

Production of ceramic tiles with a salt glaze by industrial production methods

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Research Summary:

Salt glaze is one of the distinctive glazes with its special aesthetic effects, and the researcher has done a number of researches to obtain salt glaze with its various effects by traditional methods first and then by non-traditional methods secondly, and that was in several previous studies, and the fire was done in the traditional kiln to fire sewage pipes, to obtain Salt glaze in traditional ways, then fire in the tunnel kiln, then fire in the rolls kiln (fast firing), and the previous study was about the possibility of obtaining the effects of salt glaze on ceramic tiles by application methods different from the traditional known methods, and this was done by more than one method. For application, but in the laboratory and not on production lines, and given the importance of the method of application of salt on ceramic tiles to obtain the effects of salt glaze because the resulting salt effects differ according to the method of salt application, so the study completed the topic of applying salt on ceramic tiles, and this study deals with how to produce ceramic tiles with salt glazing by industrial methods of production and application, and an attempt to solve its problems on the production line. Therefore, in this research, the same methods of application are used on the production line. Production lines such as silkscreen printing of dry milled salt, but due to the tendency of table salt (NaCl) to become saturated with moisture in the air, after a short time, salt hydration and agglomeration occur, so another method of application was tried, which is grinding salt with water in certain proportions until we reach to a density suitable for spraying (as an emulsion), which is a method corresponding to the method of application by disc on the production line, as well as applying the same emulsion with increasing water percentages to adjust the density to be suitable for application by silkscreen printing. decoration), and each of them had a special aesthetic character and special results as a result of the different temperatures, the time of the fire cycle and the different method of application.

Key words:

Salt glaze, roller kilns, ceramic tiles, disc application, silkscreen application.