

Existing

Table 1.5a
Historical AISC Allowable Stresses (ksi) for Welds - ASD

| Year | Source | Steels and Welding Materials | Fillet Weld Shear | Tension | Compression |
|------------|-------------|--|----------------------|----------------------------|----------------------------|
| 1934 | AISC Manual | A7/A9 steel | 11.3 | 13 | 15 |
| 1939 | AISC Manual | A7/A9 steel | 11.3 | 13 | 18 |
| 1946 | AISC Spec. | A7/A9 steel: 60xx electrodes. | 13.6 | 20 | 20 |
| 1961, 1963 | AISC Spec. | All steels: 60xx electrodes or subarc Grade SAW-1. A7 and A373 steels: 70xx or subarc Grade SAW-2. A36, A242, and A441 steels: 70xx or subarc Grade SAW-2. | 13.6 13.6 15.8 | Same as member, all cases. | Same as member, all cases. |
| 1969 | AISC Spec. | All steels and weld processes.** | $0.30F_{uw}$ | " | " |
| 1989 | AISC Spec. | No significant changes. | $0.30F_{uw}$ | " | " |

* 13.0 for shear in butt welds.
** Electrodes and matching base metals are defined. Allowable shear stress is 0.30 times nominal tensile strength of weld metal, $0.30F_{uw}$. Supplement 3, 1974, permitted weld metal with a strength level equal to or less than matching base metal, except for tension members.

Proposed

Table 1.5a
Historical AISC Allowable Stresses (ksi) for Welds - ASD

| Year | Source | Steels and Welding Materials | Fillet Weld Shear | Tension | Compression |
|------------|-------------|--|----------------------|----------------------------|----------------------------|
| 1934 | AISC Manual | A7/A9 steel | 11.3 | 13 | 15 |
| 1939 | AISC Manual | A7/A9 steel | 11.3 | 13 | 18 |
| 1942 | AISC Spec. | A7/A9 steel | 15.0 | 20 | 24 |
| 1946 | AISC Spec. | A7/A9 steel: 60xx electrodes. | 13.6 | 20 | 20 |
| 1961, 1963 | AISC Spec. | All steels: 60xx electrodes or subarc Grade SAW-1. A7 and A373 steels: 70xx or subarc Grade SAW-2. A36, A242, and A441 steels: 70xx or subarc Grade SAW-2. | 13.6 13.6 15.8 | Same as member, all cases. | Same as member, all cases. |
| 1969 | AISC Spec. | All steels and weld processes.** | $0.30F_{uw}$ | " | " |
| 1989 | AISC Spec. | No significant changes. | $0.30F_{uw}$ | " | " |

* 13.0 for shear in butt welds.
** Electrodes and matching base metals are defined. Allowable shear stress is 0.30 times nominal tensile strength of weld metal, $0.30F_{uw}$. Supplement 3, 1974, permitted weld metal with a strength level equal to or less than matching base metal, except for tension members.

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