

**WELD REINFORCEMENT TABLE**  
**DOE Nuclear Applications**

**Vessels, Pumps, and Valves**

Thickness of Base Material	Maximum Reinforcement, in.
Up to 1 in.	$\frac{3}{32}$
Over 1 in. to 2 in.	$\frac{1}{8}$
Over 2 in. to 3 in.	$\frac{5}{32}$
Over 3 in. to 4 in.	$\frac{7}{32}$
Over 4 in. to 5 in.	$\frac{1}{4}$
Over 5 in.	$\frac{5}{16}$

**Piping**

Thickness of Base Material	Maximum Reinforcement, in.	
	Column 1	Column 2
Up to $\frac{1}{8}$ in.	$\frac{3}{32}$	$\frac{3}{32}$
Over $\frac{1}{8}$ in. to $\frac{3}{16}$ in.	$\frac{1}{8}$	$\frac{3}{32}$
Over $\frac{3}{16}$ in. to $\frac{1}{2}$ in.	$\frac{5}{32}$	$\frac{1}{8}$
Over $\frac{1}{2}$ in. to 1 in.	$\frac{3}{16}$	$\frac{5}{32}$
Over 1 in. to 2 in.	$\frac{1}{4}$	$\frac{5}{32}$
Over 2 in.	The larger of $\frac{1}{8}$ x the width of the weld or $\frac{1}{4}$ in.	$\frac{5}{32}$

For double-welded butt joints, the limitations on the reinforcement given in Column 1 of the above table shall apply separately to both inside and outside surfaces of the joint. For single-welded butt joints, the reinforcement given in Column 2 shall apply to the inside surface and the reinforcement given in Column 1 shall apply to the outer surface. The reinforcement shall be determined from the higher of the abutting surfaces involved.

**Structural Supports**

Thickness of Base Material	Maximum Reinforcement, in.
Up to 1 in.	$\frac{3}{32}$
Over 1 in. to 2 in.	$\frac{1}{8}$
Over 2 in. to 3 in.	$\frac{5}{32}$
Over 3 in. to 4 in.	$\frac{7}{32}$
Over 4 in. to 5 in.	$\frac{1}{4}$
Over 5 in.	$\frac{5}{16}$

**ALIGNMENT TOLERANCE TABLE**  
**DOE Nuclear Applications**

**Piping and Components**

<b>Thickness of Base Material</b>	<b>Longitudinal Butt Weld</b>	<b>Circumferential Butt Weld</b>
Up to 1/2 in.	1/4 thickness	1/4 thickness
Over 1/2 in. to 3/4 in.	1/8 in.	1/4 thickness
Over 3/4 in. to 1 1/2 in.	1/8 in.	3/16 in.
Over 1 1/2 in. to 2 in.	1/8 in.	1/8 thickness
Over 2 in.	Lesser of 1/16 thickness or 3/8 in.	Lesser of 1/8 thickness or 3/4 in.

**Structural Supports**

<b>Thickness of Base Material</b>	<b>Maximum Offset</b>
Up to 3/4 in.	1/4 thickness
Over 3/4 in. to 1 1/2 in.	3/16 in.
Over 1 1/2 in. to 2 in.	1/8 thickness
Over 2 in.	Lesser of 1/8 thickness or 3/4 in.

Note: The thickness of the base material is the nominal thickness of the thinner section at the weld joint.