

Tiling tips: — No 2

GRP valley troughs

The most vulnerable part of any inclined valley is where it discharges into the eaves gutter. This is equally true for GRP valley troughs, which are the tiler's preferred valley liner due to ease of installation and relative cost.

Unlike lead, GRP (glass reinforced polyester) cannot be stretched or bent into shape. Whilst it can be bent a little along its length (down the centre line), it is more difficult to bend across its width, due to its general 'V' shape. The ability to be bent along its length is to allow the trough to fit a limited range of roof pitches. The steeper the rafter pitch, the smaller the angle across the valley (dihedral angle). If the valley trough is bent across its width it is likely to stress or damage the corrugations that form the edge of the trough. The corrugations provide rigidity to help it resist wind uplift forces, once it is nailed into position. They also form channels to take away water that may pene-

trate the mortar bedding, which is not 100 percent waterproof.

The rainwater flowing off the tiles into the valley is added to that already flowing down the valley. This continues until the maximum volume of water is reached at the bottom of the valley, just before it discharges into the gutter, or back onto the roof in the case of a dormer. At the point of maximum flow it is essential that nothing obstructs the discharge of water. A reduction of the true valley pitch will cause the water flow to slow down or develop turbulence. This will act as a restriction to the water flow, which will in turn, cause the water to back up the valley and spill out over the adjacent tiles.

Placing the valley trough directly onto the top of the fascia board will reduce the true valley pitch, as the height of the fascia is generally about 50mm above the rafter level. This will also cause the outer corrugations of the trough to kick up the eaves tiles on



~ This is how NOT to install a GRP valley trough. Note the kink in the GRP at the first nail fixing and how the underlay is dipped behind the fascia caused by the end of the valley batten.

either side of the valley by between 19 and 25mm. Whilst this looks less than professional, it also reduces the weatherability of the roof covering by creating gapping between the tiles.

To prevent this happening, the fascia board should be cut down by at least the height of the GRP trough corrugations (25mm) for the full width of the valley; this is to allow water in the side channels to discharge into the gutters. If the fascia is cut down by more than 25mm it will affect the position of the guttering, which in turn could allow water flowing of the roof to

discharge over the gutters.

Cutting down the height of the fascia board should be the responsibility of the carpenter but it is inevitably left to the tiler to do. Whilst this is more work for the tiler, installing a GRP valley is a far simpler operation than forming a lead valley.

Provided the GRP valley is installed correctly the life expectancy of the roof should not be compromised.

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