VALENTIN FLOORING
From traditional to original

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INTRODUCTION

Valentín flooring is a traditional building material, consisting of handcrafted tiles made of special clays, involving a fully artisanal manufacturing process in Valentín, a small town of Murcia.

With this special type of ceramic material, different sizes are manufactured. Particularly noteworthy are the solid ceramic bricks, curved roofing tiles, floor tiles and some special pieces, manufactured by traditional methods, with special clays from the area, and which are mainly for use in facades, as face brick and in **decorative claddings and rustic flooring**, as well as in some other decoration work, both in interiors and exteriors, without forgetting their use in building restoration or heritage conservation work.

THE MANUFACTURING PROCESS

Water, earth and fire are the three key words. The **earth** is of a marl-limestone nature of a grey colour, with some reddish brown tinges. The **water** is collected in a reservoir (for rain). The **fire** is in Moorish kilns of traditional construction.

Raw material. Stockpile..

Inside view of a production hall.

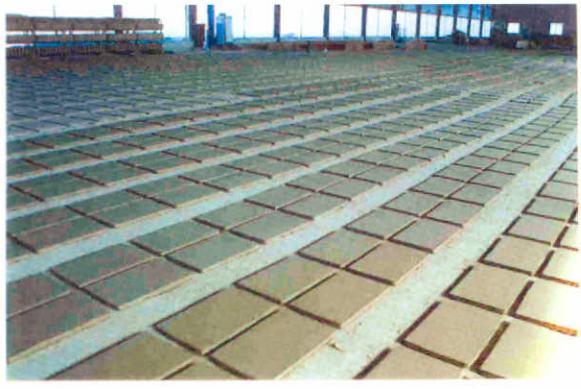
The process begins with a **stockpile** of these two materials on an outdoor platform. **This is spread out, worked and mixed**. It is spread out on the stockpile platform and **left to dry**. The clay production process is carried out in a continuous way, without interruptions, limited only by the capacity of the "tanks" or "clay rooms", which are the clay storage enclosures of the factory. After suitable preparation and treatment, the clay can remain there for a month, maintaining its moisture content in the closed storage rooms and tanks, always ready for use.

The actual manufacturing process commences with **kneading of the clay**, which has been appropriately stockpiled, mixed and protected (in tanks or closed rooms).

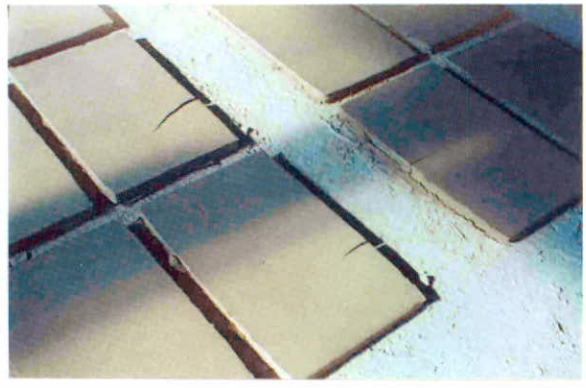
Detail of the clay, ready for use.

Discharging the clay onto the wooden frame.

The wooden frame is smeared with beach sand, to keep the clay from sticking to it. The wooden frame is placed on the floor or on a production tray, and the clay is then discharged by hand, filling the frame, and **spread out over the frame**, also in a completely manual way. A strip of wood is used to level it on the frame, adding water to the surface to smoothen the top surface of the piece. The wooden frame is immediately withdrawn and the process is continued, successively repeating the same operation. These pieces, without moving them, are left on the floor for two days to **dry**.



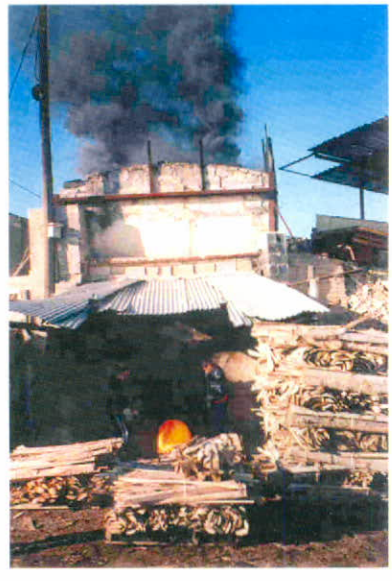
Production platform: Hall floor.



Detail of fracture in some pieces in the drying process.

After this time, the **products are fired**, which turns out to be the most delicate step in the whole manufacturing process, by a completely traditional process in a **Moorish kiln**.

General view of the inside of a kiln.



General view of the outside of a Moorish kiln.

The kiln is fired to an internal temperature of 750 ° C (this takes six or seven hours to reach). The fire increases on adding more firewood to the hearth, gradually raising the temperature.

It is heated non-stop for twenty-four hours (adding firewood by hand) until reaching 950° C as **peak temperature**, to be held for two or three hours, before proceeding with **slow cooling**. After slowly cooling the kiln, the pieces are **withdrawn**. Once they are outside the kiln, the finished products are put into a water tank for curing by slaking lime inside. Then the products are organised and stored in the yards next to the hall for control and despatch.

Storage of fired pieces..

Quality control: Sound test.

Several features are carefully monitored in the material's **quality control process**. In the first place, in the **raw material**, the composition – proportioning and later on in the **finished product**, its final appearance (Colour - the whiter the final appearance of the piece, the more fired is the clay, while the redder, the less fired). Particular care is taken in the quality of the firing process, especially controlling the existence of cracks, chipping, etc. The last "test" designed to check tile end quality is "**sound control**" and this is done by striking the piece with a metal object that produces a very characteristic sound. This "sound test" is carried out on all the pieces, one by one, thus ensuring total quality of the finished product, prior to despatch. The pieces that do not give off a "clear bell sound" are rejected.

CONCLUSIONS

In view of the result of our study and what has been set out above, the following conclusions may be drawn:

- A product is involved with the **qualities of a traditional material** (beauty, quality, durability, etc.) and with the **advantage of being original**, of very topical use in new work and in restoration and heritage conservation work.
- **Research** should be done on the **production** of this material with the raw material of the area, to attempt to improve product quality if possible.
- Its **use should be promoted**, given the qualities already indicated, in our Region and in the rest of Spain, as well as abroad, with the economic advantages that this would entail for the area.
- **Manual (craft) production processes** should be fostered to differentiate them clearly from the most advanced industrial processes, which detract from the traditional origin of this material. The manufacturers at Valentín should start considering a "**Guarantee of Origin and Quality**" or a "**Quality Mark**" only for the product that fulfils a series of minimum requirements, or as an alternative, to define a classification, according to production models and techniques (see proposal table).