



3D DIGITAL STRUCTURE TECHNOLOGY

WITH SINKING OR
REPELLENT AGENT

This Unilin patented production technology for ceramic tiles **combines digital printing of graphic patterns with digital 3D material** structure.

The digital embossing is created by **applying a repellent or sinking agent**. This type of digital structuring achieves an extraordinary realistic and natural effect.

The textures of the ceramic tiles are **easily synchronized** with multiple graphic patterns and colored designs. The agents react with the glaze above, creating a **deeper structure and countering defaults** that could occur with traditional texturing.

UNILIN PATENT PORTFOLIO

We license out our knowhow to create more **innovative products**. By licensing out our patented technologies, we support the implementation of new production processes, improved efficiency and better products. Worldwide.

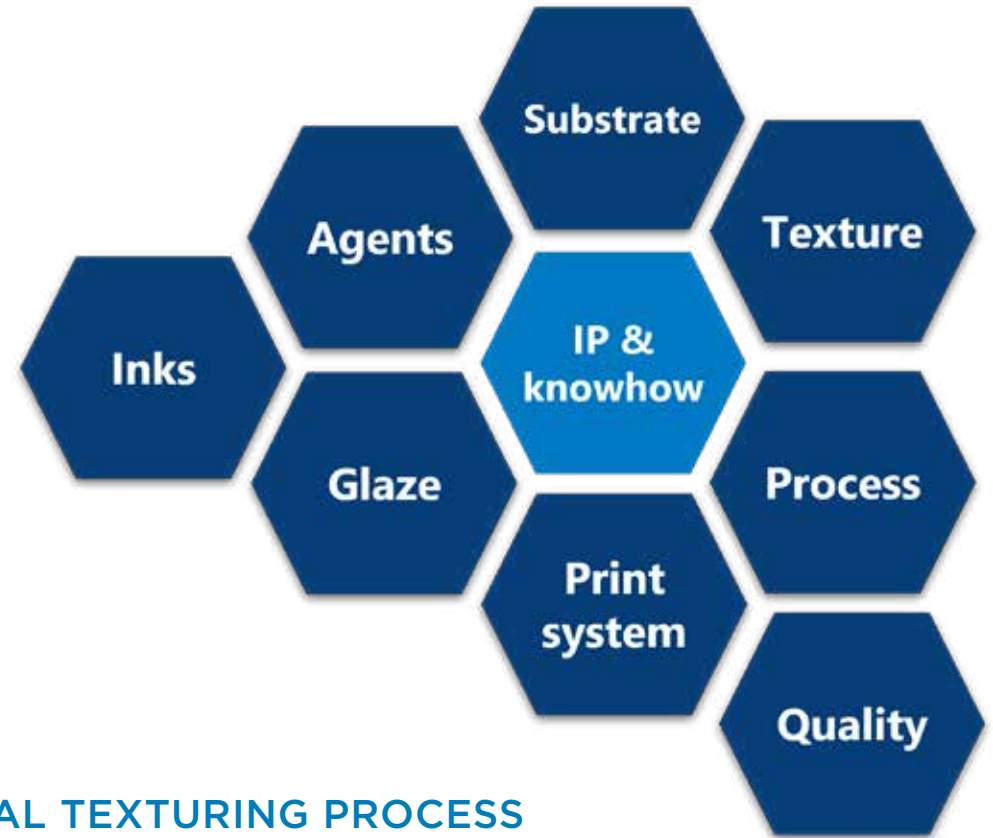
Our patent portfolio for ceramics covers different technologies for **improving the digital structure and design**.

PATENT PORTFOLIO SINCE 2013

EP3808921

US11492811

WO2022234352



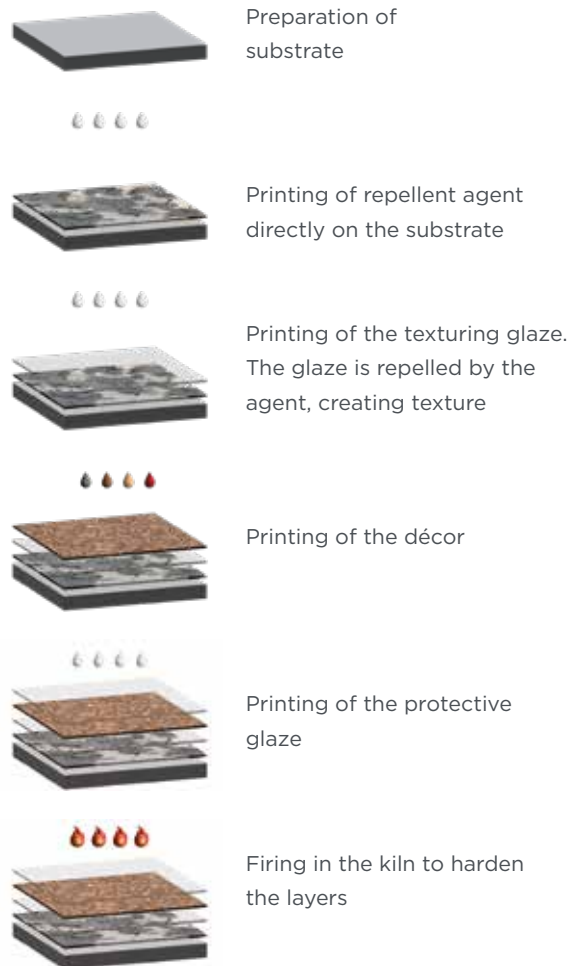
DIGITAL TEXTURING PROCESS

This patented, innovative application technology for structuring of ceramic tiles provides a **deeper and more realistic texture**. The two production options create an **authentic result**, maintaining the brightness and sharpness of the colors of the design. The repellent and sinking agents can be used together to combine the effects.

The production technology is **perfect even for large slabs**, reducing manufacturer's investment cost for expensive embossing belts.

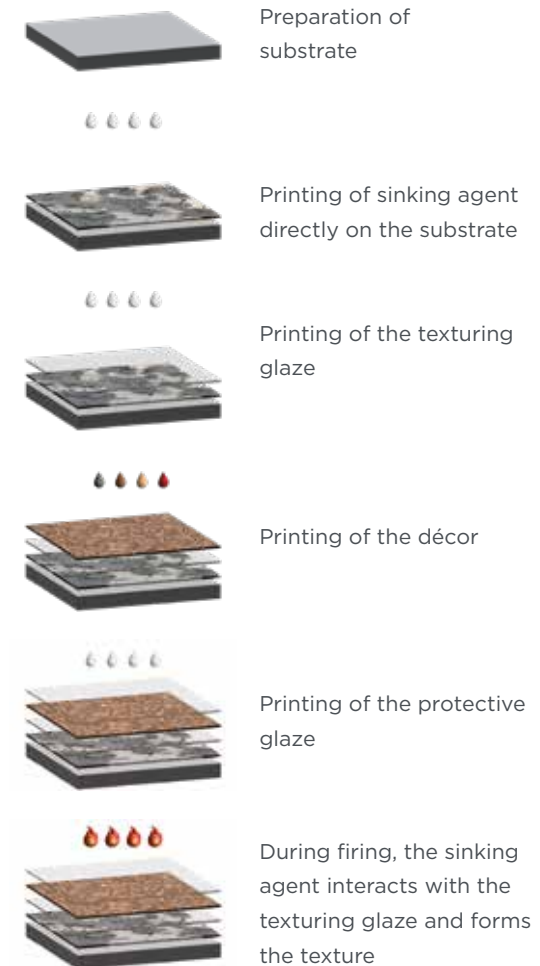
REPELLENT AGENT

The repellent agent is applied to the substrate of the tile, prior to applying the texturing glaze, the décor and the transparent protective glaze. The **glaze is repelled by the agent before firing** so that hollow spots are formed in the glaze, creating the texture on the tile.



SINKING AGENT

The sinking agent is applied to the substrate of the tile. After printing the texturing glaze, the design and a transparent protective glaze, **in the kiln the sinking agent will react chemically** with the texture glaze and the other structures that are printed to create the texture.



WHY CHOOSE 3D DIGITAL STRUCTURING?



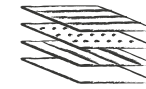
REAL TOUCH & FEEL



GREAT TECHNICAL PERFORMANCE



AUTHENTIC DESIGN & TEXTURE



DEEPER TEXTURING



PATENTED SINCE 2013



UNCHANGED COLORS



AFFORDABLE SOLUTION COMPARED
TO MECHANICAL STRUCTURING



UNLIMITED FLEXIBILITY