

# Existing

**Table 1.4.1a**  
**Historical AISC Allowable Stresses (ksi) for**  
**Unfinished Carbon Steel Bolts or A307 Bolts - ASD**

| AISC Spec. Year | Tension        | Shear | Bearing                |
|-----------------|----------------|-------|------------------------|
| 1936            | Not specified. | 10*   | 20.0/25.0 <sup>†</sup> |
| 1941            | 12             | 10*   | 20.0/25.0 <sup>†</sup> |
| 1946            | 20             | 10*   | 20.0/25.0 <sup>†</sup> |
| 1949            | 20**           | 10*   | 20.0/25.0 <sup>†</sup> |
| 1963            | 14*            | 10*   | 1.35 $F_y$             |
| 1969            | 20***          | 10*   | 1.35 $F_y$             |
| 1978            | 20*            | 10*   | 1.50 $F_u$             |
| 1989            | 20*            | 10*   | 1.20 $F_u$             |

\* Stress on nominal body area.  
 \*\* Stress on nominal area at root of thread. Values are tabulated in AISC Manual, Fifth Ed., and as "section at minor diameter" in current ANSI B1.1.  
 \*\*\* Stress on defined tensile stress area (in.<sup>2</sup>),  $A_s = 0.7854[D - (0.9743/n)]^2$ , where  $D$  (in.) is nominal diameter and  $n$  is number of threads per in.  
<sup>†</sup> Lower value for single shear, larger value for double shear.

# Proposed

**Table 1.4.1a**  
**Historical AISC Allowable Stresses (ksi) for**  
**Unfinished Carbon Steel Bolts or A307 Bolts - ASD**

| AISC Spec. Year | Tension        | Shear | Bearing                |
|-----------------|----------------|-------|------------------------|
| 1936            | Not specified. | 10*   | 20.0/25.0 <sup>†</sup> |
| 1941            | 12             | 10*   | 20.0/25.0 <sup>†</sup> |
| 1942            | 13             | 12*   | 20.0/25.0 <sup>†</sup> |
| 1946            | 20             | 10*   | 20.0/25.0 <sup>†</sup> |
| 1949            | 20**           | 10*   | 20.0/25.0 <sup>†</sup> |
| 1963            | 14*            | 10*   | 1.35 $F_y$             |
| 1969            | 20***          | 10*   | 1.35 $F_y$             |
| 1978            | 20*            | 10*   | 1.50 $F_u$             |
| 1989            | 20*            | 10*   | 1.20 $F_u$             |

\* Stress on nominal body area.  
 \*\* Stress on nominal area at root of thread. Values are tabulated in AISC Manual, Fifth Ed., and as "section at minor diameter" in current ANSI B1.1.  
 \*\*\* Stress on defined tensile stress area (in.<sup>2</sup>),  $A_s = 0.7854[D - (0.9743/n)]^2$ , where  $D$  (in.) is nominal diameter and  $n$  is number of threads per in.  
<sup>†</sup> Lower value for single shear, larger value for double shear.

AISC Design Guide 15, Rev Dec. 2009

(SlideRuleEra)

Attach 3 of 4