



DESIGN RESPONSIBILITY FOR STUD SHEAR CONNECTORS

None of the member companies of the Steel Deck Institute (SDI) manufacture or furnish shear studs. As manufacturers of steel deck, the SDI members are not in a position to properly design the shear connectors to meet the building designer's intent. Consequently, the *SDI Code of Recommended Standard Practice* states: "The layout, design, numbering or sizing of shear connectors is not the responsibility of the deck manufacturer."

It is the Engineer of Record's responsibility to determine the quantity of shear connectors required for each compositely designed beam and show that quantity on the project drawings. The determination of shear connector quantities for purlin beams must take into account the profile of the steel deck. Shear connector quantities for girder beams must also consider the steel deck profile unless contract documents specify otherwise. The steel deck rib height, average opening width, and the stud length and placement are the key factors to determine whether a reduction factor must be applied to the shear connector strength. The *AISC Specification for Structural Steel Buildings* provides the design method to determine any reduction factors to be considered when using shear connectors in conjunction with steel deck. Table A is a summary of the "minimum" average rib width and width/height ratios of all SDI members. This average width value can be safely used in the AISC shear connector strength reduction formulas.

The deck detailers for member companies of the SDI will assume the shear connector strength reduction factors have already been incorporated into the design when detailing composite deck projects. Since the steel deck manufacturer doesn't furnish the shear connectors, they normally are not shown on the deck erection drawings. If a deck detailer does prepare a separate stud installation drawing, the detailer shall indicate the number of studs shown on the contract documents. The deck detailer shall not make adjustments without revised contract drawings.

Compliance with this document will ensure the correct number of shear connectors will be specified to meet the requirements of the building design.

COMPOSITE DECK PROFILE	w_r	w_r / h_r
1.5" x 6"	2.125"	1.417
1.5" x 12"	6"	4.000
2" x 12"	6"	3.000
3" x 12"	6"	2.000
Inverted 1.5" x 6"	3.875"	2.583
2" Keystone	4.60"	2.300

TABLE A