

Slating & Tiling

TIPS 45

nibs

Like most things in roofing, we take nibs for granted when they are a very important feature of a good tile. Nibs are the projection on the underside of a tile close to the head, used to hook the tiles onto a batten or similar horizontal ledge. They can be one small nib on its own, two or three separate nibs, or one continuous nib across the head of the tile. Some are at the head of the tile while others are a short distance down the underside. Some are pressed while others are moulded. In most cases the nib is

directly above the nail hole, but there are exceptions to every rule. Each design and location has its advantages and disadvantages which I will try to explain.

“The importance of nibs should not be underestimated... We have to take our hats off to the person who invented them.”

Types

Tiles with one nib are more difficult to locate and keep straight as they can swing about the nib, especially if the nib is not central. Some clay single pantiles have their nibs below the pan of the corrugation making them off-centre, and the tile tends to swing clockwise through about 20° when severe winds lift them off the tile below. A similar effect can be seen when one of a pair breaks off, or is cut off, such as down the side of a hip.

Tiles with two or three nibs are much easier to locate and keep straight as the nibs are normally located as far apart as is possible without weakening the tile. Nibs that are located close to the centre of the tile are stronger than those located at the far corners.

Tiles with a continuous top nib can be difficult to locate if the batten is uneven, such as at a batten joint. In some instances the nib is very shallow – to save weight, material and make the tile easy to stack. This can make the tile difficult to stack out on the

roof and they can vibrate off the batten more easily than with a larger nib.

Nibs that are located at the top edge of the tile are more vulnerable to being broken off than those located a short distance down the underside of the tile, but are better for weather resistance as the nail hole is closer to the top edge. Tiles with the nib a short distance down the underside of the tile have poorer weather resistance because the nail hole is closer to the bottom of the head-lap, and often cannot

be nailed as the nail-hole falls below the head-lap. Also with interlocking tiles the further the nib is away from the head of the tile the longer the unsupported section of nail between the tile clip and the batten, making it less efficient.

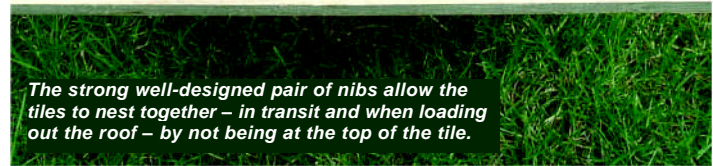
This can be overcome with special tile clips, but they are more difficult to fit as often it is almost impossible to see the batten that you are fixing too.

Tiles with moulded nibs are stronger than nibs that are pressed through the material and are in effect hollow. Pressing the nibs leaves a recess into which nibs of another tile rest when stacked during manufacture and transportation to site. However, some clay tiles are very brittle, and the nibs can break off easily due to the sharp angles of the nib-shape.

Hanging length

The hanging length of any tile is the distance from the face of the nib to the bottom of the underside of the tile. This is important – unless this distance is constant the leading edge of the tiles will not line through and therefore the head-lap distance will vary.

While some handmade clay tiles look oldy-woldy, if the leading edge does not form a



straight line, there is more variation and a greater need to close down the gauge to ensure that the minimum head-lap is achieved for all tiles. Most machine-made tiles are made by extruding a continuous ribbon of clay or concrete, which is then cut into one-tile lengths. With interlocking tiles the nibs are moulded in the pallet that provides the shape of the tile underside. If the knife that cuts the ribbon of material is slightly out of position the hanging length will be different.

Like all manufactured products the hanging length must be within a tolerance to achieve the required head-lap for weather resistance.

Nib angle

All tiles lay at an angle that is shallower than the rafter pitch as the bottom of each tile rests on the head of the tile below. This means that the face of the nib that rests on the top face of the batten is not at right angles to the tile, but a few degrees greater.

With most plain tiles the difference between the rafter pitch and the true tile pitch can be between 9° and 10°. But if the tile has an excessive camber in its length, and/or width, this figure can increase the angle of the nib face. With interlocking tiles the difference is between 3° and 6°, depending upon the design and thickness of the tile.

Fixings

Some clay pantiles do not have a nail hole fixing through the face of the tile. Instead they have one through the top face of the nib.

This method of fixing is very good for preventing the tile from

slipping off the batten, but it is very difficult to drive the nail home onto the nib, due to the lack of space, especially if the nib is recessed, so it is not ideal for resisting wind uplift. Positioning the nail hole in the nib does remove the nail hole from the face of the tile, making better use of the head-lap to resist wind driven rain. As the nail hole is located in the depth of the nib it weakens the nib and if the nail is a tight fit and expands due to rust it can break the nib off.

Stacking

Nibs that hang down below the tile can be a problem when manufacturing and stacking the tiles. Some plain tiles have to be stacked with alternate nibs at opposite ends to keep the stack from breaking in transit. Other tiles, like concrete double roman tiles, have a nib that coincides with the pan of the corrugation so they can all stack the same way around.

Having tiles that are stacked the same way around is easier and quicker to produce. Once on the roof stacking out the roof requires tiles to be placed ready to fix. Often this requires one or more tiles to be hooked onto the head of the tile below. Some tile designs will allow this to be done while others will not, such as those with a scoop.

The importance of nibs should not be underestimated. They control the position of the nail hole and ensure that the leading edge of the tiles all line up. We have to take out hats off to the person who invented the tile nib as it makes roof tiling a lot easier. ■

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