

Название публикации:

Monitoring of the Porcelain Firing Conditions by Optical Methods

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Аннотация:

It is proposed that the redox conditions for firing porcelain be monitored in situ ('on site') according to the reflection spectra in the UV-VIS-NIR region. It is shown that the difference in terms of the color characteristics of glazed porcelain is correlated with reflection at $\lambda \sim 1100$ nm, which depends on the ratio Fe^{2+}/Fe^{3+} predominantly in the composition of the glaze. It was found that as the intensity of the luminescence band due to the optically active center Fe^{3+} increases, the reflection coefficient of the glazed porcelain at $\lambda \sim 1100$ nm also increases. © 2018, Springer Science+Business Media, LLC, part of Springer Nature

Ключевые слова:

diffuse reflection spectrum, glaze, infrared region of the spectrum, luminescence, porcelain, whiteness