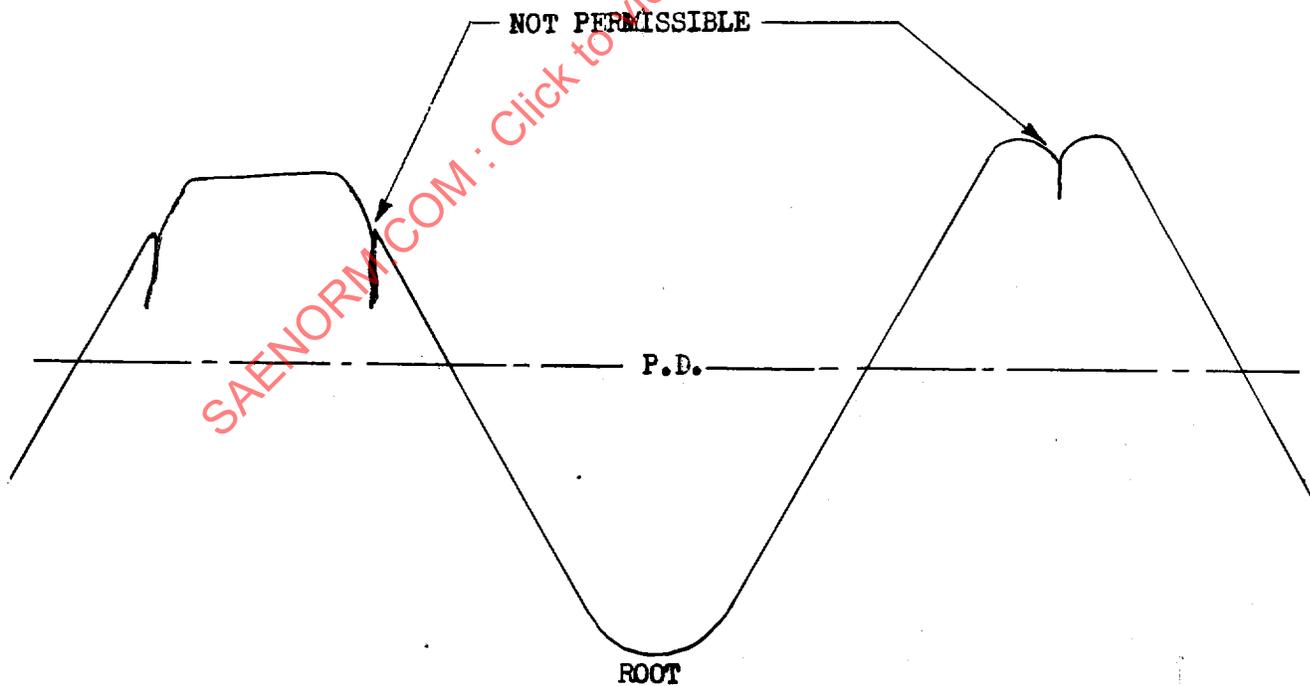


FIGURE 4
ROLLED THREAD