

## 1. Preliminary preparation:

- Material preparation: Purchase a sufficient number of colored stone metal tiles, matching self-tapping screws, waterproof gaskets and other fixings, as well as ridge tiles, eaves, gutter boards, gable boards and other accessories. At the same time, ensure that the quality and specifications of the materials meet the requirements.
- Tool preparation: Prepare measuring tools such as tape measure, level ruler, ink fountain, cutting tools such as electric saw, hand saw, scissors, fastening tools such as electric drill, screwdriver, pneumatic screwdriver, and protective equipment such as safety helmets, gloves, and safety shoes.
- Roof inspection: Check the stability of the roof structure. For old roofs, reinforcement and repair are required if necessary. At the same time, clean the roof surface to ensure that there are no debris, loose or damaged parts, and ensure that the installation surface is clean and flat.
- Design planning: According to the shape and size of the roof, design a laying plan for colored stone metal tiles, including the arrangement of tiles, the starting point position, and the reserved expansion joints, and mark the installation reference line on the roof.

## 2. Formal installation:

**Laying a waterproof layer** (if necessary): If the roof has poor waterproof performance or has special waterproof requirements, a layer of waterproof membrane can be laid on the entire roof or waterproof coating can be applied to form a solid waterproof barrier.

### I. Installing tile purlin:

- Material selection can be wooden or galvanized pipes, etc. The materials must be dry, non-deformed, and anti-corrosive.
- Tile purlins are installed from bottom to top. The first tile purlin is installed at the eaves, and the spacing with the second one is about 350mm. The spacing between the second and subsequent tile purlins is kept at about 370mm. Ensure that the tile purlins are firmly installed and fit closely with the roof structure.

### II. Tile installation:

- Starting from the eaves, lay the colored stone metal tiles piece by piece from bottom to top according to the designed arrangement. The first metal tile is 20mm out of the eaves, and then the second tile is installed in order to the ridge. If there is any excess part, it can be cut or pulled down to the appropriate position according to the actual situation.
- Tiles should be closely overlapped, usually in an interlocking manner. The overlapped part should face away from the prevailing wind direction, rainwater flow direction or rainwater drainage pipe and roof gutter.
- Use flat-head stainless steel or galvanized screws of about 20-25mm to fix the tiles to the tile strips. The

screws of a tile are driven into the groove to connect with the tile strips.

Usually, a colored stone metal tile needs about 6 nails, 3 at the bottom and 3 at the top, to ensure a firm connection.

### III. Accessories installation:

- **Gutter installation:** First fix the gutter tile strips, and then lay the metal tiles. Use steel nails to fix the roof gutter board and the gutter tile strips. When installing the tiles to the gutter position, the tiles need to be 20mm downward. If the tiles are too long and need to be cut, it is best to pre-lay them before cutting to ensure uniform cutting.

- **Eaves installation:** The eaves are installed on the first tile strip, ensuring that they are in the same horizontal direction as the eaves, and the facade should fit closely with the eaves. Fix it with screws, and then lay the tiles one by one on the eaves board and fix them.

- **Gable installation:** When installing tiles to the gable position, fold the tiles upward by 30mm, then put the gable on the tiles, that is, press the inner side of the gable board on the folded part, and finally fix the side and top of the gable with screws.

- **Ridge tile installation:** Install special ridge tiles on the ridge of the roof. Leave a 5cm width at the connection between the main tile and the ridge tile (including the main ridge and the inclined ridge), cut off the rest, then fold it up 5cm and fix it on the ridge tile hanging strip with nails, then buckle the ridge tile on it, and fix it to the hanging strip on both sides with self-tapping nails.