

# MECHANICAL REQUIREMENTS (AWS D1.1) – MM SIZE

## Mechanical Property Requirements for Studs

		Type A <sup>a</sup>	Type B <sup>b</sup>
<b>Tensile strength</b>	psi min.	61 000	65 000
	Mpa min.	420	450
<b>Yield strength (0.2% offset)</b>	psi min.	49 000	51 000
	Mpa min.	340	350
<b>(0.5% offset)</b>	psi min.	-	-
	Mpa min.	-	-
<b>Elongation</b>	% in 2 in min.	17%	20%
	% in 5x dia. min.	14%	15%
<b>Reduction of area</b>	% min.	50%	50%

<sup>a</sup> Type A studs shall be general purpose of any type and size used for purposes other than shear transfer in composite beam design and construction.

<sup>b</sup> Type B studs shall be studs that are headed, bent, or of other configuration in 3/8 in [10mm], 1/2 in [12mm], 5/8 in [16mm], 3/4 in [20mm], 7/8 in [22mm], and 1 in [25mm] diameter that are used as an essential component in composite beam design and concrete anchorage design.