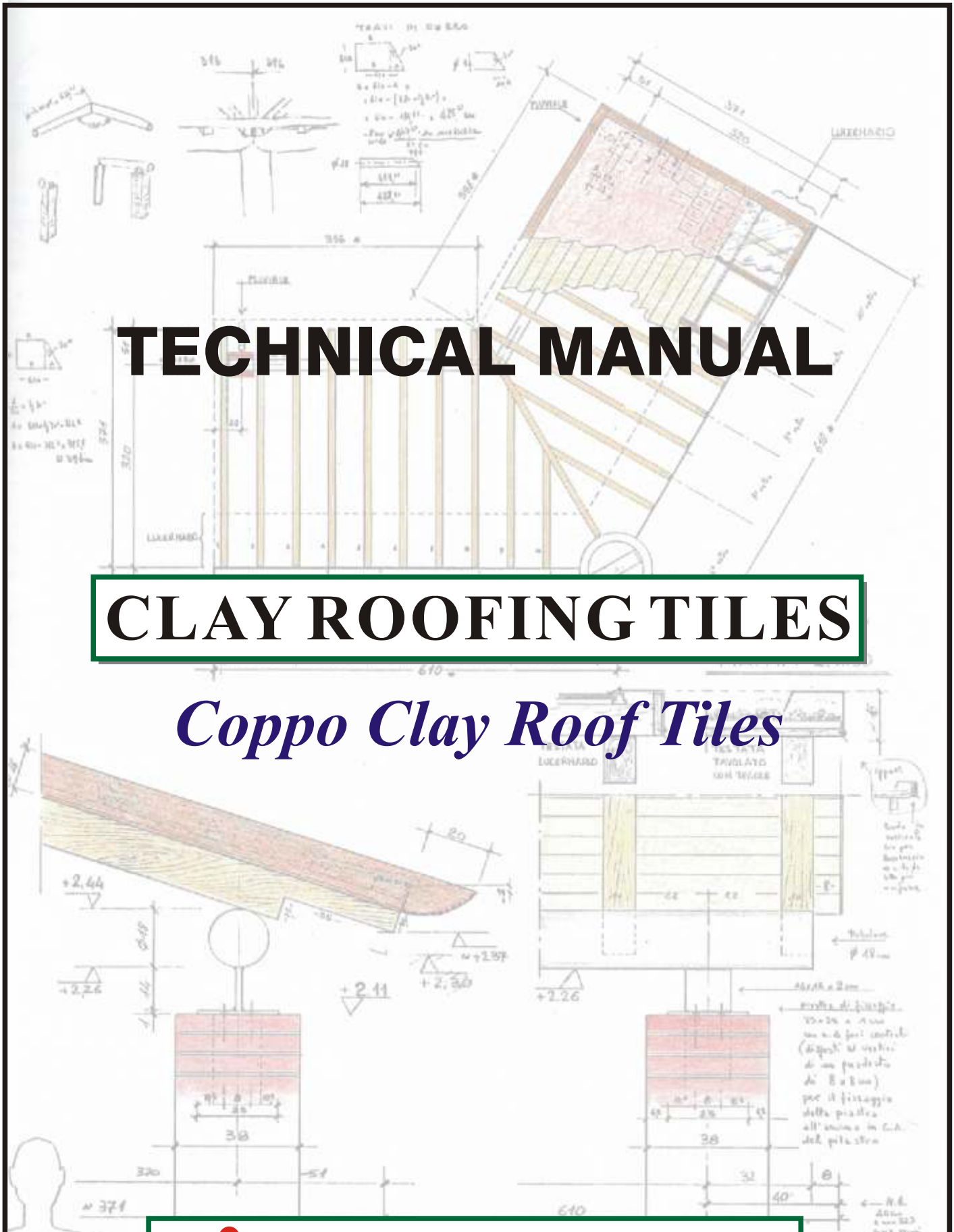
TECHNICAL MANUAL

CLAY ROOFING TILES

Coppo Clay Roof Tiles



ITALCOTTO

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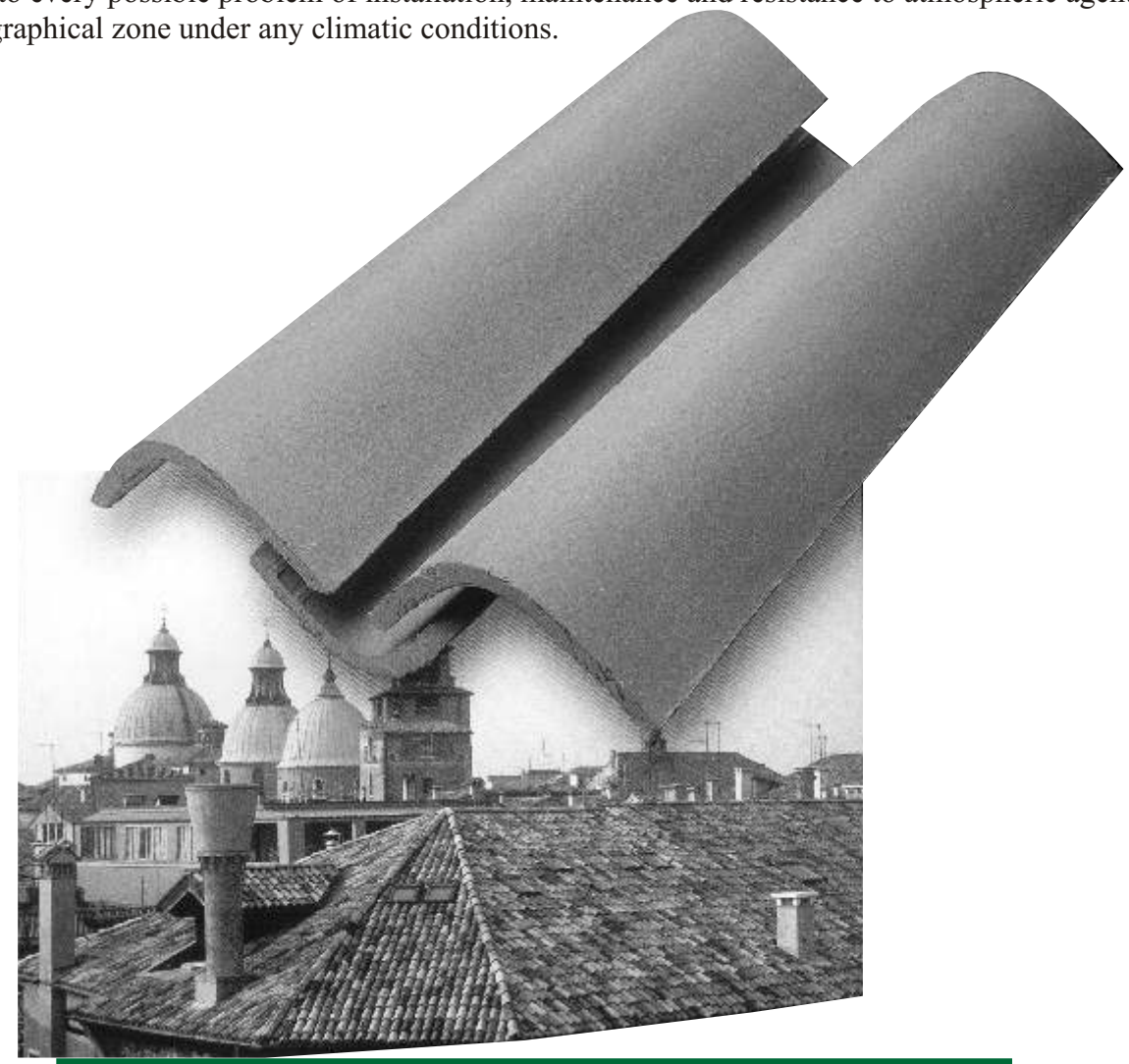
The finest Italian roof tiles.

Of all roof tiles, bent tiles are surely the most classical and the richest in tradition. They are the ideal solution for buildings of high historical and architectural value and provide the best type of protection for the most complex roof structures thanks to the particular morphology of the elements that can be overlaid in different ways with ample tolerances. This type of installation ensures, among other things, ample and effective air circulation under the roof. Industrie Cotto Possagno produces several different lines of bent tiles for roofing, each suitable for special uses or highly refined aesthetic demands.
The "Traditional" line consists of the typical red, pink or beige bent tiles; then there is a line of antiqued bent tiles, with a number of different models, designed for use in full respect of the environment and especially for urban renewal projects.
All the bent tiles produced are suitable for use on ventilated roofs. The ventilation systems used by Industrie Cotto Possagno are ideal for every engineering need, and have been developed to provide the solution to every possible problem of installation, maintenance and resistance to atmospheric agents in any geographical zone under any climatic conditions.



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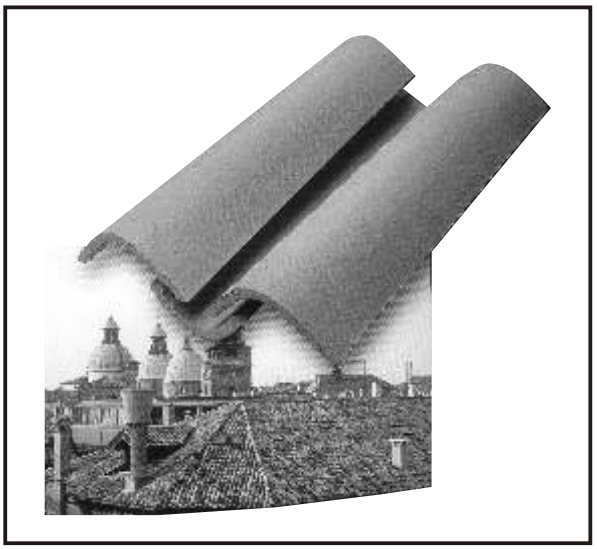

Formed originally by the shape of the human thigh, the distinctive rounded curve of the Coppo clay tile is complemented by the warm, rich colour of terracotta clay. Versatile, frost resistant, fully waterproof, colour fast and durable, this extremely robust tile has high mechanical strength that helps it to endure the severest abuses that transport, handling and laying can inflict.

INSTALLATION

UNDERLAYMENT:

Recommended underlayments installed over the sheathing are dependent on roof pitch and local weather conditions.
On roofs below 21 degrees, tiles should be considered as a decorative finish only and laid over an impervious built-up membrane. On pitched roofs of 21 degrees or greater, cover entire roof area with plastic underlaying.
Underlayment should be laid parallel to the eaves with minimum 100mm horizontal lap and 150mm vertical lap with a minimum 300mm upstand at all abutments. An additional layer of underlayment should be secured with large flat-headed non-corrosive roofing nails at 150mm centres.

EAVES:

At the eave a 38 x 50 softwood cant strip should be installed to the fascia board. This will support the toe of the eave course of tiles and set them at the correct angle.
The eave course of tiles should be set to overhang the fascia board by at least 50mm, dependant on gutter detaiEach tile should be secured with a single non-corrosive nail, through the hole provided. The nails should not be driven tightly against the tile.

FIXING

All pitched roofs are affected by wind pressure and this varies dependent upon the pitch of the roof, the exposure of the building and the height of the roof from the ground. Please check with your local building code, but as a general rule:

1) The field tiles are installed by placing the initial layer (under tile) with the concave side upwards and having the narrow side of the tile on the eave side. These tiles are laid between the vertical battens with a 120mm overlap. The under tile has a moulded hook which affixes itself to the horizontal batten.

2) On top of the initial layer tiles are laid concave side down with the wide part of the tile on the eave side so as to cover the joints between tiles. For this reason the first row should be laid using shortened tiles. The top tiles need to be individually nailed with a non-corrosive nail of sufficient length to penetrate the batten. (+- 63mm clout nail).

3) Storm clips: as a precaution top tiles can be clipped to reduce the effects of wind uplift. (Stainless steel clip Type - S)
See batten layout illustration.

RIDGE:

A wood nailer should be secured to the apex of the ridge to support the ridge tiles. It should be set at a height to allow the ridge tiles to rest on the top course of field tiles. The top course of field tiles should be finished close to the ridge board.
The interlocking ridge tiles should be secured to

the ridge nailer with a non-corrosive nail. Where they interlock they should be bedded in mortar. Where it is necessary to finish the top course of field tiles with a cut, the installer should cut the tile, on site, and drill the head of the tile and nail in the normal way.

The resulting gap between the ridge tile and field tile can be filled with colour matched mortar (oxide).
Ensure that no bedding is visible on the exposed surface of the tiles.

HIPS:

A wood nailer should be secured to the apex of the hip. It should be set at a height to allow the hip tile to be supported for nailing and rest on the adjacent cut field tiles.
The field tiles either side of the hip should be cut close to the wood nailer and all cut tiles firmly secured. Small cut tile pieces can be secured using a silicon adhesive.
Ensure that the first hip tile is set at the same angle as the others. Secure to the nailer with a single non-corrosive nail and where the hip tiles overlap they should be secured with mortar. The hip tile should be bedded in colour matched mortar and either flush pointed or back bedded. Ensure that no mortar marks the face of the tiles.

VALLEYS:

Open valleys should be formed using a long-life lead flashing. The valley metal should be a minimum of 500mm wide for short valleys and 600mm wide for longer valleys and in length, no greater than 2.5m. Sheets should be lapped by 100mm and not soldered.
On a steep valley with unequal pitches you might consider a 25mm crease on the centre line to reduce the force of the water and direct the flow. A wide open valley is strongly advised in locations that will experience high snow loading or where heavy roof debris accumulation is likely. The edge of the valley metal should be turned over 120mm and secured to the deck with cleats. The tile should be cut to form an open valley 150mm wide, The cut tiles should be secured without puncturing the valley metal. Open valleys should be bedded in mortar and flush pointed. You should ensure that the valley discharges evenly over the fascia board into the gutter.

ABUTMENTS:

Side Abutments:
Where field tiles finish against a vertical abutment the underlayment should be turned up the wall at least 150mm and over the deck an even amount. The edges of the deck flushing should be turned up 25mm to form a secret gutter, directing water down the roof and discharging into the gutter. The flashing should be firmly secured to the wall. You might consider setting the flashing in a bed of flexible roof cement, to give additional protection, at this vulnerable junction. The tiles can then be laid close to the wall. On brick abutments a cover flashing let into a mortar joint can be installed.

Head Abutments:
The underlayment will be returned up the wall at least 150mm and secured. The top course of field tiles will then be laid. Where it is necessary to finish the top course with a cut tile, the installer should cut the tile on site, and drill each head, then secure to the deck in the normal way. The resulting gap under the tiles can either be filled with colour match mortar or with a purpose-made rubber top filler. Ensure that no bedding is visible on the exposed surface of the tiles. A metal flashing should be formed to the correct angle, it should abut the wall by at least 150mm and cover the head of the tiles by 150mm. With a brick abutment, the flashing can be returned into the mortar joint and a cover flashing installed. When flashing behind a chimney it is always advisable to form a saddle to divert the water around the chimney. The saddle should be weathered in suitably compatible flashing material.

PACKING OF MATERIAL

Pallets: 252-280 pieces per pallet.

SPECIAL PIECES:
a) Hip and ridge tiles: 2,5 pieces per linear metre
b) Hip end caps

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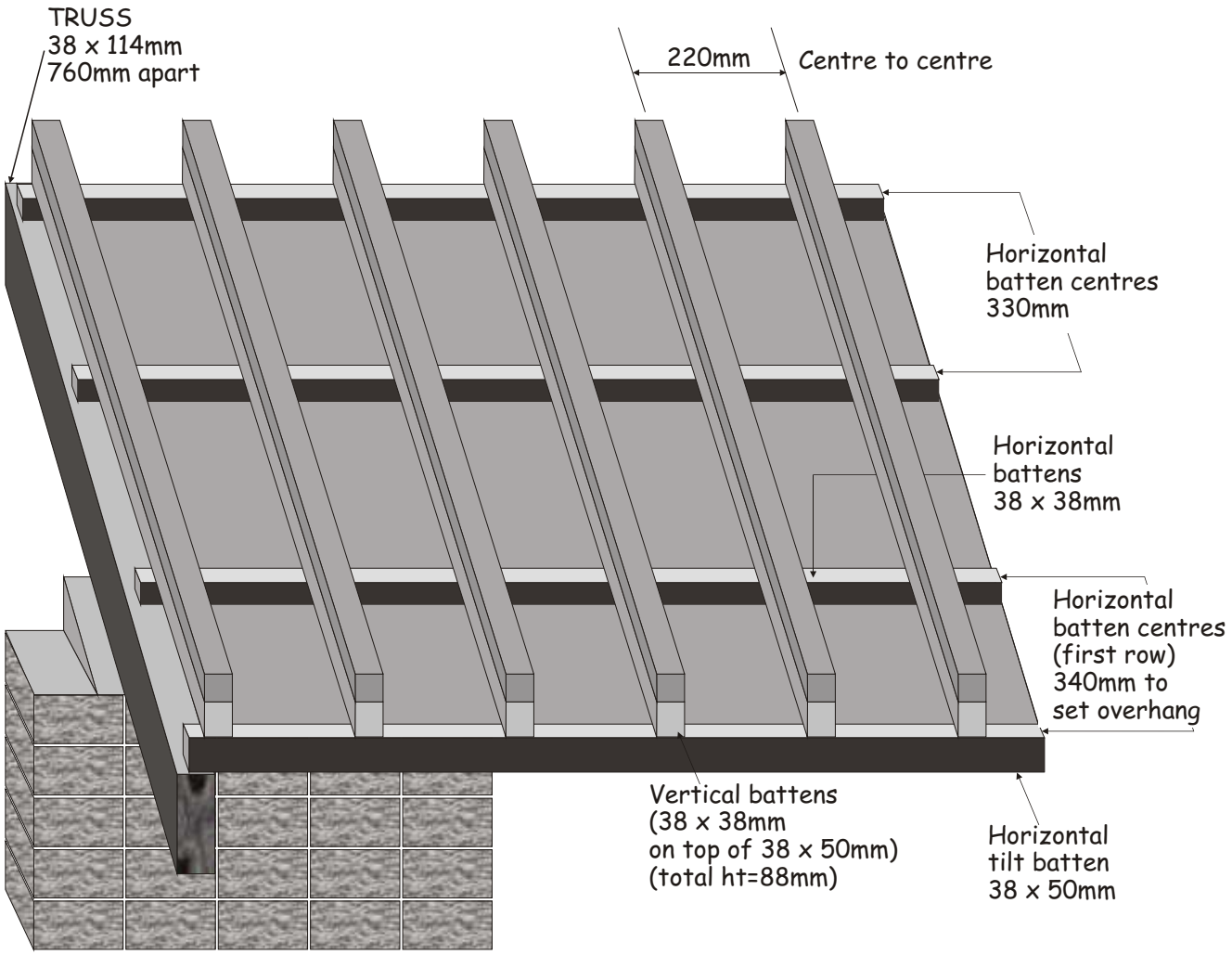

SUGGESTED BATTEN LAYOUT