

Название публикации:

Monitoring of the Porcelain Firing Conditions by Optical Methods

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Сведения об издании:

GLASS AND CERAMICS

Том: 75 Выпуск: 1-2 Стр.: 17-21

DOI: 10.1007/s10717-018-0020-y

Опубликовано:М АУ 2018

Тип документа :Article

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 λ similar to 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 λ similar to 1100 nm also increases.

Ключевые слова:

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