TILE ROOFING INSTITUTE

Section 1: Using the TRI Installation Manual

Words Pages Include Specifications:

Material Check list & Tile Classifications – page 3
Tile Specifications & Recommendations – page 5
Battens & Counter Battens, Nailing & Fastening – pages 5-6
Walking on tile (& other info) – page 7
Summary for New Construction – page 8; Re-roofing – page 9

Tables Summarize Requirements:

Table 1B –Installation when using tile with lugs and slope ≥ 4:12 – page 11
Table 1A – Installation for low slope (< 4:12) or tile with no lugs – page 10
Table A – Reference table for flashing drawings – page 4
Table 3 – Guidelines for battens & counterbattens – page 13

Drawings include diagrams, footnotes and steps for installation

Slope determines underlayment requirements:

- Slopes 4:12 and greater – Minimum one layer ASTM D226 Type II (No.30 Felt)(ASTM D4869 Type IV) head lapped 2 inches and end lapped 6 inches, or approved equal per UBC.
- Slopes 3:12 to <4:12 - two (2) layers of felt are required per IBC and IRC
- Slopes less than 3:12 - Built-up membrane, multiple plies, three plies minimum, applied per building code requirements or code approved alternate. Tile installed at less than 3:12 shall be considered decorative.

Flashing Options

- Valley: Standard Tile Valley, 3 Ribbed, 5 Ribbed, **Multi Ribbed** – page 38
- Rake Wall (Channel, "J" Flashing, Ribbed Pan), **Pan**– page 38
- Penetration Flashing- vents, Primary/Secondary, **Deck/Tile** – page 18

Section 2: PetersenDean Upgrades over Minimum Standards

	Minimum Standard	PetersenDean
Underlayment	1 ply #30 ASTM D226	2 Plies #30 ASTM D226
Fasteners/Battens	Tile fastened direct to deck	1"X2"X 4' (Maximum) battens
Weather blocking (Hip, ridge and Headwalls)	Mortar, Mastic, plastic, Pressure sensitive rolls, foam, other approved materials	Flash Band Tape, So-Lite & Flash Band Tape

Section 3: Why Do We Do the Following…

1. Use 2 plies of #30 ASTM D226 when 1 ply is required? - pages16 & 17
   - Double the material
   - UV protection during install
   - Fasten high, blind fastening, no exposed fasteners
   - Battens secure underlayment.
   - Fewer penetrations.
   - Installing pipes, vents, stanchions, the "bib" is already there to integrate into underlayment system.
2. Use 2 flashings at every penetration (vent/pipe)? - pages 18 & 63
3. Require Lead or Soft Aluminum flashings on Medium & High Profile tiles? - page 18
4. Use battens if they are not required below 7/12? - page 13
   - Once attached to deck battens become part of deck.
   - Maximum 4' in length, with ½" gap for drainage.
   - Provides attachment option, reduces penetrations.
   - Faster installation, easier tile replacement.
   - Provides attachment options at valleys and sidewalls (batten extenders & raised battens)
5. Tile Pan at walls? - pages 42 & 43
6. What are the benefits of plastic inserts for weather blocking? - page 53
7. How can we deal with transitions from shake or composition to tile? What is required? Not in Manual.

Section 4: Identifiable Details (Inspector on a ladder)

- Underlayment 1" over rake edge – page 16
- Downslope eave drip edge – page 32 footnote #2
- Bird stop on High Profile – page 29 footnote #1
- Double flashing at penetrations – page 18
- Kick Out at pan termination – page 38

Other Resources:

Layout Article in Roofing Magazine by John Jensen:
www.roofingmagazine.com/swing-tape-layout-methods-make-tile-layout-easy/