ATTACHMENT OF CLAY OR CONCRETE “S” ROOF TILE

IR 15-1

References:
California Code of Regulations (CCR), Title 24, Part 2: California Building Code (CBC)
2001 CBC, Section 1507.7, Tables 15-D-1.1, and 15-D-2.1
2007/2010 CBC, Section 1507.3, Table 1507.3.7

Discipline: Structural

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA which includes State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at http://www.dgs.ca.gov/dsa/Resources/IRManual.aspx at the time of plan submittal to DSA are considered applicable.

**Purpose:** The purpose of this Interpretation of Regulations (IR) is to provide guidelines for the installation of “S” roof tiles.

**Note:** This IR is not applicable to roof tiles with an interlocking channel, and it is limited to maximum basic wind speed of 85mph, and maximum mean roof height of 60 feet.

**General:** Clay or concrete “S” roof tile attachments are acceptable as shown on Figure 1. For additional requirements, refer to 2001 CBC Section 1507.7A and Tables 15-D-1.1 and Tables 15-D-2.1. For projects submitted to DSA for review under the 2007 or 2010 CBC, refer to Section 1507.3 and Table 1507.3.7.

Alternatively, clay or concrete “S” roof tile attachments meeting the requirements of IR 15-2 are acceptable.

**Inspection:** The project inspector is to provide continuous inspection of the attachment of the roof tile. If the details do not conform to the approved drawings, application of the roof tile is not to be started until the attachment details have been reviewed and approved by the Division of the State Architect (DSA) field engineer (e.g. contractor substitution).

Attachment (next page)

Figure 1
Fig. 1A

- 1 fastener to wood strip
- "S" roof tile
- Height as required to fully support cover portion of tile
- Continuous sound soft grain wood strip attached to roof sheathing with fastener (8d min.) at 12" o.c. (Staggered toe-nails each side when height of strip is greater than 1'4"
- 1¼" net

Fig. 1B

- Tile tie wire to continuous tie or wire fastener roof sheathing
- All tile installations on roof slope 7:12 and greater require tile lock device at bottom of each tile to prevent uplift
- "S" roof tile

Fig. 1C

- Twist continuous tie wire loop as required at tile tie wires to prevent rotation of tile
- Equal angle at each tile tie wire
- Continuous tie
- "S" roof tile