

SPECIFICATION OF DECON® Studrails®

The **shear studs** used in the fabrication of DECON® Studrails® are Low Carbon Steel, C1015 to C1018 in accordance with ASTM-A108. The strength and ductility requirements are:

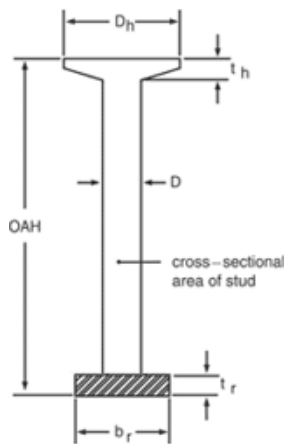
Yield Strength:	51,000 psi (350 MPa) minimum
Tensile Strength:	65,000 psi (450 MPa) minimum
Elongation in 2 in.:	20% minimum
Reduction of Area:	50% minimum

The **rails** used in DECON® Studrails® are Low Carbon Steel Type 44W with the following strength and ductility requirements:

Yield Strength:	44,000 psi (300 MPa) minimum
Tensile Strength:	65,000 psi (450 MPa) minimum
Elongation in 8 in.:	20% minimum

The studs are welded in accordance with **American Welding Society (AWS) D1.1** and **CSA Standard W59** as certified by the Canadian Welding Bureau.

The overall height of the stud is dependent on the slab thickness and the required concrete cover. The table and drawing below show the size of studs that are available:



D in (mm)	x-sect. area in ² (mm ²)	D _h in (mm)	t _h in (mm)	b _r in (mm)	t _r in (mm)	min. OAH in (mm)
3/8 (9.5)	0.110 (71)	1.19 (30.1)	0.21 (5.3)	1 (25.4)	3/16 (4.8)	3-1/2 (90)
1/2 (12.7)	0.196 (127)	1.58 (40.2)	0.28 (7.1)	1-1/4 (31.8)	1/4 (6.5)	3-1/2 (90)
5/8 (15.9)	0.307 (199)	1.98 (50.2)	0.35 (8.9)	1-3/4 (44.5)	5/16 (7.9)	4 (100)
3/4 (19.1)	0.442 (287)	2.37 (60.2)	0.42 (10.7)	2 (50.8)	3/8 (9.5)	4-1/2 (115)

DECON® Studrails® should be specified in the project documents under “Section 3200 – Concrete Reinforcement” The engineer should use wording similar to the following:

“Shear Reinforcement at the slab column connection as shown on the drawings and details, shall be Studrails® as manufactured by DECON. The complete and finished DECON® Studrail® shall be ICC ES evaluated and welding has to take place in an ICC ES approved and audited facility. Studrails® shall conform to the latest update of ASTM A1044.”

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